

3.1.1. Grants received from Government and non-governmental agencies for research projects / endowments in the institution during the year (2022-2023): 4.18 Lakhs

INDEX

Sl. No.	Name of the Project / Endowments, Chairs	Name of the Principal Investigator / Co-investigator	Department of Principal Investigator	Year of Award	Name of the Funding Agency	Amount Sanctioned (Lakhs)	Type (Government / non-Government)	Page No.
1	Polylactic acid reinforced by microcrystalline cellulose biocomposite for biomedical applications	Prof. Kavya M V / Dr Shobha G	Biotechnology	2023	Vision Group on Science and Technology (VGST)	3	Government	4
2	A sustainable technology for enhancing plant growth using copper based nanomaterial by microbial siderophores production in plant rhizosphere and its influence on iron uptake	Dr. Shobha G / Dr. Soumya C	Biotechnology	2023	Karnataka State Council for Science and Technology - 46th Series - SPP	0.06	Government	10
3	Development of Ecofriendly Biodegradable food packing film from by product of fruit waste and processing with different plasticizers	Dr. Soumya C / Dr. Shobha G	Biotechnology	2023	Karnataka State Council for Science and Technology - 46th Series - SPP	0.06	Government	12
4	Green inhibitor incorporated biofilms for corrosion resistance	Prof. Kavya M V / Dr. Soumya C	Biotechnology	2023	Karnataka State Council for Science and Technology - 46th Series - SPP	0.06	Government	14
5	Medicine Dispensing Using Image Processing	Prof. Sheela Rani C M	Computer Science & Engineering	2022-2023	Karnataka State Council for Science and Technology - 46th Series - SPP	0.04	Government	16
6	Solar Powered Electric Vehicle Charging station using IoT	Prof. Shashirekha G	Computer Science & Engineering	2022-2023	Karnataka State Council for Science and Technology - 46th Series - SPP	0.04	Government	18
7	Efficiency Enhancement Cf Wind Turbine Using Maglev Technique	Dr. Vidya M	Electrical & Electronics Engineering	2022-2023	Karnataka State Council for Science and Technology - 46th Series - SPP	0.06	Government	20

Sl. No.	Name of the Project/ Endowments, Chairs	Name of the Principal Investigator / Co-investigator	Department of Principal Investigator	Year of Award	Name of the Funding Agency	Amount Sanctioned (Lakhs)	Type (Government / non-Government)	Page No.
8	Design And Implementation of Sleep Apnea Detection System	Dr. Prakash Jadhav & Mrs. Kalavathi S	Electronics & Communication Engineering	2022-2023	Karnataka State Council for Science and Technology - 46th Series - SPP	0.05	Government	22
9	Self-Driving Automobile for Disabled People Using Machine Learning	Dr. Prerana Chaithra	Information Science and Engineering	2022-2023	Karnataka State Council for Science and Technology - 46th Series - SPP	0.04	Government	24
10	METRO PLATFORM SAFETY BARRICADE USING RECYCLED PLASTIC ROPES	Dr. Basavaraj S / Dr. Tulsidas D	Mechanical Engineering	2023	Karnataka State Council for Science and Technology - 46th Series - SPP	0.07	Government	26
11	Removal of cationic dyes used for staining silk clothes by nano photochemical process - effluent source from kamakshipalaya (Bangalore city)	Prof. Ramya D L & Dr. J S S Allwin Ebinesar	Biotechnology	2023	Visvesvaraya Technological University	0.7	Government	28
12	An Isothermal effect for effective charge neutralization through coagulation process of high concentrated dairy waste by using <i>Moringa oleifera</i> - Design of unbaffled batch reactor	Dr. J S S Allwin Ebinesar & Prof. Ramya D L	Biotechnology	2023	Visvesvaraya Technological University		Government	
13	Determination of optimum binder content for bituminous concrete	Prof. Akshay J	Civil Engineering	2023	Visvesvaraya Technological University		Government	
14	Improving the compressive strength of concrete by using crushed aggregate granite powder as filler material	Prof. Kavya H P	Civil Engineering	2023	Visvesvaraya Technological University		Government	
15	Cost effective smart IoT based gate controller for agriculture irrigation system	Dr. Kamalakshi Naganna	Computer Science & Engineering	2023	Visvesvaraya Technological University		Government	
16	Obstacle detection and home appliances control using smart wheel chair for crippled patients	Dr. Kamalakshi Naganna	Computer Science & Engineering	2023	Visvesvaraya Technological University		Government	

17	Electric Bicycle	Prof. A Dhamodaran	Electrical & Electronics Engineering	2023	Visvesvaraya Technological University	Government
18	Smart movable road divider	Dr. Rekha S N	Electrical & Electronics Engineering	2023	Visvesvaraya Technological University	Government
19	Driver dormant monitoring system to alert fatal accidents using image processing	Dr. Prakash Jadhav	Electronics & Communication Engineering	2023	Visvesvaraya Technological University	Government
20	Solar powered wheel chair with voice controller for physically challenged persons	Prof. Manasa M G	Electronics & Communication Engineering	2023	Visvesvaraya Technological University	Government
21	Efficient Eye Blink method to assist paralyzed patients using Artificial Intelligence	Dr. Prerana Chaithra	Information Science and Engineering	2023	Visvesvaraya Technological University	Government
22	Collaborative compiler with pair programming	Prof. Sudarsanan D	Information Science and Engineering	2023	Visvesvaraya Technological University	Government
23	Solid Fuel Operated propellant	Dr. Tulsidas D	Mechanical Engineering	2023	Visvesvaraya Technological University	Government
24	Fabrication and analysis of novel rocket stove for domestic cooking	Prof. Ramkumar M	Mechanical Engineering	2023	Visvesvaraya Technological University	Government

ವಿಜ್ಞಾನ ಮತ್ತು ತಂತ್ರಜ್ಞಾನ ದಾರ್ಶನಿಕ ಸಮೂಹ

ಮಾಹಿತಿ ತಂತ್ರಜ್ಞಾನ, ಜೈವಿಕ ತಂತ್ರಜ್ಞಾನ ಹಾಗೂ ವಿಜ್ಞಾನ ಮತ್ತು ತಂತ್ರಜ್ಞಾನ ಇಲಾಖೆ
ಕರ್ನಾಟಕ ಸರ್ಕಾರದ ಸಚಿವಾಲಯ, 7ನೇ ಮಹಡಿ, 4ನೇ ಗೇಟ್, ಬಹುಮಹಡಿ ಕಟ್ಟಡ, ಡಾ|| ಅಂಬೇಡ್ಕರ್ ವೀದಿ, ಬೆಂಗಳೂರು-560 001

080-2203 2013, visiongroup.st@gmail.com, www.vgst.in

ಸಂಖ್ಯೆ: ವಿತಂದಾಸ/ಜಿ.ಆರ್.ಡಿ ಸಂಖ್ಯೆ:1068(2021-22)/RGS-F/2023-24/207 ದಿನಾಂಕ:23.05.2023

ಇವರಿಗೆ,

ಪ್ರಾಂಶುಪಾಲರು

ಸಪ್ತಗಿರಿ ಇಂಜಿನಿಯರಿಂಗ್ ಕಾಲೇಜು

#14/5, ಚಿಕ್ಕಸಂದ್ರ, ಹೆಸರಘಟ್ಟ ಮುಖ್ಯರಸ್ತೆ ಬೆಂಗಳೂರು - 560 057

ಮಾನ್ಯರೇ,

ವಿಷಯ: RGS-F ಯೋಜನೆಯಡಿಯಲ್ಲಿ ಆಯ್ಕೆಯಾಗಿರುವ ಫಲಾನುಭವಿ ವಿದ್ಯಾಸಂಸ್ಥೆಗೆ ಉಪಕರಣಗಳ/ವಸ್ತುಗಳ ಖರೀದಿಗೆ (ಜಿ.ಆರ್.ಡಿ-1068) ಅನುಮೋದನೆ ನೀಡುವ ಬಗ್ಗೆ

ಉಲ್ಲೇಖ: 1. ಸೂಚನೆ ಪತ್ರ ಸಂಖ್ಯೆ: ಕೆಸ್ಪೆಪ್ಸ್/ವಿತಂದಾಸ/RGS-F/GRD-1068/2021-22/453,

ದಿನಾಂಕ: 15.02.2023

2. RGS-F ಯೋಜನೆಗೆ ಅನುದಾನ ಬಿಡುಗಡೆಯ ಪತ್ರದ ಸಂಖ್ಯೆ:KSTePS/VGST/2021-22/RGS-F /GRD-1068/161/2022-23/52, ದಿನಾಂಕ: 25.04.2023

3. ತಮ್ಮ ಸಂಸ್ಥೆಯಿಂದ PART-A ದಾಖಲೆಗಳನ್ನು ಸ್ವೀಕರಿಸಿದ ದಿನಾಂಕ: 20.05.2023

ಮೇಲ್ಕಂಡ ವಿಷಯ ಮತ್ತು ಉಲ್ಲೇಖಗಳಿಗೆ ಸಂಬಂಧಿಸಿದಂತೆ, ವಿಜ್ಞಾನ ಹಾಗೂ ತಂತ್ರಜ್ಞಾನ ದಾರ್ಶನಿಕ ಸಮೂಹ (ವಿತಂದಾಸ)ದ ವಿವಿಧ ಯೋಜನೆಗಳಡಿಯಿಂದಾದ RGS-F ಕಾರ್ಯಕ್ರಮದಡಿ 2021-22ನೇ ಸಾಲಿನಲ್ಲಿ ಆಯ್ಕೆಯಾಗಿದ್ದ ಡಾ|| ಕಾವ್ಯ. ಎಂ. ವಿ, ಜೈವಿಕ ತಂತ್ರಜ್ಞಾನ ವಿಭಾಗ, ಸಪ್ತಗಿರಿ ಇಂಜಿನಿಯರಿಂಗ್ ಕಾಲೇಜು, ಬೆಂಗಳೂರು (ಜಿ.ಆರ್.ಡಿ-1068) ರವರು ಸಲ್ಲಿಸಿದ್ದ "Polylactic acid reinforced by microcrystalline cellulose biocomposite for biomedical applications" ಶೀರ್ಷಿಕೆಯ ಪ್ರಸ್ತಾವನೆಗೆ ಒಂದೇ ಕಂತಿನ ಅನುದಾನವಾಗಿ ರೂ.3.00 ಲಕ್ಷಗಳನ್ನು RTGS ಮೂಲಕ ಬಿಡುಗಡೆ ಮಾಡಲಾಗಿರುವುದು ಸರಿಯಷ್ಟೆ.

ಈ ನಿಟ್ಟಿನಲ್ಲಿ, ವಿತಂದಾಸದ ವಿಮರ್ಶಾ ಸಮಿತಿಯ ಶಿಫಾರಸ್ಸಿನ ಆಧಾರದ ಮೇಲೆ ಮತ್ತು ಯೋಜನಾ ಸಂಯೋಜಕರು ಸಲ್ಲಿಸಿದ್ದ PART-A ದಾಖಲೆಗೆ ಅನುಗುಣವಾಗಿ ರೆಕರಿಂಗ್ (Recurring) ಮತ್ತು ನಾನ್-ರೆಕರಿಂಗ್ (Non-recurring) ಉಪಕರಣಗಳ/ವಸ್ತುಗಳ ಖರೀದಿಗೆ ಅನುಮೋದನೆಯನ್ನು ಈ ಕೆಳಕಂಡಂತೆ ನೀಡಲಾಗಿದೆ.

ಕ್ರ. ಸಂ.	ವಿವರಗಳು ನಾನ್-ರೆಕರಿಂಗ್ (Non recurring)	ಒಟ್ಟು ಪ್ರಮಾಣ	ವಿತಂದಾಸದಿಂದ ಅನುಮೋದನೆ ನೀಡಿದ ಮೊತ್ತ (ರೂ.ಗಳಲ್ಲಿ)
1	Tensile Strength Measuring Unit	01	—2,70,000.00
A) ಒಟ್ಟು ನಾನ್- ರೆಕರಿಂಗ್ ಮೊತ್ತ			
ರೆಕರಿಂಗ್ ಪಟ್ಟಿ (recurring)			
1	Chemicals/Glassware's/Plasticwares/Biological Specimens		30,000.00
B) ಒಟ್ಟು ರೆಕರಿಂಗ್ ಮೊತ್ತ			
	ಒಟ್ಟು ನಾನ್- ರೆಕರಿಂಗ್ ಮತ್ತು ರೆಕರಿಂಗ್ ಮೊತ್ತ (A+B)		3,00,000.00

ಯೋಜನೆಯ ಅನುಷ್ಠಾನಕ್ಕೆ ಅನುದಾನವನ್ನು ಬಳಸುವಾಗ ಈ ಕೆಳಕಂಡ ಅಂಶಗಳನ್ನು ಕಡ್ಡಾಯವಾಗಿ ಅನುಸರಿಸುವುದು:

- 1) ಉದ್ದೇಶಿತ ಯೋಜನೆ/ಕಾರ್ಯಕ್ರಮವನ್ನು ತಮ್ಮ ಸಂಸ್ಥೆಯಿಂದಗಲೀ ಅಥವಾ ಬೇರೆ ಸಂಸ್ಥೆಗಳ ಮುಖಾಂತರವಾಗಲೀ ಅನುಷ್ಠಾನಗೊಳಿಸುವಾಗ ಕರ್ನಾಟಕ ಸಾರ್ವಜನಿಕ ಸಂಗ್ರಹಣೆಯಲ್ಲಿ ಪಾರದರ್ಶಕತೆ ಅಧಿನಿಯಮ - 1999 ಮತ್ತು ನಿಯಮಗಳು 2000 (KTPP Act - 1999 & Rules - 2000), ಕರ್ನಾಟಕ ಆರ್ಥಿಕ ಸಂಹಿತೆ (KFC) ಹಾಗೂ ಕರ್ನಾಟಕ ಸರ್ಕಾರದ ಮಾರ್ಗಸೂಚಿಗಳನ್ನು ಕಟ್ಟುನಿಟ್ಟಾಗಿ (strictly) ಮತ್ತು ಕಡ್ಡಾಯವಾಗಿ (Compulsorily) ಅನುಸರಿಸುವುದು/ ಪಾಲಿಸುವುದು.
- 2) ಉದ್ದೇಶಿತ ಯೋಜನೆಯ ಅನುಷ್ಠಾನಕ್ಕೆ ಬಿಡುಗಡೆಯಾಗುವ ಅನುದಾನದಿಂದ ಅನುಮೋದಿತ ಪಾರ್ಟ್-ಎ (Part-A) ದಾಖಲೆಯಲ್ಲಿ ನಮೂದಿತವಾಗಿರುವ ಉಪಕರಣಗಳ/ವಸ್ತುಗಳನ್ನು ಮಾತ್ರ ಖರೀದಿಸುವುದು. ಇದರಲ್ಲಿ ಯಾವುದೇ ಬದಲಾವಣೆಗೆ ಅವಕಾಶವಿರುವುದಿಲ್ಲ.
- 3) ರೂ.1.00 ಲಕ್ಷ ಮತ್ತು ಅದಕ್ಕಿಂತ ಹೆಚ್ಚಿನ ಬೆಲೆಯ ಉಪಕರಣಗಳನ್ನು ಇ-ಟೆಂಡರ್ ಮೂಲಕ ಮಾತ್ರ ಖರೀದಿಸತಕ್ಕದ್ದು. ರೂ.1.00 ಲಕ್ಷಕ್ಕಿಂತ ಕಡಿಮೆ ಬೆಲೆಯ ಉಪಕರಣಗಳನ್ನು ಮಾನ್ಯುಯಲ್ ಟೆಂಡರ್ ಮೂಲಕ ಖರೀದಿಸ ಬಹುದು.
- 4) ಫಲಾನುಭವಿ ಸಂಸ್ಥೆಗೆ ಬಿಡುಗಡೆ ಮಾಡುವ ಅನುದಾನವನ್ನು ಅಗತ್ಯಕ್ಕೆ ಅನುಗುಣವಾಗಿ ನೀಡಲಾದ ಉದ್ದೇಶಕ್ಕೆ ಮಾತ್ರ ಬಳಸುವುದು ಹಾಗೂ ಸದರಿ ಅನುದಾನಕ್ಕೆ ಬರುವ ಬ್ಯಾಂಕ್ ಬಡ್ತಿ ಮೊತ್ತವನ್ನು ಯಾವುದೇ ಕಾರಣಕ್ಕೂ ಉದ್ದೇಶಿತ ಯೋಜನೆಯ ಅನುಷ್ಠಾನಕ್ಕೆ ಬಳಸಿಕೊಳ್ಳಲು ಅನುಮತಿ/ಅವಕಾಶವಿರುವುದಿಲ್ಲ. ಈ ಬಡ್ತಿಯ ಮೊತ್ತವನ್ನು ಉಪಯೋಗಿತ ಪ್ರಮಾಣ - ಪತ್ರದೊಂದಿಗೆ ವ್ಯವಸ್ಥಾಪಕ ನಿರ್ದೇಶಕರು, ಕಸ್ಟೋಡಿಯನ್ ಹೆಸರಿನಲ್ಲಿ ಚೆಕ್/ ಡಿ.ಡಿ. ಮೂಲಕ ಹಿಂತಿರುಗಿಸುವುದು.
- 5) ತಮ್ಮ ಸಂಸ್ಥೆಗೆ ಸದರಿ ಕಾರ್ಯಕ್ರಮದ ಅನುಷ್ಠಾನಕ್ಕೆ ಬಿಡುಗಡೆಯಾಗಿರುವ ಅನುದಾನದಲ್ಲಿ ಬಳಕೆಯಾಗದೆ ಉಳಿಕೆಯಾಗುವ ಮೊತ್ತವನ್ನು ಮುಂದಿನ ಕಂತಿನ ಅನುದಾನದಲ್ಲಿ ಕಡಿತಗೊಳಿಸಿ ಉಳಿದ ಅನುದಾನವನ್ನು ಬಿಡುಗಡೆ ಮಾಡಲಾಗುವುದು, ಅಥವಾ ಕೊನೆ ಕಂತು ಆಗಿದ್ದಲ್ಲಿ ಉಳಿಕೆಯಾಗುವ ಮೊತ್ತವನ್ನು ಹಿಂತಿರುಗಿಸುವುದು.
- 6) ಯೋಜನೆಯನ್ನು ಕಾರ್ಯಗತಗೊಳಿಸುವಾಗ ಸರ್ಕಾರದ ಎಲ್ಲಾ ಮಾರ್ಗಸೂಚಿಗಳು, ನಿಯಮಗಳು ಮತ್ತು ಷರತ್ತುಗಳನ್ನು ಕಟ್ಟುನಿಟ್ಟಾಗಿ ಅನುಸರಿಸತಕ್ಕದ್ದು.
- 7) ಯೋಜನೆಯ ಅನುಷ್ಠಾನದ ಯಾವುದೇ ಹಂತದಲ್ಲಿ ಯಾವುದೇ ಮಾಹಿತಿಯ ಅಗತ್ಯವಿದ್ದಲ್ಲಿ, ವಿತಂದಾಸ ಕಛೇರಿಯನ್ನು ಸಂಪರ್ಕಿಸಬಹುದು.

ತಮ್ಮ ವಿಶ್ವಾಸಿ,

R. K. K. K. 23/05/2023
ಡಾ. ಆರ್. ಟಿ. ವೆಂಕಟೇಶ

ವಿಜ್ಞಾನಿ-ಎಸ್.ಇ, ಕಸ್ಟೋಡಿಯನ್/ಸಂಯೋಜಕರು, ವಿತಂದಾಸ

ಪ್ರತಿ: ಶ್ರೀಮತಿ ಕಾವ್ಯ ಎಂ ವಿ, ಸಹಾಯಕ ಪ್ರಾಧ್ಯಾಪಕರು, ಜೈವಿಕ ತಂತ್ರಜ್ಞಾನ ವಿಭಾಗ, ಸಪ್ತಗಿರಿ
ಇಂಜಿನಿಯರಿಂಗ್ ಕಾಲೇಜು, #14/5, ಚಿಕ್ಕಸಂದ್ರ, ಹೆಸರಘಟ್ಟ ಮುಖ್ಯರಸ್ತೆ, ಬೆಂಗಳೂರು ಉತ್ತರ - 560 057.



ವಿದ್ಯುನ್ಮಾನ, ಮಾಹಿತಿ ತಂತ್ರಜ್ಞಾನ, ಜೈವಿಕ ತಂತ್ರಜ್ಞಾನ ಹಾಗೂ ವಿಜ್ಞಾನ ಮತ್ತು ತಂತ್ರಜ್ಞಾನ ಇಲಾಖೆ, ಕರ್ನಾಟಕ ಸರ್ಕಾರ
ವಿಜ್ಞಾನ ಭವನ' ನಂ: 24/2, 3ನೇ ಮಹಡಿ, 21ನೇ ಮುಖ್ಯ ರಸ್ತೆ, ಬನಶಂಕರಿ 2ನೇ ಹಂತ, ಬೆಂಗಳೂರು-560070
ದೂರವಾಣಿ-080-2671116 ಇ-ಮೇಲ್: ksteps.dst@gmail.com

ಸಂಖ್ಯೆ: ಕೆಸ್ಸೆಪ್ಸ/ ವಿತಂದಾಸ /RGS-F/GRD No. 1068/2021-22/ 4-53

ದಿನಾಂಕ: 15ನೇ ಫೆಬ್ರವರಿ, 2023

ಇವರಿಗೆ:

ಶ್ರೀಮತಿ ಕಾವ್ಯ ಎಂ ವಿ

ಸಹಾಯಕ ಪ್ರಾಧ್ಯಾಪಕರು

ಜೈವಿಕ ತಂತ್ರಜ್ಞಾನ ವಿಭಾಗ

ಸಪ್ತಗಿರಿ ಇಂಜಿನಿಯರಿಂಗ್ ಕಾಲೇಜು

#14/5, ಚಿಕ್ಕಸಂದ್ರ, ಹೆಸರಘಟ್ಟ ಮುಖ್ಯರಸ್ತೆ

ಬೆಂಗಳೂರು ಉತ್ತರ - 560,057

ಮಾನ್ಯರೇ,

ವಿಷಯ: 2021-22ನೇ ಸಾಲಿನ ವಿತಂದಾಸ ಯೋಜನೆಗಳಡಿ ಪ್ರಸ್ತಾವನೆ ಆಯ್ಕೆಯಾಗಿರುವ ಬಗ್ಗೆ

ಉಲ್ಲೇಖ: 1. ವಿತಂದಾಸ ಅರ್ಜಿ ಆಹ್ವಾನ ಜಾರಿರಾತು ಸಂಖ್ಯೆ: DST/KSTePS/VGST/2021-22 ದಿನಾಂಕ: 24.01.2022

2. ಸರ್ಕಾರಿ ಆದೇಶ ಸಂಖ್ಯೆ: ಐಟಿ ಬಿಟಿ 19 ಎಸ್ ಟಿ ಎಸ್ 2023, ಬೆಂಗಳೂರು, ದಿನಾಂಕ: 14.02.2023

ಮೇಲ್ಕಂಡ ವಿಷಯ ಮತ್ತು ಉಲ್ಲೇಖಗಳಿಗೆ ಸಂಬಂಧಿಸಿದಂತೆ, ಭಾರತ ರತ್ನ ಪ್ರೊ|| ಸಿ.ಎನ್.ಆರ್. ರಾವ್, ಎಫ್.ಆರ್.ಎಸ್., ರವರ ಅಧ್ಯಕ್ಷತೆಯಡಿ ರಚಿಸಲಾಗಿರುವ ವಿಜ್ಞಾನ ಮತ್ತು ತಂತ್ರಜ್ಞಾನ ದಾರ್ಶನಿಕ ಸಮೂಹದ (ವಿತಂದಾಸ) ಶಿಫಾರಸ್ಸಿನ ಆಧಾರದ ಮೇಲೆ 2021-22ನೇ ಸಾಲಿನ ವಿತಂದಾಸದ ಯುವ ವಿಜ್ಞಾನಿಗಳಿಗೆ ಮತ್ತು ಸಂಶೋಧಕರಿಗೆ ಸಂಶೋಧನೆಗಾಗಿ ಮೂಲಧನ (RGS/F) ಯೋಜನೆಯಡಿ ತಾವು ಸಲ್ಲಿಸಿದ್ದ "Polylactic acid reinforced by microcrystalline cellulose biocomposite for biomedical applications" ಶೀರ್ಷಿಕೆಯ ಪ್ರಸ್ತಾವನೆಯು ಆಯ್ಕೆಗೊಂಡು ಸರ್ಕಾರದಿಂದ ಅನುಮೋದನೆಗೊಂಡಿರುತ್ತದೆ ಎಂದು ತಿಳಿಸಲು ಹರ್ಷಿಸುತ್ತೇನೆ.

ವಿವಿಧ ಯೋಜನೆಗಳಡಿ ಆಯ್ಕೆಯಾದ ಸಂಸ್ಥೆ/ಪ್ರಸ್ತಾವನೆಗೆ ಸರ್ಕಾರದಿಂದ ಒದಗಿಸಲಾಗುವ ಅನುದಾನದ ವಿವರವನ್ನು ಅನುಬಂಧ-1 ರಲ್ಲಿ ಲಗತ್ತಿಸಿದೆ.

ಈ ನಿಟ್ಟಿನಲ್ಲಿ, ಈ ಕೆಳಕಂಡ ದಾಖಲೆಗಳನ್ನು ವಿತಂದಾಸ ಕಛೇರಿಗೆ (ನಂ: 702, 7ನೇ ಮಹಡಿ, 4ನೇ ಹಂತ, ಬಹುಮಹಡಿ ಕಟ್ಟಡ, ಅಂಬೇಡ್ಕರ್ ವೀದಿ, ಬೆಂಗಳೂರು-560001) ಸಲ್ಲಿಸಲು ಸೂಚಿಸಿದೆ:

1) PPMS ನಲ್ಲಿ ಅರ್ಜಿಯೊಂದಿಗೆ ಸಲ್ಲಿಸಲಾಗಿರುವ ಸಂಬಂಧಪಟ್ಟ ಪ್ರಾಧಿಕಾರದ ಸಹಿಯಿರುವ ಕೆಳಕಂಡ ದಾಖಲೆಗಳು:

- ಪ್ರಸ್ತಾವನೆಯ ಮೂಲ ಪ್ರತಿ - 2 ಪ್ರತಿಗಳು
- Part-A ದಾಖಲೆಯ ಮೂಲ ಪ್ರತಿ (ಅನುಬಂಧ-1 ರಲ್ಲಿ ನೀಡಲಾಗಿರುವ ಅನುದಾನದ ವಿವರಕ್ಕೆ ಹೊಂದುವಂತೆ ಇರತಕ್ಕದ್ದು)
- Undertaking letter ಮತ್ತು ಸಂಸ್ಥೆಯಿಂದ ನೀಡಲಾಗಿರುವ Endorsement Letter ನ ಮೂಲ ಪ್ರತಿಗಳು
- ಸಹಯೋಗದ ಪತ್ರ (Letter of Collaboration) - ಪ್ರಸ್ತಾವನೆಯಲ್ಲಿ ನಮೂದಿಸಿದ್ದಲ್ಲಿ
- ಸಂಶೋಧನಾ ಲೇಖನಗಳು (Publications) ಪ್ರತಿ, CV, ಅನುಭವ ಪ್ರಮಾಣ ಪತ್ರ, ಪಿ.ಹೆಚ್.ಡಿ. ಪ್ರಮಾಣ ಪತ್ರ ಮತ್ತು ಇತರ ಸಂಬಂಧಪಟ್ಟ ದಾಖಲೆಗಳು

2) ಅಫಿಡವಿಟ್ (ಅನುಬಂಧ-2 ರಲ್ಲಿ ನೀಡಲಾಗಿರುವ ನಮೂನೆಯಲ್ಲಿ ರೂ. 100/- ರ ಛಾಪಾ ಕಾಗದದ ಮೇಲೆ ನೀಡತಕ್ಕದ್ದು).

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Principal
Sapthagiri College of Engineering
14/5, Chikkaasandra, Hosuraghatta Main Road
Bengaluru - 560 057

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- 3) ಸಂಸ್ಥೆಯ ಮುಖ್ಯಸ್ಥರ ಲೆಟರ್ ಹೆಡ್ ನಲ್ಲಿ ಅನುದಾನ ಬಿಡುಗಡೆಗೆ ಸಂಸ್ಥೆಯ ಬ್ಯಾಂಕ್ ಖಾತೆಯ ಕೆಳಕಂಡ ವಿವರ (ಸಂಸ್ಥೆಯ ಮುಖ್ಯಸ್ಥರ ಖಾತೆಯ ವಿವರವನ್ನು ಮಾತ್ರ ನೀಡತಕ್ಕದ್ದು):

ಖಾತೆಯ ಹೆಸರು:
ಖಾತೆಯ ಸಂಖ್ಯೆ:
ಬ್ಯಾಂಕ್ ನ ಹೆಸರು ಮತ್ತು ಶಾಖೆ:
IFSC ಸಂಖ್ಯೆ:

ಮುಂದುವರಿದು, ತಮ್ಮ ಯೋಜನೆಯ ಜಿ. ಆರ್. ಡಿ. ಸಂಖ್ಯೆ 1068 ಆಗಿದ್ದು, ವಿತಂದಾಸ/ಕಸ್ಟೋಪ್ ಜೊತೆ ನಡೆಸಲಾಗಿರುವ ಮುಂದಿನ ಎಲ್ಲಾ ಪತ್ರ ವ್ಯವಹಾರಗಳಿಗೆ ಈ ಸಂಖ್ಯೆಯನ್ನು ತಪ್ಪದೇ ನಮೂದಿಸಲು ಸೂಚಿಸಿದೆ.

ಈ ಎಲ್ಲಾ ದಾಖಲೆಗಳನ್ನು ದಿನಾಂಕ: 21ನೇ ಫೆಬ್ರವರಿ, 2023, ರೊಳಗಾಗಿ ವಿತಂದಾಸ ಕಛೇರಿಗೆ ಸಲ್ಲಿಸಲು ಕೋರಿದೆ. ಹೆಚ್ಚಿನ ಮಾಹಿತಿಗಾಗಿ ದೂರವಾಣಿ ಸಂಖ್ಯೆ: 080-2203-2013/ ಇಮೇಲ್: visiongroup.st@gmail.com ಅನ್ನು ಸಂಪರ್ಕಿಸಬಹುದಾಗಿದೆ.

ಧನ್ಯವಾದಗಳೊಂದಿಗೆ,



ನಿರ್ದೇಶಕರು (ತಾಂತ್ರಿಕ)
ವಿದ್ಯುನ್ಮಾನ, ಮಾತಂ, ಜೈತಂ ಹಾಗೂ ವಿಜ್ಞಾನ ಮತ್ತು ತಂತ್ರಜ್ಞಾನ ಇಲಾಖೆ/
ವ್ಯವಸ್ಥಾಪಕ ನಿರ್ದೇಶಕರು, ಕಸ್ಟೋಪ್

ಪ್ರತಿ:

- 1) ಪ್ರಾಂಶುಪಾಲರು, ಸಪ್ತಗಿರಿ ಇಂಜಿನಿಯರಿಂಗ್ ಕಾಲೇಜು, #14/5, ಚಿಕ್ಕಸಂದ್ರ, ಹೆಸರಘಟ್ಟ ಮುಖ್ಯರಸ್ತೆ, ಬೆಂಗಳೂರು ಉತ್ತರ - 560 057.
- 2) ಪ್ರೊ. ಶೋಭ ಜಿ. ಸಹಾಯಕ ಪ್ರಾಧ್ಯಾಪಕರು, ಜೈವಿಕ ತಂತ್ರಜ್ಞಾನ ವಿಭಾಗ (Co-PI), ಸಪ್ತಗಿರಿ ಇಂಜಿನಿಯರಿಂಗ್ ಕಾಲೇಜು, #14/5, ಚಿಕ್ಕಸಂದ್ರ, ಹೆಸರಘಟ್ಟ ಮುಖ್ಯರಸ್ತೆ, ಬೆಂಗಳೂರು ಉತ್ತರ - 560 057.
- 3) ಸರ್ಕಾರದ ಜಂಟಿ ಕಾರ್ಯದರ್ಶಿಗಳು, ವಿಜ್ಞಾನ ಮತ್ತು ತಂತ್ರಜ್ಞಾನ ಇಲಾಖೆ, ಕೊರಡಿ ಸಂಖ್ಯೆ: 305, 5ನೇ ಮಹಡಿ, 5ನೇ ಹಂತ, ಬಹುಮಹಡಿ ಕಟ್ಟಡ, ಡಾ|| ಅಂಬೇಡ್ಕರ್ ವೀದಿ, ಬೆಂಗಳೂರು - 560 001.
- 4) ಕಛೇರಿ ಪ್ರತಿ..

ವಿಜ್ಞಾನ ಮತ್ತು ತಂತ್ರಜ್ಞಾನ ದಾರ್ಶನಿಕ ಸಮೂಹ

ಮಾಹಿತಿ ತಂತ್ರಜ್ಞಾನ, ಜೈವಿಕ ತಂತ್ರಜ್ಞಾನ ಹಾಗೂ ವಿಜ್ಞಾನ ಮತ್ತು ತಂತ್ರಜ್ಞಾನ ಇಲಾಖೆ
ಕರ್ನಾಟಕ ಸರ್ಕಾರದ ಸಚಿವಾಲಯ, 7ನೇ ಮಹಡಿ, 4ನೇ ಗೇಟ್, ಬಹುಮಹಡಿ ಕಟ್ಟಡ, ಡಾ|| ಅಂಬೇಡ್ಕರ್ ವೀದಿ, ಬೆಂಗಳೂರು-560 001
080-2203 2013, visiongroup.st@gmail.com, www.vgst.in

ಸಂಖ್ಯೆ: ವಿತಂದಾಸ/ಜಿ.ಆರ್.ಡಿ ಸಂಖ್ಯೆ:1068(2021-22)/RGS-F/2023-24/107 ದಿನಾಂಕ:23.05.2023

ಇವರಿಗೆ,

ಪ್ರಾಂಶುಪಾಲರು

ಸಪ್ತಗಿರಿ ಇಂಜಿನಿಯರಿಂಗ್ ಕಾಲೇಜು

#14/5, ಚಿಕ್ಕಸಂದ್ರ, ಹೆಸರಾಘಟ್ಟ ಮುಖ್ಯರಸ್ತೆ ಬೆಂಗಳೂರು - 560 057

ಮಾನ್ಯರೇ,

ವಿಷಯ: RGS-F ಯೋಜನೆಯಡಿಯಲ್ಲಿ ಆಯ್ಕೆಯಾಗಿರುವ ಫಲಾನುಭವಿ ವಿದ್ಯಾಸಂಸ್ಥೆಗೆ ಉಪಕರಣಗಳ/ವಸ್ತುಗಳ ಖರೀದಿಗೆ (ಜಿ.ಆರ್.ಡಿ-1068) ಅನುಮೋದನೆ ನೀಡುವ ಬಗ್ಗೆ

ಉಲ್ಲೇಖ: 1. ಸೂಚನೆ ಪತ್ರ ಸಂಖ್ಯೆ: ಕೆಸ್ಕೆಪ್ಸ್/ವಿತಂದಾಸ/RGS-F/GRD-1068/2021-22/453,

ದಿನಾಂಕ: 15.02.2023

2. RGS-F ಯೋಜನೆಗೆ ಅನುದಾನ ಬಿಡುಗಡೆಯ ಪತ್ರದ ಸಂಖ್ಯೆ:KSTePS/VGST/2021-22/RGS-F /GRD-1068/161/2022-23/52, ದಿನಾಂಕ: 25.04.2023

3. ತಮ್ಮ ಸಂಸ್ಥೆಯಿಂದ PART-A ದಾಖಲೆಗಳನ್ನು ಸ್ವೀಕರಿಸಿದ ದಿನಾಂಕ: 20.05.2023

ಮೇಲ್ಕಂಡ ವಿಷಯ ಮತ್ತು ಉಲ್ಲೇಖಗಳಿಗೆ ಸಂಬಂಧಿಸಿದಂತೆ, ವಿಜ್ಞಾನ ಹಾಗೂ ತಂತ್ರಜ್ಞಾನ ದಾರ್ಶನಿಕ ಸಮೂಹ (ವಿತಂದಾಸ)ದ ವಿವಿಧ ಯೋಜನೆಗಳಲ್ಲೊಂದಾದ RGS-F ಕಾರ್ಯಕ್ರಮದಡಿ 2021-22ನೇ ಸಾಲಿನಲ್ಲಿ ಆಯ್ಕೆಯಾಗಿದ್ದ ಡಾ|| ಕಾವ್ಯ. ಎಂ. ವಿ, ಜೈವಿಕ ತಂತ್ರಜ್ಞಾನ ವಿಭಾಗ, ಸಪ್ತಗಿರಿ ಇಂಜಿನಿಯರಿಂಗ್ ಕಾಲೇಜು, ಬೆಂಗಳೂರು (ಜಿ.ಆರ್.ಡಿ-1068) ರವರು ಸಲ್ಲಿಸಿದ್ದ "Polylactic acid reinforced by microcrystalline cellulose biocomposite for biomedical applications" ಶೀರ್ಷಿಕೆಯ ಪ್ರಸ್ತಾವನೆಗೆ ಒಂದೇ ಕಂತಿನ ಅನುದಾನವಾಗಿ ರೂ.3.00 ಲಕ್ಷಗಳನ್ನು RTGS ಮೂಲಕ ಬಿಡುಗಡೆ ಮಾಡಲಾಗಿರುವುದು ಸರಿಯಷ್ಟೆ.

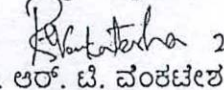
ಈ ನಿಟ್ಟಿನಲ್ಲಿ, ವಿತಂದಾಸದ ವಿಮರ್ಶಾ ಸಮಿತಿಯ ಶಿಫಾರಸ್ಸಿನ ಆಧಾರದ ಮೇಲೆ ಮತ್ತು ಯೋಜನಾ ಸಂಯೋಜಕರು ಸಲ್ಲಿಸಿದ್ದ PART-A ದಾಖಲೆಗೆ ಅನುಗುಣವಾಗಿ ರೆಕರಿಂಗ್ (Recurring) ಮತ್ತು ನಾನ್-ರೆಕರಿಂಗ್ (Non-recurring) ಉಪಕರಣಗಳ/ವಸ್ತುಗಳ ಖರೀದಿಗೆ ಅನುಮೋದನೆಯನ್ನು ಈ ಕೆಳಕಂಡಂತೆ ನೀಡಲಾಗಿದೆ.

ಕ್ರ. ಸಂ.	ವಿವರಗಳು ನಾನ್-ರೆಕರಿಂಗ್ (Non recurring)	ಒಟ್ಟು ಪ್ರಮಾಣ	ವಿತಂದಾಸದಿಂದ ಅನುಮೋದನೆ ನೀಡಿದ ಮೊತ್ತ (ರೂ.ಗಳಲ್ಲಿ)
1	Tensile-Strength Measuring Unit	01	— 2,70,000.00
	A) ಒಟ್ಟು ನಾನ್- ರೆಕರಿಂಗ್ ಮೊತ್ತ		
	ರೆಕರಿಂಗ್ ಪಟ್ಟಿ (recurring)		
1	Chemicals/Glassware's/Plasticwares/Biological Specimens		30,000.00
	B) ಒಟ್ಟು ರೆಕರಿಂಗ್ ಮೊತ್ತ		
	ಒಟ್ಟು ನಾನ್- ರೆಕರಿಂಗ್ ಮತ್ತು ರೆಕರಿಂಗ್ ಮೊತ್ತ (A+B)		
			3,00,000.00

ಯೋಜನೆಯ ಅನುಷ್ಠಾನಕ್ಕೆ ಅನುದಾನವನ್ನು ಬಳಸುವಾಗ ಈ ಕೆಳಕಂಡ ಅಂಶಗಳನ್ನು ಕಡ್ಡಾಯವಾಗಿ ಅನುಸರಿಸುವುದು:

- 1) ಉದ್ದೇಶಿತ ಯೋಜನೆ/ಕಾರ್ಯಕ್ರಮವನ್ನು ತಮ್ಮ ಸಂಸ್ಥೆಯಿಂದಗಲೀ ಅಥವಾ ಬೇರೆ ಸಂಸ್ಥೆಗಳ ಮುಖಾಂತರವಾಗಲೀ ಅನುಷ್ಠಾನಗೊಳಿಸುವಾಗ ಕರ್ನಾಟಕ ಸಾರ್ವಜನಿಕ ಸಂಗ್ರಹಣೆಯಲ್ಲಿ ಪಾರದರ್ಶಕತೆ ಅಧಿನಿಯಮ - 1999 ಮತ್ತು ನಿಯಮಗಳು 2000 (KTPP Act - 1999 & Rules - 2000), ಕರ್ನಾಟಕ ಆರ್ಥಿಕ ಸಂಹಿತೆ (KFC) ಹಾಗೂ ಕರ್ನಾಟಕ ಸರ್ಕಾರದ ಮಾರ್ಗಸೂಚಿಗಳನ್ನು ಕಟ್ಟುನಿಟ್ಟಾಗಿ (strictly) ಮತ್ತು ಕಡ್ಡಾಯವಾಗಿ (Compulsorily) ಅನುಸರಿಸುವುದು/ ಪಾಲಿಸುವುದು.
- 2) ಉದ್ದೇಶಿತ ಯೋಜನೆಯ ಅನುಷ್ಠಾನಕ್ಕೆ ಬಿಡುಗಡೆಯಾಗುವ ಅನುದಾನದಿಂದ ಅನುಮೋದಿತ ಪಾರ್ಟ್-ಎ (Part-A) ದಾಖಲೆಯಲ್ಲಿ ನಮೂದಿತವಾಗಿರುವ ಉಪಕರಣಗಳ/ವಸ್ತುಗಳನ್ನು ಮಾತ್ರ ಖರೀದಿಸುವುದು. ಇದರಲ್ಲಿ ಯಾವುದೇ ಬದಲಾವಣೆಗೆ ಅವಕಾಶವಿರುವುದಿಲ್ಲ.
- 3) ರೂ.1.00 ಲಕ್ಷ ಮತ್ತು ಅದಕ್ಕಿಂತ ಹೆಚ್ಚಿನ ಬೆಲೆಯ ಉಪಕರಣಗಳನ್ನು ಇ-ಟೆಂಡರ್ ಮೂಲಕ ಮಾತ್ರ ಖರೀದಿಸತಕ್ಕದ್ದು. ರೂ.1.00 ಲಕ್ಷಕ್ಕಿಂತ ಕಡಿಮೆ ಬೆಲೆಯ ಉಪಕರಣಗಳನ್ನು ಮಾನ್ಯುಯಲ್ ಟೆಂಡರ್ ಮೂಲಕ ಖರೀದಿಸ ಬಹುದು.
- 4) ಫಲಾನುಭವಿ ಸಂಸ್ಥೆಗೆ ಬಿಡುಗಡೆ ಮಾಡುವ ಅನುದಾನವನ್ನು ಅಗತ್ಯಕ್ಕೆ ಅನುಗುಣವಾಗಿ ನೀಡಲಾದ ಉದ್ದೇಶಕ್ಕೆ ಮಾತ್ರ ಬಳಸುವುದು ಹಾಗೂ ಸದರಿ ಅನುದಾನಕ್ಕೆ ಬರುವ ಬ್ಯಾಂಕ್ ಬಡ್ತಿ ಮೊತ್ತವನ್ನು ಯಾವುದೇ ಕಾರಣಕ್ಕೂ ಉದ್ದೇಶಿತ ಯೋಜನೆಯ ಅನುಷ್ಠಾನಕ್ಕೆ ಬಳಸಿಕೊಳ್ಳಲು ಅನುಮತಿ/ಅವಕಾಶವಿರುವುದಿಲ್ಲ. ಈ ಬಡ್ತಿಯ ಮೊತ್ತವನ್ನು ಉಪಯೋಗಿತ ಪ್ರಮಾಣ - ಪತ್ರದೊಂದಿಗೆ ವ್ಯವಸ್ಥಾಪಕ ನಿರ್ದೇಶಕರು, ಕಸ್ಟೋಡಿಯನ್ ಹೆಸರಿನಲ್ಲಿ ಚೆಕ್/ ಡಿ.ಡಿ. ಮೂಲಕ ಹಿಂತಿರುಗಿಸುವುದು.
- 5) ತಮ್ಮ ಸಂಸ್ಥೆಗೆ ಸದರಿ ಕಾರ್ಯಕ್ರಮದ ಅನುಷ್ಠಾನಕ್ಕೆ ಬಿಡುಗಡೆಯಾಗಿರುವ ಅನುದಾನದಲ್ಲಿ ಬಳಕೆಯಾಗದ ಉಳಿಕೆಯಾಗುವ ಮೊತ್ತವನ್ನು ಮುಂದಿನ ಕಂತಿನ ಅನುದಾನದಲ್ಲಿ ಕಡಿತಗೊಳಿಸಿ ಉಳಿದ ಅನುದಾನವನ್ನು ಬಿಡುಗಡೆ ಮಾಡಲಾಗುವುದು, ಅಥವಾ ಕೊನೆ ಕಂತು ಆಗಿದ್ದಲ್ಲಿ ಉಳಿಕೆಯಾಗುವ ಮೊತ್ತವನ್ನು ಹಿಂತಿರುಗಿಸುವುದು.
- 6) ಯೋಜನೆಯನ್ನು ಕಾರ್ಯಗತಗೊಳಿಸುವಾಗ ಸರ್ಕಾರದ ಎಲ್ಲಾ ಮಾರ್ಗಸೂಚಿಗಳು, ನಿಯಮಗಳು ಮತ್ತು ಷರತ್ತುಗಳನ್ನು ಕಟ್ಟುನಿಟ್ಟಾಗಿ ಅನುಸರಿಸತಕ್ಕದ್ದು.
- 7) ಯೋಜನೆಯ ಅನುಷ್ಠಾನದ ಯಾವುದೇ ಹಂತದಲ್ಲಿ ಯಾವುದೇ ಮಾಹಿತಿಯ ಅಗತ್ಯವಿದ್ದಲ್ಲಿ, ವಿತಂದಾಸ ಕಛೇರಿಯನ್ನು ಸಂಪರ್ಕಿಸಬಹುದು.

ತಮ್ಮ ವಿಶ್ವಾಸಿ,

 23/05/2023
ಡಾ. ಆರ್. ಟಿ. ವೆಂಕಟೇಶ

ವಿಜ್ಞಾನಿ-ಎಸ್.ಇ, ಕಸ್ಟೋಡಿಯನ್/ಸಂಯೋಜಕರು, ವಿತಂದಾಸ

✓ ಪ್ರತಿ: ಶ್ರೀಮತಿ ರಾವ್ ಎಂ ವಿ . ಸಹಾಯಕ ಪ್ರಾಧ್ಯಾಪಕರು, ಜೈವಿಕ ತಂತ್ರಜ್ಞಾನ ವಿಭಾಗ, ಸಪ್ತಗಿರಿ
ಇಂಜಿನಿಯರಿಂಗ್ ಕಾಲೇಜು, #14/5, ಚಿಕ್ಕಸಂದ್ರ, ಹೆಸರಘಟ್ಟ ಮುಖ್ಯರಸ್ತೆ, ಬೆಂಗಳೂರು ಉತ್ತರ - 560 057.



Karnataka State Council for Science and Technology

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Indian Institute of Science Campus, Bengaluru – 560 012

Telephone: 080-23341652, 23348848, 23348849, 23348840

Email: office.kscst@iisc.ac.in, office@kscst.org.in Website: www.kscst.iisc.ernet.in, www.kscst.org.in

Dr. U T Vijay

Executive Secretary

24th April, 2023

Ref: 7.1.01/SPP/33

The Principal,
Sapthagiri College of Engineering,
14/5, Chickasandra, Hesaraghatta Main Road,
Bengaluru – 560 057.

Dear Sir/Madam,

Sub : Sanction of Student Project - 46th Series: Year 2022-2023

Project Proposal Reference No. : 46S_BE_2026

Ref : Project Proposal entitled

**A SUSTAINABLE TECHNOLOGY FOR ENHANCING PLANT GROWTH
USING COPPER BASED NANOMATERIAL BY MICROBIAL
SIDEROPHORES PRODUCTION IN PLANT RHIZOSPHERE AND ITS
INFLUENCE ON IRON UPTAKE**

We are pleased to inform that your student project proposal referred above, has been approved by the Council under "Student Project Programme - 46th Series". The project details are as below:

Student(s)	Ms. PALLAVI GOWDA J	Department	BIOTECHNOLOGY
	Ms. KEERTHI REDDY S		
	Ms. ROHINI B N		
	Ms. YASHASWINI B R		
Guide(s)	Dr. SHOBHA G	Sanctioned Amount (in Rs.)	6,000.00
	Dr. SOUMYA C		

Instructions:

- The project should be performed based on the objectives of the proposal submitted.
- Any changes in the project title, objectives or students team is liable for rejection of the project and your institution shall return the sanctioned funds to KSCST.
- Please quote your project reference number printed above in all your future correspondences.
- After completing the project, 2 to 3 page write-up (synopsis) needs to be uploaded on to the following Google Forms link <https://forms.gle/nWTaJjvrwzp3Wmvt6>. The synopsis should include following:
 - Project Reference Number
 - Title of the project
 - Name of the College & Department
 - Name of the students & Guide(s)
 - Keywords
 - Introduction / background (with specific reference to the project, work done earlier, etc) - about 20 lines
 - Objectives (about 10 lines)


Principal
Sapthagiri College of Engineering
14/5, Chickasandra, Hesaraghatta Main Road
Bengaluru - 560 057

- 8) Methodology (about 20 lines on materials, methods, details of work carried out, including drawings, diagrams etc)
- 9) Results and Conclusions (about 20 lines with specific reference to work carried out)
- 10) Scope for future work (about 20 lines).
- e) In case of incompeted projects, the sanctioned amount shall be returned to KSCST.
- f) The sanctioned amount will be transferred by NEFT to the bank account provided by the College/Institute.
- g) The sponsored projects evaluation will be held in the Nodal Centre/Online Mode and the details of the same will be intimated shortly by email / Website announcement.
- h) After completion of the project, soft copy of the project report duly signed by the Principal, the HoD, Guide(s) and student(s) shall be uploaded in the following Google Forms Link <https://forms.gle/YWz56TrGg7fnSQgc7>. The report should be prepared in the format prescribed by the university.

Please visit our website for further announcements / information and for any clarifications please email to spp@kscst.org.in

Thanking you and with best regards,

Yours sincerely,



(U T Vijay)

Copy to:

- 1) The HoD
BIOTECHNOLOGY
SAPTHAGIRI COLLEGE OF ENGINEERING, BENGALURU
- 2) Dr. SHOBHA G Dr. SOUMYA C
BIOTECHNOLOGY
SAPTHAGIRI COLLEGE OF ENGINEERING, BENGALURU
- 3) THE ACCOUNTS OFFICER
KSCST, BENGALURU



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Dr. U T Vijay

Executive Secretary

24th April, 2023

Ref: 7.1.01/SPP/33

The Principal,
Sapthagiri College of Engineering,
14/5, Chickasandra, Hesaraghatta Main Road,
Bengaluru – 560 057.

Dear Sir/Madam,

Sub : Sanction of Student Project - 46th Series: Year 2022-2023

Project Proposal Reference No. : 46S_BE_2778

Ref : Project Proposal entitled

**DEVELOPMENT OF ECO-FRIENDLY BIODEGRADABLE FOOD
PACKAGING FILM FROM BY-PRODUCTS OF FRUIT WASTE AND
PROCESSING WITH DIFFERENT LASTICIZERS**

We are pleased to inform that your student project proposal referred above, has been approved by the Council under "Student Project Programme - 46th Series". The project details are as below:

Student(s)	Ms. HARSSHITHA J K	Department	BIOTECHNOLOGY
	Ms. AMULYA S M		
	Ms. SPANDANA IYER		
	Ms. VAISHNAVI R		
Guide(s)	Dr. SOWMYA C	Sanctioned Amount (in Rs.)	6,000.00
	Dr. SHOBHA G		

Instructions:

- The project should be performed based on the objectives of the proposal submitted.
- Any changes in the project title, objectives or students team is liable for rejection of the project and your institution shall return the sanctioned funds to KSCST.
- Please quote your project reference number printed above in all your future correspondences.
- After completing the project, 2 to 3 page write-up (synopsis) needs to be uploaded on to the following Google Forms link <https://forms.gle/nWTaJjvrvzp3Wmvt6>. The synopsis should include following:
 - Project Reference Number
 - Title of the project
 - Name of the College & Department
 - Name of the students & Guide(s)
 - Keywords
 - Introduction / background (with specific reference to the project, work done earlier, etc) - about 20 lines
 - Objectives (about 10 lines)


Principal
Sapthagiri College of Engineering
14/5, Chickasandra, Hesaraghatta Main Road
Bengaluru - 560 057

- 8) Methodology (about 20 lines on materials, methods, details of work carried out, including drawings, diagrams etc)
 - 9) Results and Conclusions (about 20 lines with specific reference to work carried out)
 - 10) Scope for future work (about 20 lines).
- e) In case of incompeted projects, the sanctioned amount shall be returned to KSCST.
 - f) The sanctioned amount will be transferred by NEFT to the bank account provided by the College/Institute.
 - g) The sponsored projects evaluation will be held in the Nodal Centre/Online Mode and the details of the same will be intimated shortly by email / Website announcement.
 - h) After completion of the project, soft copy of the project report duly signed by the Principal, the HoD, Guide(s) and student(s) shall be uploaded in the following Google Forms Link <https://forms.gle/YWz56TrGg7fnSQgc7>. The report should be prepared in the format prescribed by the university.

Please visit our website for further announcements / information and for any clarifications please email to spp@kscst.org.in

Thanking you and with best regards,

Yours sincerely,



(U T Vijay)

Copy to:

- 1) The HoD
BIOTECHNOLOGY
SAPTHAGIRI COLLEGE OF ENGINEERING, BENGALURU
- 2) Dr. SOWMYA C Dr. SHOBHA G
BIOTECHNOLOGY
SAPTHAGIRI COLLEGE OF ENGINEERING, BENGALURU
- 3) THE ACCOUNTS OFFICER
KSCST, BENGALURU



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Dr. U T Vijay

Executive Secretary

24th April, 2023

Ref: 7.1.01/SPP/33

The Principal,
Sapthagiri College of Engineering,
14/5, Chickasandra, Hesaraghatta Main Road,
Bengaluru – 560 057.

Dear Sir/Madam,

Sub : Sanction of Student Project - 46th Series: Year 2022-2023

Project Proposal Reference No. : 46S_BE_2379

Ref : Project Proposal entitled **GREEN INHIBITOR INCORPORATED BIOFILMS FOR CORROSION RESISTANCE**

We are pleased to inform that your student project proposal referred above, has been approved by the Council under "Student Project Programme - 46th Series". The project details are as below:

Student(s)	Ms. CHERUKURI DHARA	Department	BIOTECHNOLOGY
	Ms. AASIMA RIZWANA Y M		
	Ms. MEGHASHREE D		
	Ms. VEDHASHREE M		
Guide(s)	Prof. KAVYA M V	Sanctioned Amount (in Rs.)	6,000.00
	Dr. SOWMYA C		

Instructions:

- The project should be performed based on the objectives of the proposal submitted.
- Any changes in the project title, objectives or students team is liable for rejection of the project and your institution shall return the sanctioned funds to KSCST.
- Please quote your project reference number printed above in all your future correspondences.
- After completing the project, 2 to 3 page write-up (synopsis) needs to be uploaded on to the following Google Forms link <https://forms.gle/nWTaJjvrwzp3Wmvt6>. The synopsis should include following:
 - Project Reference Number
 - Title of the project
 - Name of the College & Department
 - Name of the students & Guide(s)
 - Keywords
 - Introduction / background (with specific reference to the project, work done earlier, etc) - about 20 lines
 - Objectives (about 10 lines)

Principal
Sapthagiri College of Engineering
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- 8) Methodology (about 20 lines on materials, methods, details of work carried out, including drawings, diagrams etc)
- 9) Results and Conclusions (about 20 lines with specific reference to work carried out)
- 10) Scope for future work (about 20 lines).
- e) In case of incompeted projects, the sanctioned amount shall be returned to KSCST.
- f) The sanctioned amount will be transferred by NEFT to the bank account provided by the College/Institute.
- g) The sponsored projects evaluation will be held in the Nodal Centre/Online Mode and the details of the same will be intimated shortly by email / Website announcement.
- h) After completion of the project, soft copy of the project report duly signed by the Principal, the HoD, Guide(s) and student(s) shall be uploaded in the following Google Forms Link <https://forms.gle/YWz56TrGg7fnSQgc7>. The report should be prepared in the format prescribed by the university.

Please visit our website for further announcements / information and for any clarifications please email to spp@kscst.org.in

Thanking you and with best regards,

Yours sincerely,



(U T Vijay)

Copy to:

- 1) The HoD
BIOTECHNOLOGY
SAPTHAGIRI COLLEGE OF ENGINEERING, BENGALURU
- 2) Prof. KAVYA M V Dr. SOWMYA C
BIOTECHNOLOGY
SAPTHAGIRI COLLEGE OF ENGINEERING, BENGALURU
- 3) THE ACCOUNTS OFFICER
KSCST, BENGALURU



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Dr. U T Vijay

Executive Secretary

24th April, 2023

Ref: 7.1.01/SPP/33

The Principal,
Sapthagiri College of Engineering,
14/5, Chickasandra, Hesaraghatta Main Road,
Bengaluru – 560 057.

Dear Sir/Madam,

Sub : Sanction of Student Project - 46th Series: Year 2022-2023

Project Proposal Reference No. : 46S_BE_1268

Ref : Project Proposal entitled **MEDICINE DISPENSING MACHINE USING IMAGE PROCESSING**

We are pleased to inform that your student project proposal referred above, has been approved by the Council under "Student Project Programme - 46th Series". The project details are as below:

Student(s)	Mr. BHARATH G	Department	COMPUTER SCIENCE AND ENGINEERING
	MR. LKITHGOWDA A P		
	Ms. AMULYA S K		
	Ms. ANUSHA M.L		
Guide(s)	Prof. SHEELA RANI C M	Sanctioned Amount (in Rs.)	4,000.00

Instructions:

- The project should be performed based on the objectives of the proposal submitted.
- Any changes in the project title, objectives or students team is liable for rejection of the project and your institution shall return the sanctioned funds to KSCST.
- Please quote your project reference number printed above in all your future correspondences.
- After completing the project, 2 to 3 page write-up (synopsis) needs to be uploaded on to the following Google Forms link <https://forms.gle/nWTaJjvrwzp3Wmvt6>. The synopsis should include following:
 - Project Reference Number
 - Title of the project
 - Name of the College & Department
 - Name of the students & Guide(s)
 - Keywords
 - Introduction / background (with specific reference to the project, work done earlier, etc) - about 20 lines
 - Objectives (about 10 lines)

Principal

Sapthagiri College of Engineering
14/5, Chikkasandra, Hesaraghatta Main Road
Bengaluru - 560 057

46S_BE_1268

- 8) Methodology (about 20 lines on materials, methods, details of work carried out, including drawings, diagrams etc)
 - 9) Results and Conclusions (about 20 lines with specific reference to work carried out)
 - 10) Scope for future work (about 20 lines).
- e) In case of incompleted projects, the sanctioned amount shall be returned to KSCST.
 - f) The sanctioned amount will be transferred by NEFT to the bank account provided by the College/Institute.
 - g) The sponsored projects evaluation will be held in the Nodal Centre/Online Mode and the details of the same will be intimated shortly by email / Website announcement.
 - h) After completion of the project, soft copy of the project report duly signed by the Principal, the HoD, Guide(s) and student(s) shall be uploaded in the following Google Forms Link <https://forms.gle/YWz56TrGg7fnSQgc7>. The report should be prepared in the format prescribed by the university.

Please visit our website for further announcements / information and for any clarifications please email to spp@kscst.org.in

Thanking you and with best regards,

Yours sincerely,



(U T Vijay)

Copy to:

- 1) The HoD
COMPUTER SCIENCE AND ENGINEERING
SAPTHAGIRI COLLEGE OF ENGINEERING, BENGALURU
- 2) Prof. SHEELA RANI C M
COMPUTER SCIENCE AND ENGINEERING
SAPTHAGIRI COLLEGE OF ENGINEERING, BENGALURU
- 3) THE ACCOUNTS OFFICER
KSCST, BENGALURU



Principal
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Dr. U T Vijay

Executive Secretary

24th April, 2023

Ref: 7.1.01/SPP/33

The Principal,
Sapthagiri College of Engineering,
14/5, Chickasandra, Hesaraghatta Main Road,
Bengaluru – 560 057.

Dear Sir/Madam,

Sub : Sanction of Student Project - 46th Series: Year 2022-2023

Project Proposal Reference No. : 46S_BE_4383

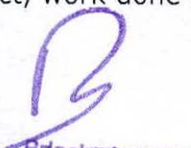
Ref : Project Proposal entitled **SOLAR POWERED ELECTRIC VEHICLE CHARGING STATION USING IOT**

We are pleased to inform that your student project proposal referred above, has been approved by the Council under "Student Project Programme - 46th Series". The project details are as below:

Student(s)	Mr. ROHITH S	Department	COMPUTER SCIENCE AND ENGINEERING
	Ms. SANJANA PATIL		
	Ms. SRUSHTI K S		
	Ms. VINUTHA D S		
Guide(s)	Prof. SHASHI REKHA G	Sanctioned Amount (in Rs.)	4,000.00

Instructions:

- The project should be performed based on the objectives of the proposal submitted.
- Any changes in the project title, objectives or students team is liable for rejection of the project and your institution shall return the sanctioned funds to KSCST.
- Please quote your project reference number printed above in all your future correspondences.
- After completing the project, 2 to 3 page write-up (synopsis) needs to be uploaded on to the following Google Forms link <https://forms.gle/nWTaJjvrwzp3Wmvt6>. The synopsis should include following:
 - Project Reference Number
 - Title of the project
 - Name of the College & Department
 - Name of the students & Guide(s)
 - Keywords
 - Introduction / background (with specific reference to the project, work done earlier, etc) - about 20 lines
 - Objectives (about 10 lines)

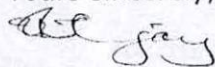

Principal
Sapthagiri College of Engineering
14/5, Chickasandra, Hesaraghatta Main Road,
Bengaluru - 560 057

- 8) Methodology (about 20 lines on materials, methods, details of work carried out, including drawings, diagrams etc)
- 9) Results and Conclusions (about 20 lines with specific reference to work carried out)
- 10) Scope for future work (about 20 lines).
- e) In case of incompeted projects, the sanctioned amount shall be returned to KSCST.
- f) The sanctioned amount will be transferred by NEFT to the bank account provided by the College/Institute.
- g) The sponsored projects evaluation will be held in the Nodal Centre/Online Mode and the details of the same will be intimated shortly by email / Website announcement.
- h) After completion of the project, soft copy of the project report duly signed by the Principal, the HoD, Guide(s) and student(s) shall be uploaded in the following Google Forms Link <https://forms.gle/YWz56TrGg7fnSQgc7>. The report should be prepared in the format prescribed by the university.

Please visit our website for further announcements / information and for any clarifications please email to spp@kscst.org.in

Thanking you and with best regards,

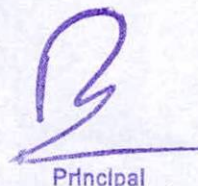
Yours sincerely,



(U T Vijay)

Copy to:

- 1) The HoD
COMPUTER SCIENCE AND ENGINEERING
SAPTHAGIRI COLLEGE OF ENGINEERING, BENGALURU
- 2) Prof. SHASHI REKHA G
COMPUTER SCIENCE AND ENGINEERING
SAPTHAGIRI COLLEGE OF ENGINEERING, BENGALURU
- 3) THE ACCOUNTS OFFICER
KSCST, BENGALURU



Principal
Sapthagiri College of Engineering
14/5, Chikkasandra, Hesaraghatta Main Road
Bengaluru - 560 057



Karnataka State Council for Science and Technology

(An autonomous organisation under the Dept. of Science & Technology, Govt. of Karnataka)

Indian Institute of Science Campus, Bengaluru – 560 012

Telephone: 080-23341652, 23348848, 23348849, 23348840

Email: office.kscst@iisc.ac.in, office@kscst.org.in • Website: www.kscst.iisc.ernet.in, www.kscst.org.in

Dr. U T Vijay

Executive Secretary

24th April, 2023

Ref: 7.1.01/SPP/33

The Principal,
Sapthagiri College of Engineering,
14/5, Chickasandra, Hesaraghatta Main Road,
Bengaluru – 560 057.

Dear Sir/Madam,

Sub : Sanction of Student Project - 46th Series: Year 2022-2023

Project Proposal Reference No. : 46S_BE_2372

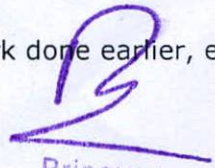
Ref : Project Proposal entitled **EFFICIENCY ENHANCEMENT OF WIND TURBINE USING MAGLEV TECHNIQUE**

We are pleased to inform that your student project proposal referred above, has been approved by the Council under "Student Project Programme - 46th Series". The project details are as below:

Student(s)	Mr. FAZLIL ABBAS A K	Department	ELECTRICAL AND ELECTRONICS ENGINEERING
	Mr. SANTHOSH REDDY G		
	Mr. BHARATH K H		
	Ms. KRUTHIK L G		
Guide(s)	Dr. VIDYA.M	Sanctioned Amount (in Rs.)	6,000.00

Instructions:

- The project should be performed based on the objectives of the proposal submitted.
- Any changes in the project title, objectives or students team is liable for rejection of the project and your institution shall return the sanctioned funds to KSCST.
- Please quote your project reference number printed above in all your future correspondences.
- After completing the project, 2 to 3 page write-up (synopsis) needs to be uploaded on to the following Google Forms link <https://forms.gle/nWTaJjvrwzp3Wmvt6>. The synopsis should include following:
 - Project Reference Number
 - Title of the project
 - Name of the College & Department
 - Name of the students & Guide(s)
 - Keywords
 - Introduction / background (with specific reference to the project, work done earlier, etc) - about 20 lines
 - Objectives (about 10 lines)


Principal
Sapthagiri College of Engineering
Chikkasandra, Hesaraghatta Road
Bangalore- 560 057

- 8) Methodology (about 20 lines on materials, methods, details of work carried out, including drawings, diagrams etc)
- 9) Results and Conclusions (about 20 lines with specific reference to work carried out)
- 10) Scope for future work (about 20 lines).
- e) In case of incompleted projects, the sanctioned amount shall be returned to KSCST.
- f) The sanctioned amount will be transferred by NEFT to the bank account provided by the College/Institute.
- g) The sponsored projects evaluation will be held in the Nodal Centre/Online Mode and the details of the same will be intimated shortly by email / Website announcement.
- h) After completion of the project, soft copy of the project report duly signed by the Principal, the HoD, Guide(s) and student(s) shall be uploaded in the following Google Forms Link <https://forms.gle/YWz56TrGg7fnSQgc7>. The report should be prepared in the format prescribed by the university.

Please visit our website for further announcements / information and for any clarifications please email to spp@kscst.org.in

Thanking you and with best regards,

Yours sincerely,



(U T Vijay)

Copy to:

- 1) The HoD
ELECTRICAL AND ELECTRONICS ENGINEERING
SAPTHAGIRI COLLEGE OF ENGINEERING, BENGALURU
- 2) Dr. VIDYA.M
ELECTRICAL AND ELECTRONICS ENGINEERING
SAPTHAGIRI COLLEGE OF ENGINEERING, BENGALURU
- 3) THE ACCOUNTS OFFICER
KSCST, BENGALURU



Principal
Sapthagiri College of Engineering
Chikkasandra, Hosaraghatta Road
Bangalore-560 057



Karnataka State Council for Science and Technology

(An autonomous organisation under the Dept. of Science & Technology, Govt. of Karnataka)

Indian Institute of Science Campus, Bengaluru – 560 012

Telephone: 080-23341652, 23348848, 23348849, 23348840

Email: office.kscst@iisc.ac.in, office@kscst.org.in ♦ Website: www.kscst.iisc.ernet.in, www.kscst.org.in

Dr. U T Vijay
Executive Secretary

24th April, 2023

Ref: 7.1.01/SPP/33

The Principal,
Sapthagiri College of Engineering,
14/5, Chickasandra, Hesaraghatta Main Road,
Bengaluru – 560 057.

Dear Sir/Madam,

Sub : Sanction of Student Project - 46th Series: Year 2022-2023

Project Proposal Reference No. : 46S_BE_1104

Ref : Project Proposal entitled **DESIGN AND IMPLEMENTATION OF SLEEP APNEA DETECTION SYSTEM**

We are pleased to inform that your student project proposal referred above, has been approved by the Council under "Student Project Programme - 46th Series". The project details are as below:

Student(s)	Mr. SUMANTH C GOWDA	Department	ELECTRONICS AND COMMUNICATION ENGINEERING
	Ms. POORNIMA S		
	Mr. RAHUL N		
	Mr. SANJAY K		
Guide(s)	Mrs. KALAVATHI S	Sanctioned Amount (in Rs.)	5,000.00
	Mr. PRAKASH JADHAV		

Instructions:

- The project should be performed based on the objectives of the proposal submitted.
- Any changes in the project title, objectives or students team is liable for rejection of the project and your institution shall return the sanctioned funds to KSCST.
- Please quote your project reference number printed above in all your future correspondences.
- After completing the project, 2 to 3 page write-up (synopsis) needs to be uploaded on to the following Google Forms link <https://forms.gle/nWTaJjvrwzp3Wmvt6>. The synopsis should include following:
 - Project Reference Number:
 - Title of the project
 - Name of the College & Department
 - Name of the students & Guide(s)
 - Keywords
 - Introduction / background (with specific reference to the project, work done earlier, etc) - about 20 lines
 - Objectives (about 10 lines)

Principal
Sapthagiri College of Engineering
14/5, Chikkasandra, Hesaraghatta Main Road
Bengaluru - 560 057

- 8) Methodology (about 20 lines on materials, methods, details of work carried out, including drawings, diagrams etc)
 - 9) Results and Conclusions (about 20 lines with specific reference to work carried out)
 - 10) Scope for future work (about 20 lines).
- e) In case of incompeted projects, the sanctioned amount shall be returned to KSCST.
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 - h) After completion of the project, soft copy of the project report duly signed by the Principal, the HoD, Guide(s) and studetn(s) shall be uploaded in the following Google Forms Link <https://forms.gle/YWz56TrGg7fnSQgc7>. The report should be prepared in the format prescribed by the university.

Please visit our website for further announcements / information and for any clarifications please email to spp@kscst.org.in

Thanking you and with best regards,

Yours sincerely,



(U T Vijay)

Copy to:

- 1) The HoD
ELECTRONICS AND COMMUNICATION ENGINEERING
SAPTHAGIRI COLLEGE OF ENGINEERING, BENGALURU
- 2) Mrs. KALAVATHI S Mr. PRAKASH JADHAV
ELECTRONICS AND COMMUNICATION ENGINEERING
SAPTHAGIRI COLLEGE OF ENGINEERING, BENGALURU
- 3) THE ACCOUNTS OFFICER
KSCST, BENGALURU



Principal
Sapthagiri College of Engineering
14/5, Chikkasandra, Hesaraghatta Main Road
Bengaluru - 560 057



Karnataka State Council for Science and Technology

(An autonomous organisation under the Dept. of Science & Technology, Govt. of Karnataka)

Indian Institute of Science Campus, Bengaluru – 560 012

Telephone: 080-23341652, 23348848, 23348849, 23348840

Email: office.kscst@iisc.ac.in, office@kscst.org.in ♦ Website: www.kscst.iisc.ernet.in, www.kscst.org.in

Dr. U T Vijay

Executive Secretary

24th April, 2023

Ref: 7.1.01/SPP/33

The Principal,
Sapthagiri College of Engineering,
14/5, Chickasandra, Hesaraghatta Main Road,
Bengaluru – 560 057.

Dear Sir/Madam,

Sub : Sanction of Student Project - 46th Series: Year 2022-2023

Project Proposal Reference No. : 46S_BE_3950

Ref : Project Proposal entitled **SELF DRIVING AUTOMOBILE FOR DISABLED PEOPLE USING MACHINE LEARNING**

We are pleased to inform that your student project proposal referred above, has been approved by the Council under "Student Project Programme - 46th Series". The project details are as below:

Student(s)	Mr. SHIVAM KUMAR	Department	INFORMATION SCIENCE AND ENGINEERING
	Ms. SHRUTI PANDEY		
	Mr. SIDDHI YESHWANT SONWALKAR		
	Mr. UTKARSH MANDILWAR		
Guide(s)	Dr. PRERANA CHAITHRA	Sanctioned Amount (in Rs.)	4,000.00

Instructions:

- The project should be performed based on the objectives of the proposal submitted.
- Any changes in the project title, objectives or students team is liable for rejection of the project and your institution shall return the sanctioned funds to KSCST.
- Please quote your project reference number printed above in all your future correspondences.
- After completing the project, 2 to 3 page write-up (synopsis) needs to be uploaded on to the following Google Forms link <https://forms.gle/nWTaJjvrvzp3Wmvt6>. The synopsis should include following:
 - Project Reference Number
 - Title of the project
 - Name of the College & Department
 - Name of the students & Guide(s)
 - Keywords
 - Introduction / background (with specific reference to the project, work done earlier, etc) - about 20 lines
 - Objectives (about 10 lines)

Principal
Sapthagiri College of Engineering
14/5, Chickasandra, Hesaraghatta Main Road
Bengaluru - 560 057

- 8) Methodology (about 20 lines on materials, methods, details of work carried out, including drawings, diagrams etc)
 - 9) Results and Conclusions (about 20 lines with specific reference to work carried out)
 - 10) Scope for future work (about 20 lines).
- e) In case of incompeted projects, the sanctioned amount shall be returned to KSCST.
 - f) The sanctioned amount will be transferred by NEFT to the bank account provided by the College/Institute.
 - g) The sponsored projects evaluation will be held in the Nodal Centre/Online Mode and the details of the same will be intimated shortly by email / Website announcement.
 - h) After completion of the project, soft copy of the project report duly signed by the Principal, the HoD, Guide(s) and student(s) shall be uploaded in the following Google Forms Link <https://forms.gle/YWz56TrGg7fnSQgc7>. The report should be prepared in the format prescribed by the university.

Please visit our website for further announcements / information and for any clarifications please email to spp@kscst.org.in

Thanking you and with best regards,

Yours sincerely,



(U T Vijay)

Copy to:

- 1) The HoD
INFORMATION SCIENCE AND ENGINEERING
SAPTHAGIRI COLLEGE OF ENGINEERING, BENGALURU
- 2) Dr. PRERANA CHAITHRA
INFORMATION SCIENCE AND ENGINEERING
SAPTHAGIRI COLLEGE OF ENGINEERING, BENGALURU
- 3) THE ACCOUNTS OFFICER
KSCST, BENGALURU



Principal
Sapthagiri College of Engineering
14/5, Chikkasandra, Hosaraghatta Main Road
Bengaluru - 560 057



Karnataka State Council for Science and Technology

(An autonomous organisation under the Dept. of Science & Technology, Govt. of Karnataka)

Indian Institute of Science Campus, Bengaluru – 560 012

Telephone: 080-23341652, 23348848, 23348849, 23348840

Email: office.kscst@iisc.ac.in, office@kscst.org.in • Website: www.kscst.iisc.ernet.in, www.kscst.org.in

Dr. U T Vijay

Executive Secretary

24th April, 2023

Ref: 7.1.01/SPP/33

The Principal,
Sapthagiri College of Engineering,
14/5, Chickasandra, Hesaraghatta Main Road,
Bengaluru – 560 057.

Dear Sir/Madam,

Sub : Sanction of Student Project - 46th Series: Year 2022-2023

Project Proposal Reference No. : 46S_BE_3817

Ref : Project Proposal entitled **METRO PLATFORM SAFETY BARRICADE USING RECYCLED PLASTIC ROPES**

We are pleased to inform that your student project proposal referred above, has been approved by the Council under "Student Project Programme - 46th Series". The project details are as below:

Student(s)	Mr. SHREYAS R	Department	MECHANICAL ENGINEERING
	Mr. RAHUL H M		
	Mr. SHREYAS KUMAR A S		
	Ms. SOWRABHA R S		
Guide(s)	Dr. BASAVARAJ S	Sanctioned Amount (in Rs.)	7,000.00
	Dr. TULSIDAS D		

Instructions:

- The project should be performed based on the objectives of the proposal submitted.
- Any changes in the project title, objectives or students team is liable for rejection of the project and your institution shall return the sanctioned funds to KSCST.
- Please quote your project reference number printed above in all your future correspondences.
- After completing the project, 2 to 3 page write-up (synopsis) needs to be uploaded on to the following Google Forms link <https://forms.gle/nWTajjvrwzp3Wmvt6>. The synopsis should include following:
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 - Title of the project
 - Name of the College & Department
 - Name of the students & Guide(s)
 - Keywords
 - Introduction / background (with specific reference to the project, work done earlier, etc) - about 20 lines
 - Objectives (about 10 lines)


Principal
Sapthagiri College of Engineering
14/5, Chickasandra, Hesaraghatta Main Road
Bengaluru - 560 057

- 8) Methodology (about 20 lines on materials, methods, details of work carried out, including drawings, diagrams etc)
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 - 10) Scope for future work (about 20 lines).
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 - g) The sponsored projects evaluation will be held in the Nodal Centre/Online Mode and the details of the same will be intimated shortly by email / Website announcement.
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Please visit our website for further announcements / information and for any clarifications please email to spp@kscst.org.in

Thanking you and with best regards,

Yours sincerely,



(U T Vijay)

Copy to:

- 1) The HoD
MECHANICAL ENGINEERING
SAPTHAGIRI COLLEGE OF ENGINEERING, BENGALURU
- 2) Dr. BASAVARAJ S Dr. TULSIDAS D
MECHANICAL ENGINEERING
SAPTHAGIRI COLLEGE OF ENGINEERING, BENGALURU
- 3) THE ACCOUNTS OFFICER
KSCST, BENGALURU



Principal
Sapthagiri College of Engineering
14/5, Chikkasandra, Hesaraghatta Main Road
Bengaluru - 560 057

2603
13-4-23



ವಿಶ್ವೇಶ್ವರಯ್ಯ ತಾಂತ್ರಿಕ ವಿಶ್ವವಿದ್ಯಾಲಯ

("ವಿ ಟಿ ಯು ಅಧಿನಿಯಮ ೧೯೯೪" ರ ಅಡಿಯಲ್ಲಿ ಕರ್ನಾಟಕ ಸರ್ಕಾರದಿಂದ ಸ್ಥಾಪಿತವಾದ ರಾಜ್ಯ ವಿಶ್ವವಿದ್ಯಾಲಯ)

Visvesvaraya Technological University

(State University of Government of Karnataka Established as per the VTU Act, 1994)

"Jnana Sangama" Belagavi-590018, Karnataka, India

Prof. B.E. Rangaswamy Ph.D.

Registrar

Phone:(0831)2405468

Fax: (0831)2405467

Ref. No. VTU/Aca/2022-23/06/28

Date:

3 APR 2023

To

The Principal

Sapthagiri College of Engineering, Bengaluru

Sir/Madam,

Sub: Sanction of Financial Assistance for 2021-2022 to the Innovative Project of UG Final Year Students of your Institution....reg.

Ref: 1) No. VTU/BGM/Aca/A-12/VTU-FA/2021-22/1366 dated 7-6-2022
2) Vice-Chancellor's Order dated 14-2-2023

With reference to the above, please find enclosed herewith D.D. No. 473645209 dated 3/27/2023 (mm/dd/yyyy) for Rs.70000 /- towards the sanction of financial assistance to the selected Innovative projects of UG final year students of BE/B.Tech.

Further, you are hereby informed to distributed the amount to the concerned students and get an acknowledgement for the same.

Original copy of the acknowledgement should be submitted to the undersigned on or before April 10th 2023.

Encl: as above

Yours faithfully,

Rangaswamy B.E

Registrar

He

B

13/4/23

Dr Tubridan

for distribute
Discurr

B
13/4/23

B
Principal
Sapthagiri College of Engineering
14/5, Chikkasandra, Hezaraghatta Main Road
Bengaluru - 560 057

जारी करने वाला भारतीय स्टेट बैंक
Issuing Branch: State Bank of India
कोड नं. / CODE No: 40649
Tel No. -

मांग द्राफ्ट
DEMAND DRAFT

Key: TIJBIO
Sr. No. 176234

27032023
DDMMYY

मार्गे जानेपर Principal, Sapthagiri College of Engineering, Bengaluru

या उनके आदेश

ON DEMAND PAY

OR ORDER

Seventy Thousand Only

रुपये RUPEES

अदा करें

₹

70000.00

IO: 000473645209
Name of Applicant

Key: TIJBIO Sr. No: 176234
FO VTU BELGAUM

AMOUNT BELOW 70001(0/5)

सुरक्षित प्राप्त / VALUE RECEIVED

भारतीय स्टेट बैंक

STATE BANK OF INDIA

अदाकर्ता शाखा / DRAWEE BRANCH: CCPC BANGALORE

कोड नं. / CODE No. 40743

Manjunath Singh BS
SS No. - B11381
BRANCH MANAGER

कम्प्यूटर द्वारा मुद्रित होने पर ही वैध
VALID ONLY IF COMPUTER PRINTED

केवल 3 महीने के लिए वैध
VALID FOR 3 MONTHS ONLY

₹ 1,50,000/- एवं अधिक के लिखत दो अधिकारियों द्वारा हस्ताक्षरित होने पर ही वैध है।
INSTRUMENTS FOR ₹ 1,50,000/- & ABOVE ARE NOT VALID UNLESS SIGNED BY TWO OFFICERS

⑈645209⑈ 000002000⑈ 000473⑈ 16

Principal
Sapthagiri College of Engineering
14/5, Chikkasandra, Hesarachahalli
Bengaluru - 560075

To,

19/04/2023

The Principal
Sapthagiri College of Engineering,
Bangalore -560057

Respected Sir,

Subject: Distribution of Financial Assistance sanctioned by VTU for final year projects- 2021-2022.

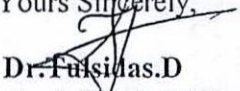
Ref: VTU Letter, No. VTU / Aca /2022-23/06/28, dated 03/04/2023

With reference to the financial assistance sanctioned by VTU, for final year projects of academic year 2021-22, Please find enclosed the name of team leaders of each project sanctioned with financial assistance of Rs. 5000/- department wise.

Hence I request you to issue the cheque for an amount of Rs.5000/-in the names of project team leaders for the distribution of amount among other team members.

Thanking You,

Yours Sincerely,


Dr. Fulsidas.D
(Prof. & Head -ME)
Co-ordinator-R & D


Principal
Sapthagiri College of Engineering
14/5, Chikkasandra, Hesaraghatta Main Road
Bengaluru - 560 057

List of VTU Funded Innovative Projects

Sl. No.	Name of Project	Department	Team Leader	Amount (Rs.)
1	Solid Fuel Operated Propellant	ME	AAKASH P 1SG18ME001	5000/-
2	Fabrication and analysis of novel rocket stove for domestic cooking	ME	ABHISHEK N 1SG18ME003	5000/
3	Determination of optimum binder content for bituminous concrete	CV	Pragathi R 1SG18CV037	5000/
4	Improving the compressive strength of concrete by using crushed aggregate - granite powder as filler material	CV	Abhisk E Mohan 1SG18CV003	5000/
5	Driver dormant Monitoring system to alert fatal accidents using image processing	ECE	DEEPA B 1SG18EC023	5000/
6	Solar Powered wheel chair with voice controller for physically challenged persons	ECE	MANU K M 1SG19EC410	5000/
7	Cost effective Smart IOT based gate controller for Agriculture Irrigation System	CSE	Panchami A 1SG18CS069	5000/
8	Obstacle Detection And Home Appliances control using Smart Wheel chair for Crippled Patients	CSE	Madhuravani.N 1SG18CS059	5000/
9	Efficient Eye Blink Method to assist Paralyzed Patients using Artificial Intelligence	ISE	Sahana A 1SG18IS089	5000/
10	Collaborative Compiler with Pair Programming	ISE	Neha M P 1SG18IS068	5000/
11	Removal of cationin dyes used for staining silk clothes by nano photochemical process – effluent source form Kamakshipalya (Bangalore city)	BT	Pooja.D.L 1SG18BT032	5000/
12	An Isothermal sffect for effective charge neutralization through coagulation process of high concentrated diary waste by using Moringa aleferra – Design of unbaffled batch reactor	BT	Varsha.K 1SG18BT048	5000/
13	Electric Bicycle	EEE	Chethan kumar M.M 1SG19EE403	5000/
14	Smart Movable Road Divider	EEE	Srujana.V.Hugar 1SG18EE084	5000/
		Total amount		Rs.70,000/-


Principal
Sapthagiri College of Engineering
 14/5, Chikkasandra, Hesareghatta Main Road
 Bengaluru - 560 057



SAPTHAGIRI COLLEGE OF ENGINEERING
(Affiliated to VTU, Belagavi, Approved by AICTE, New De
Accredited by NAAC with "A" Grade, Accredited by NBA for ECE
ME, EEE, ISO 9001:2015 and 14001:2015 Certified Institution
Chikkasandra, Hesarghatta Main Road, Bengaluru-560057



Date: 02/07/2022

**Two Final Year Innovative Projects Selected to Apply for VTU Funding
(VTU-FAFSIP)**


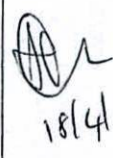
**Presentation Schedule
(08/07/2022)**

Sl. No	Department	Name of the Project	Name of Students	USN	Guide	Time
1.	ME	Solid Fuel operated Propellant	AAKASH P ✓	1SG18ME001	Dr. Tulsidas. D	09:00-09:10 am
			AJEETH N	1SG18ME005		
			BHARATH KV	1SG18ME016		
			DEEKSHITH GOWDA BM	1SG18ME022		
		Fabrication and analysis of novel rocket stove for domestic cooking.	ABHISHEK N ✓	1SG18ME003	Ram Kumar. M	09:10-09:20 am
			HEMANTH BV	1SG18ME030		
			HEMANTH GOWDA V	1SG18ME031		
			HEMANTH KUMAR RK	1SG18ME034		

2.	CV	Determination of optimum binder content for bituminous concrete	Chandana M	1SG18CV011	Mr. Akshay J	09:20-09:30 am
			Pooja S	1SG18CV035		
			Pragathi r ✓	1SG18CV037		
			Sindhu C	1SG18CV051		
		Improving the compressive strength of concrete by using crushed aggregate	Yashas M	1SG18CV064	Ms. Kavya H P	09:30-09:40 am
			Darshan N	1SG18CV013		
			Abhishek E ✓	1SG18CV003		
			Mohan ✓	1SG18CV003		
			Vivek Hegde	1SG18CV063		

Principal
Sapthagiri College of Engineering
14/5, Chikkasandra, Hesarghatta Main Road
Bengaluru - 560 057

		granite powder as filler material				
--	--	---	--	--	--	--

3.	ECE	Driver dormant Monitoring system to alert fatal accidents using image processing	DEEPA B ✓	1SG18EC023	Dr. Prakash Jadhav	09:40-09:50 am	 18/4/21
			HARSHITHA V	1SG18EC037			
			LAVANYA N	1SG18EC049			
			MEGHA S	1SG18EC058			
		Solar Powered wheel chair with voice controller for physically challenged persons	MANU K M ✓	1SG19EC410	Prof. Manasa M G	09:50-10:00 am	 18/4/21
			DORESWAM Y V B	1SG19EC407			
			PRATHAP B R	1SG19EC413			
			RANGANATH M	1SG19EC415			


Sl. No	Department	Name of the Project	Name of Students	USN	Guide	Time
4.	CSE	Cost effective Smart IOT based gate controller for Agriculture Irrigation System	Pallavi R	1SG18CS068	Dr. Kamalakshi Naganna	10:00-10:10 am
			Panchami A ✓	1SG18CS069		
			Priyanka V	1SG18CS079		
			Shalini G S	1SG18CS100		
		Obstacle Detection And Home Appliances control using Smart Wheelchair for Crippled Patients	Megha.P	1SG18CS052	Dr. Kamalakshi Naganna	10:10-10:20 am
			Meghana.G	1SG18CS054		
			Madhuravani. N ✓	1SG18CS059		
			Navyashree.K	1SG18CS062		

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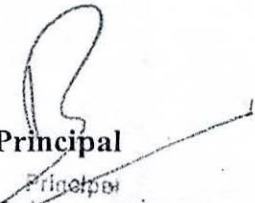
5.	ISE	Efficient Eye Blink Method to assist Paralyzed Patients using Artificial Intelligence	Sahana A ✓	1SG18IS089	Prof. Prerana Chaithra	10:20-10:30 am
			Roshan Anegundi	1SG18IS086		
			Anmol Singh	1SG18IS013		
			Sadvi H D	1SG18IS088		
		Collaborative Compiler with Pair Programming	Shreyas M Kaushik	1SG18IS101	Prof. Sudarsanan D	10:30-10:40 am
			Neha M P ✓	1SG18IS068		
			Prajwal C Patil	1SG18IS077		
			Yashaswini P	1SG18IS126		

6.	BT	Removal of cationic dyes used for staining silk clothes by nano photochemical process-effluent source from Kamakshipalay a (Bangalore city)	Pooja R	1SG18BT03 2	Prof. Ramya D L & Dr. J S S Allwin Ebinesar	11:00-11:10 am
			✓ Pooja D L	1SG18BT03 1		
		An Isothermal effect for effective charge neutralization through coagulation process of high concentrated diary waste by using <i>Moringa oleifera</i> -Design of unbaffled batch reactor	✓ Varsha K	1SG18BT04 8	Dr. J S S Allwin Ebinesar & Prof. Ramya D L	11:10-11:20 am
			Bhagyashree M	1SG18BT00 9		

7.	EEE	Electric Bicycle	CHETHANKUMA R M M ✓	1SG19EE402	Prof. A. Dhamodaran	11:20- 11:30 am
			CHIRAG B V	1SG19EE403		
			ESHWAR KAMBAR	1SG19EE405		
			NISHANK V	1SG19EE410		
		Smart Movable Road Divider	SRUJANA V HUGAR ✓	1SG18EE084	Dr. Rekha S N	11:30- 11:40 am
			RAJATH	1SG18EE062		
			SINDHU N	1SG18EE077		
			SNEHA V	1SG18EE078		


IQAC Co-ordinator


Principal
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Principal
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Date: 21/06/2022

Circular

This is to bring to your notice that, VTU is funding for two Final Year Students Innovative Projects under the scheme VTU-FAFSIP. Hence all the heads of department are hereby directed to form a department committee consisting of following members to select two best innovative projects for VTU funding. These two best projects can be selected from four shortlisted innovative projects through presentations by the students in the presence of committee. The details of committee members and date of presentation should be finalized and forwarded to the office on or before 24/06/2022.

Committee Members:

Principal – Chairman

HOD – Member

Dr.R.Harish – IQAC Co-ordinator

Two members - Subject experts / Senior Professors / Industry Partners

VTU Nominee-

Copy- All HOD'S

Office

IQAC Co-ordinator

Principal
Sapthagiri College of Engineering
14/S, Chikkasandra, Hesarghatta Main Road
Bengaluru - 560 057

Principal
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Department of Mechanical Engineering

Date: 24/06/2022

To,

The Principal
SCE,
Bengaluru

As per your direction department committee is formed as given below, for the selection of two Final Year Students Innovative Projects under the scheme VTU-FAFSIP. The presentation of four innovative final year projects is scheduled in the presence of committee in the department board room on 27/06/2022 at 2pm. The four innovative projects are shortlisted as per the emerging areas / themes give in the VTU circular.

The list of four innovative projects shortlisted for presentation is enclosed with this.

Committee Details

Sl. No.	Name	Designation	Role	Signature
1	Dr.H. Ramakrishna	Principal	Chairman	
2	Dr.Mahadevaswamy.P	Prof.&H.O.D (ME)	Member	
3	Dr.Harish.R	Prof. (Phy) & IQAC Co-ordinator	Member	
4	Mr.Ramesh.N.G	Project Co-ordinator	Subject Expert	
5	Dr.Tulsidas.D	Prof. Dept. of ME	Subject Expert	
6.	Dr. Ravishankar.C.V, Prof. & Head, ECE , Sambhram Institute of Technology	VTU Nominee	Member	

Principal
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14/5, Chikkasandra, Hesarghatta Main Road
Bengaluru - 560 057

Professor & Head
HOD
Department of Mechanical Engineering
Sapthagiri College of Engineering
Bengaluru - 560 057

List of Innovative Projects Shortlisted For Presentation

Sl. No.	Name of the Project	Name of Students	USN	Guide	Topics / Theme
1.	Solid Fuel operated Propellant	Aakash P	1SG18ME001	Dr. Tulsidas. D	Technology Relevant in the aftermath of Covid-19
		Ajeeth N	1SG18ME005		
		Bharath K V	1SG18ME016		
		Deekshith Gowda B M	1SG18ME022		
2.	Plastic Bottle accumulation & Management system for eco-friendly environment	Arun Kumar R	1SG18ME010	Mr.Satishkumar.Y. D	Waste Management/ Disposal system
		Jayanth T	1SG18ME037		
		Keerthi G	1SG18ME041		
		Priyanka H S	1SG18ME065		
3.	Fabrication and analysis of novel rocket stove for domestic cooking.	Abhishek N	1SG18ME003	Mr.Ram Kumar. M	Low cost / Rural application
		Hemanth B V	1SG18ME030		
		Hemanth Gowda V	1SG18ME031		
		Hemanth Kumar R K	1SG18ME034		
4.	Fabrication of Multipurpose agriculture machine	Akshay K	1SG18ME007	Mr.Mahesh.S	Fabrication of Multipurpose agriculture machine
		Hemanth Kumar M	1SG18ME033		
		Lokendra N	1SG18ME047		
		Naveen Kumar K	1SG19ME415		

Principal
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Professor & Head
 Department of Mechanical Engineering
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Department of Mechanical Engineering

Date: 08/07/2022

To,

The Principal
SCE,
Bengaluru

Sir,

The following two final year innovative projects have been selected to apply for VTU funding during the presentation held on 08/07/2022 in the department board room in the presence of committee members.

Two Final Year Innovative Projects Selected to Apply for VTU Funding (VTU-FAFSIP)

Sl. No.	Name of the Project	Name of Students	USN	Guide
1.	Solid Fuel operated Propellant	AAKASH P	1SG18ME001	Dr. Tulsidas. D
		AJEETH N	1SG18ME005	
		BHARATH KV	1SG18ME016	
		DEEKSHITH GOWDA BM	1SG18ME022	
2.	Fabrication and analysis of novel rocket stove for domestic cooking.	ABHISHEK N	1SG18ME003	Ram Kumar. M
		HEMANTH BV	1SG18ME030	
		HEMANTH GOWDA V	1SG18ME031	
		HEMANTH KUMAR RK	1SG18ME034	

Approval Committee

Sl. No.	Name	Designation	Role	Signature
1	Dr.H. Ramakrishna	Principal	Chairman	
2	Dr.Mahadevaswamy.P	Prof. & H.O.D (ME)	Member	
3	Dr.Harish.R	Prof. (Phy) & IQAC Co-ordinator	Member	
4	Mr.Ramesh.N.G	Project Co-ordinator	Subject Expert	
5	Dr.Tulsidas.D	Prof. Dept. of ME	Subject Expert	
6.	Dr. Ravishankar.C.V, Prof. & Head, ECE , Sambhram Institute of Technology	VTU Nominee	Member	

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Professor & Head
Department of Mechanical Engineering
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DEPARTMENT OF MECHANICAL ENGINEERING
Academic Year 2020-21

VTU Sponsored Student Project Proposal Format

1	Academic Year	2021-2022	
2	Semester	8th Semester	
3	Name of the College	Sapthagiri College of Engineering	
4	Branch	Mechanical	
5	Project Title	Fabrication and analysis of novel rocket stove for rural cooking applications.	
6	Project Discipline	Bioenergy /Solar energy application at villages.	
7	Principal	Name	Dr. Ramakrishna
		Contact No.	9448978350
		Email.Id	principal@sapthagiri.edu.in
8	HOD	Name	Dr. P. Mahadevaswamy
		Contact No.	94821 37922
		Email.Id	hodmech@sapthagiri.edu.in
9	Guide	Name	Mr. Ram Kumar M
		Contact No.	99008 47119
		Email.Id	ramkumarm@sapthagiri.edu.in
11	Project Committee Co-ordinator	Name	Mr. Ramesh NG
		Contact No.	97433 92804
		Email.Id	rameshng@sapthagiri.edu.in

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 Bengaluru - 560 057

Name of Project Group Members		
1.Group Leader & Member		
Name	Hemanth Gowda V	Pass Port size Photo
		
USN No. :	1SG18ME031	
Contact No.	9845542103	
Email id:	hemanthgowdav8@gmail.com	
2. Name	Abhishek N	Pass Port size Photo
		
USN No. :	1SG18ME003	
Contact No.	7022223948	
Email id:	abhingowda02@gmail.com	
3.Name	Hemanth B V	Pass Port size Photo
		
USN No. :	1SG18ME030	
Contact No.	8152907913	
Email id:	Hemanthb.v2000@gmail.com	

	4.Name	Hemanth Kumar R K	Pass Port size Photo
			
	USN No. :	ISG18ME034	
	Contact No.	7019692418	
	Email id:	hemanthgowdark@gmail.com	

13	Processing Fees Details	Bank Name :	
		Branch :	
		DD NO. with date: OR Cheque No. With date:	
14	Scope / Objectives of Work	Annexure -1	
15	Methodology of Work (including diagram, flow chart & design calculations)	Annexure-2	
16	Excepted outcome of Project	<ul style="list-style-type: none"> • A Novel stove for rural cooking • Easy to use and afford. • Stoves that can better reduce smoke and harmful emissions. 	



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Bangalore

		<ul style="list-style-type: none"> • Less quantity of wood with efficient use of wood. 	
17	Application of the Project	<ul style="list-style-type: none"> • To develop a portable stove easy to use and afford. • Useful for low consumption of fuel. • Useful for cost consumption. 	
18	Budget Details with material Required	Annexure-3	
19	Date of Commencement of Project		10-11-2021
20	Probable date of completion of Project		30-06-2022
21	Duration of Project Work		8 months
22	PERT chart for completion of project in said duration as per planned activities		


 Principal
 Sapthagiri College of Engineering
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 Bengaluru - 560 077

PERT Chart

Sl.NO	Activities Planned	Month / week	Month / week	Month / week	Month / week	Month / week	Month / week
1	Literature Review	Nov					
2	Planning / Design		Dec	Jan			
3	Assembly / Fabrication work			April	May		
4	Final Testing					June	
5	Result & Calculations / Conclusions					June	
6	Preparation of Report / Submission						July

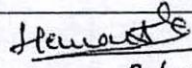
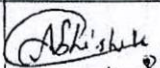
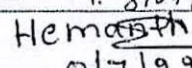
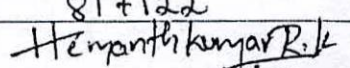

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 Sapthagiri College of Engineering
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 Bengaluru

DECLARATION BY THE STUDENTS

We, the project group members hereby declare that the details enclosed in the project proposal are true and correct to the best of our knowledge. We undertake to inform VTU, of any changes there in the project title, students name will be intimated immediately. In case, any of the above information is found to be false or untrue or misleading, we are aware that we may be held liable for it.

We are aware that the project group has to exhibit / demonstrate the project for evaluation in the VTU Regional center and for exhibition at VII), Belagavi. If the project group fails to attend the evaluation in Regional center and for Exhibition in VTU, Belagavi, the sponsored project amount will be returned back to VTU immediately

We also hereby, enclose the endorsement form to VTU, Belagavi.

Sl No	Name	Signature with Date
1	Hemanth Gowda V	 8/07/22
2	Abhishek N	 8/07/22
3	Hemanth B V	 8/7/22
4	Hemanth Kumar R K	 8/7/22


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Annexure-1

Scope / Objectives of Work:

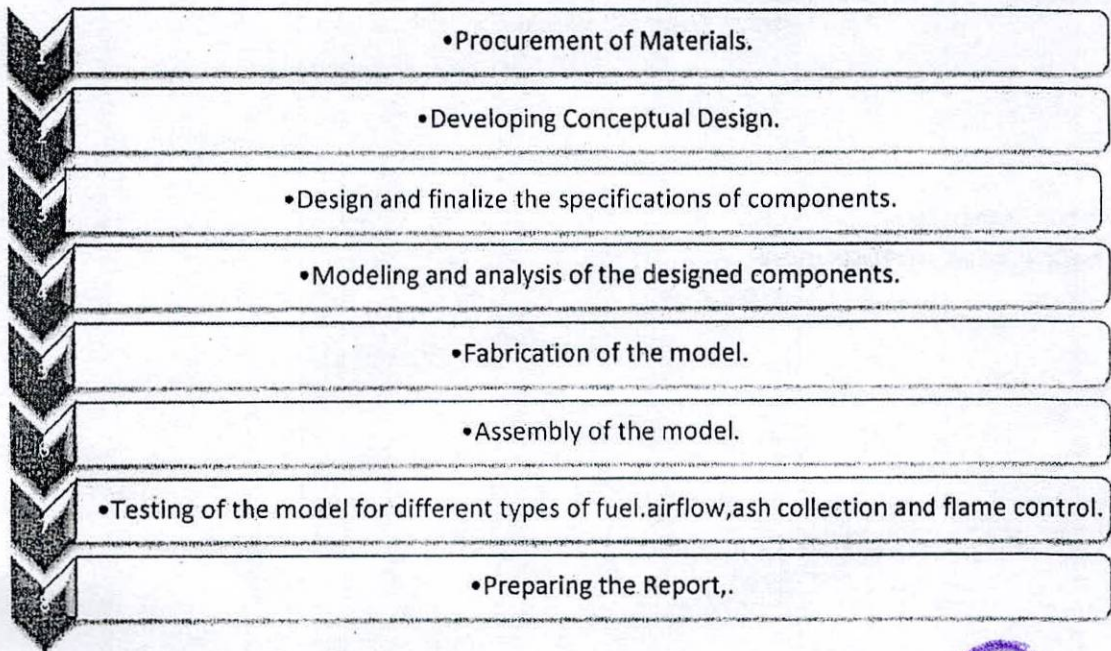
- To Design and fabricate a low cost stove for rural cooking.
- To develop a portable stove easy to use and afford.
- To study/analyze the heat flow/ loss and reduce the heat loss.
- Develop a stove with regulated heat flow and control system for efficient working.


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Annexure-2

Methodology of Work:

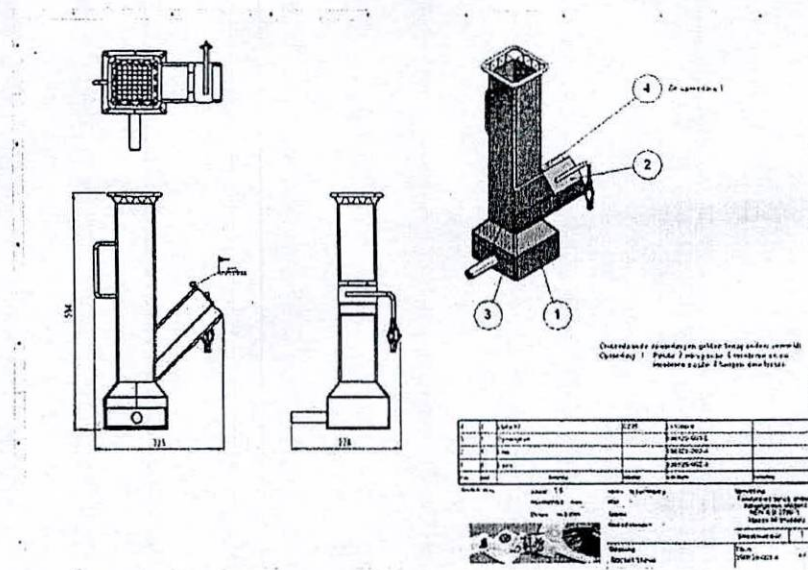
(Including diagram, flow chart & 3D Model)



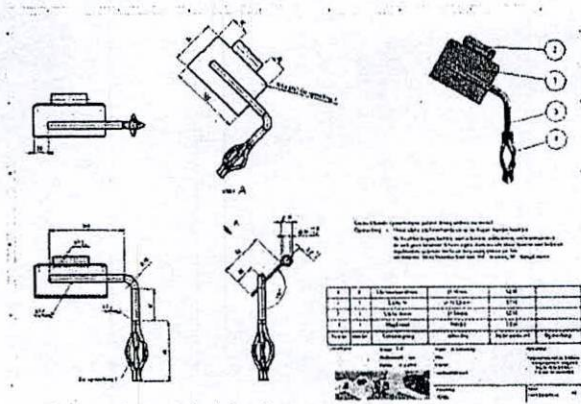

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CAD MODELS

Detailed Drawings of the proposed stove



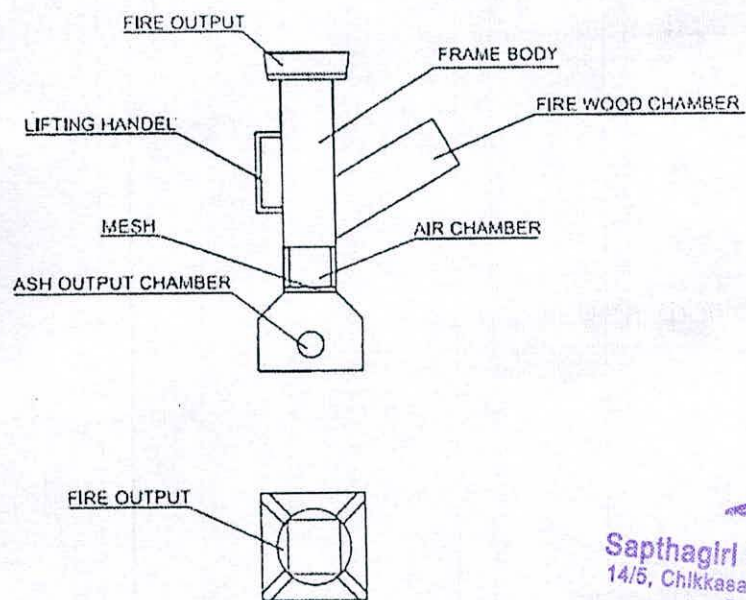
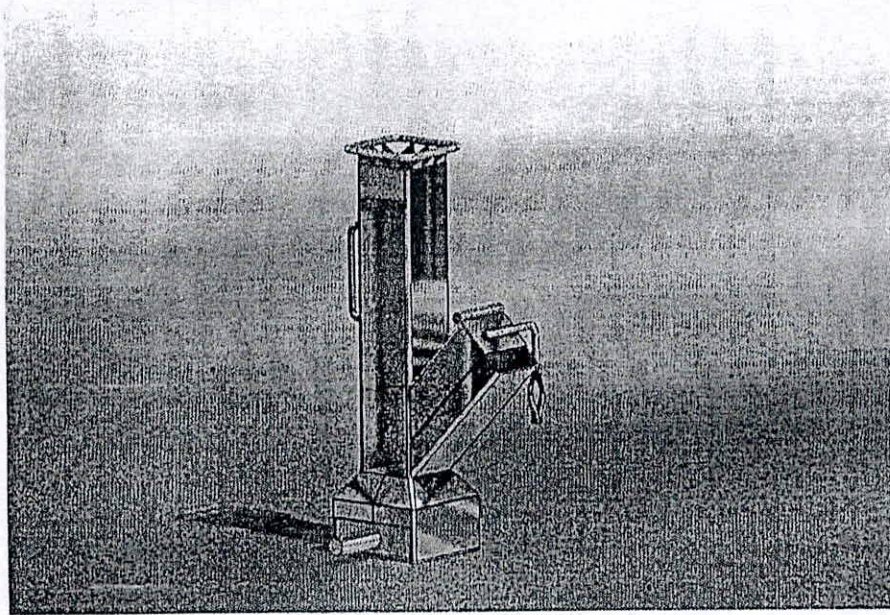
CAD MODELS



2

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Beng.

3D MODEL




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Annexure-3

Parts List/Bill of Materials

Parts	Details	Amount (Rs.)
a) Purchase of Mild Steel, etc..	Materials/ Consumables	4500.00
b) Welding, Assembly & Riveting	Labour (Riveting , Joining, Welding, Assembly)	2000.00
c) Travel	To go to IISC to collect the information about the project	500.00
d) Printing and binding	Report Preparation	500.00
e) Miscellaneous expenses	Stationery/materials	1000.00
Total		8500.00

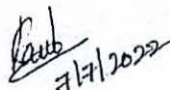
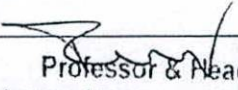
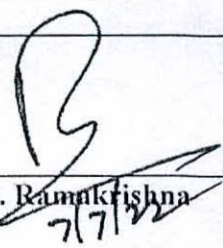

Principal
Sapthagiri College of Engineering
14/5, Chikkasandra, Hesarghatta Main Road
Bengaluru - 560 075

ENDORSEMENT BY INSTITUTION

This is to certify that.

- 1) Hemanth Gowda V
- 2] Hemanth Kumar R K
- 3] Hemanth B V
- 4] Abhishek N

are bonafide students of Department of Mechanical Engineering of our institution If the project proposal submitted by these students under VTU Sponsored Student Project Proposal is selected by VTU, we will provide the required laboratory / Computer / infrastructure support in our college / Institution. Further we also take necessary steps that the project group will exhibit / demonstrate their project in the Regional center and for exhibition at VTU, Belagavi. If the student group fails to attend the evaluation in Regional center and exhibition at VTU Belagavi, the supported project amount will be returned back to VTU immediately.

Signature of Project Guide with date	Signature of HOD with Seal and date	Signature of the Principal with Seal and date
 7/7/2022	 Professor & Head Department of Mechanical Engineering Sapthagiri College of Engineering Bengaluru - 560 057.	 7/7/22
Name : Mr. Ram Kumar M	Name: Dr. P. Mahadevaswamy	Name Dr. Ramakrishna






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DEPARTMENT OF MECHANICAL ENGINEERING
Academic Year 2020-21

VTU Sponsored Student Project Proposal

1	Academic Year	2021-2022	
2	Semester	8 th Semester	
3	Name of the College	Sapthagiri College of Engineering	
4	Branch	Mechanical	
5	Project Title	3D Printed Solid Propellant Rocket for Surveillance	
6	Project Discipline	Disaster Management	
7	Principal	Name	Dr. Ramakrishna
		Contact No.	9448978350
		Email. Id	principal@sapthagiri.edu.in
8	HOD	Name	Dr. P. Mahadevaswamy
		Contact No.	94821 37922
		Email. Id	hodmech@sapthagiri.edu.in
9	Guide	Name	Dr. Tulsidas D
		Contact No.	98864 38036
		Email. Id	tulsidasd@sapthagiri.edu.in
11	Project Committee Co-ordinator	Name	Mr. Ramesh NG
		Contact No.	97433 92804
		Email. Id	rameshng@sapthagiri.edu.in


Principal
Sapthagiri College of Engineering
14/5, Chikkasandra, Hesaraphatta, Main Road
Bengaluru - 560057

12

Name of Project Group Members	
1.Group Leader & Member	
Name	Aakash. P Passport size Photo 
USN No. :	1SG18ME001
Contact No.	9482372864
Email id:	erucaeutstellae@gmail.com
2. Name	Ajeeth. N 
USN No. :	1SG18ME005
Contact No.	9886024502
Email id:	ajeethn2000@gmail.com
3.Name	Deekshith Gowda. B. M 
USN No. :	1SG18ME022
Contact No.	6362159648
Email id:	deekshithgowdabm@gmail.com


 Principal
Sapthagiri College of Engineering
 14/5, Chikkasandra, Hesaraghatta Main Road
 Bengaluru - 560 100

13	Processing Fees Details	Bank Name :	
		Branch :	
		DD NO. with date: OR Cheque No. With date:	
14	Scope / Objectives of Work	Annexure -1	
15	Methodology of Work (including diagram, flow chart & design calculations)	Annexure-2	
16	Excepted outcome of Project	<ul style="list-style-type: none"> • Successful ignition of the rocket from the wireless Launchpad. • Successful lift-off of the rocket to the predicted height. • Procurement of video footage from the rocket. 	
17	Application of the Project	<ol style="list-style-type: none"> 1. Useful for providing video footage from high altitude of disaster sites. 2. Useful for gathering atmospheric parameters such as pressure, temperature, humidity at upper altitudes. 	
18	Budget Details with material Required	Annexure-3	
19	Date of Commencement of Project		10-10-2021
20	Probable date of completion of Project		26-06-2021
21	Duration of Project Work		8 Months
22	PERT chart for completion of project in said duration as per planned activities		


 Principal
 Sapthagiri College of Engineering
 14/5, Chikkasandra, Hesareghatta Main Road
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PERT Chart

Sl.NO	Activities Planned	Month / week	Month / week	Month / week	Month / week	Month / week	Month / week
1	Literature Review	Oct					
2	Planning / Design		Nov	Dec			
3	Assembly / Fabrication work			Apr	May		
4	Final Testing					Jun	
5	Result & Calculations / Conclusions					Jun	
6	Preparation of Report / Submission						Jul

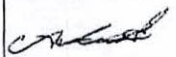
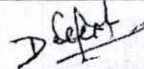

 Principal
 Sapthagiri College of Engineering
 14/5, Chikkasandra, Hesarghatta Main Road,
 Bengaluru - 5

DECLARATION BY THE STUDENTS

We, the project group members hereby declare that the details enclosed in the project proposal are true and correct to the best of our knowledge. We undertake to inform VTU, of any changes there in the project title, students name will be intimated immediately. In case, any of the above information is found to be false or untrue or misleading, we are aware that we may be held liable for it.

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We also hereby, enclose the endorsement form to VTU, Belagavi.

SI No	Name	Signature with Date
1	Aakash. P	 08-07-2022
2	Ajeeth. N	Ajeeth. N 08/07/2022
3	Deekshith Gowda. B. M	 08/07/22

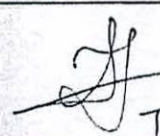
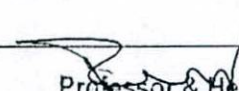
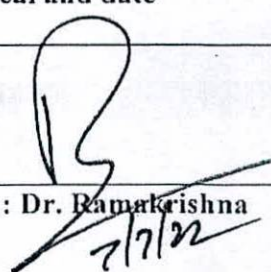

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ENDORSEMENT BY INSTITUTION

This is to certify that,

- 1) Aakash. P
- 2) Ajeeth. N
- 3) Deekshith Gowda. B. M

are bonafide students of Department of Mechanical Engineering of our institution? If the project proposal submitted by these students under VTU Sponsored Student Project Proposal is selected by VTU, we will provide the required laboratory / Computer / infrastructure support in our college / Institution. Further we also take necessary steps that the project group will exhibit / demonstrate their project in the Regional center and for exhibition at VTU, Belagavi. If the student group fails to attend the evaluation in Regional center and exhibition at VTU Belagavi, the supported project amount will be returned back to VTU immediately.

Signature of Project Guide with date	Signature of HOD with Seal & date	Signature of the Principal with Seal and date
 7/7/2022	 Professor & Head Department of Mechanical Engineering Sapthagiri College of Engineering Bengaluru - 560 057	
Name : Dr. Tulsidas D	Name: Dr. P. Mahadevaswamy	Name : Dr. Ramakrishna

Annexure-1

Scope / Objectives of Work:

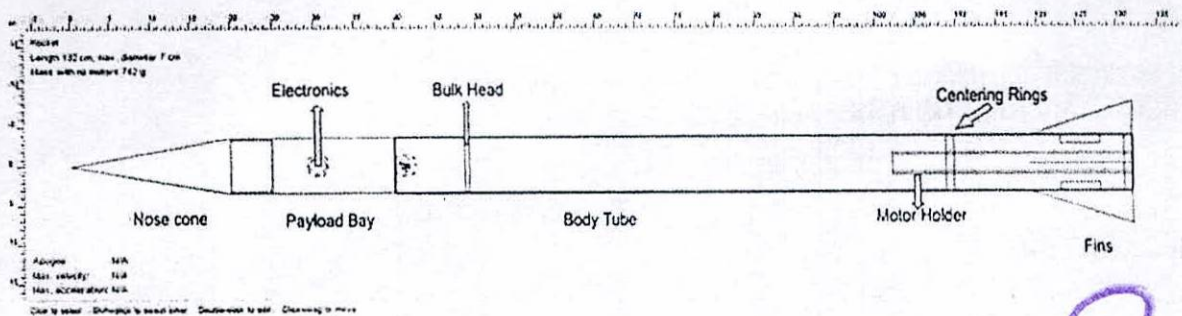
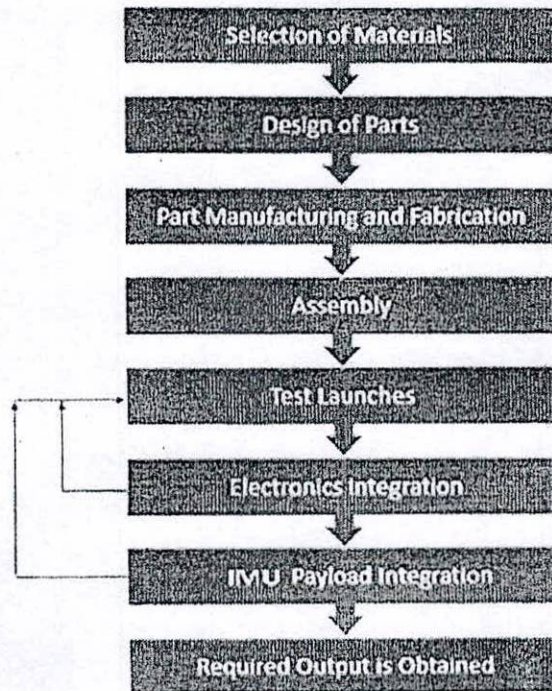
- To Design and fabricate a Solid Propellant Rocket Prototype that can be launched reliably and lands via parachute technology.
- To Build and Test a IoT Launch Pad that could be controlled from anywhere wirelessly.
- To gather high altitude atmospheric data and video footage from the rocket.


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Annexure-2

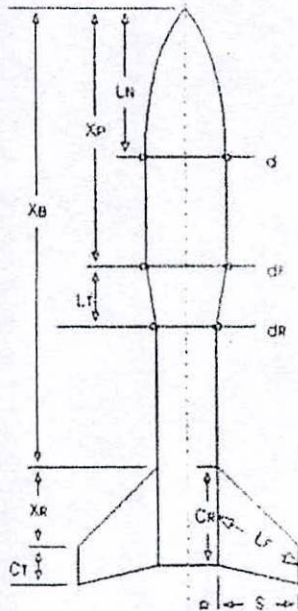
Methodology of Work:

(including diagram, flow chart & design calculations)



[Signature]
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Center of Pressure



Terms and their Values (mm)

- L_N = length of nose: 200
- d = diameter at base of nose: 70
- d_F = diameter at front of transition: 70
- d_R = diameter at rear of transition: 70
- L_T = length of transition: 0
- X_P = distance from tip of nose to front of transition: 70
- C_R = fin root chord :131
- C_T = fin tip chord :0
- S = fin semispan :41.8
- L_F = length of fin mid-chord line :137.5
- R = radius of body at aft end :35
- X_R = distance between fin root leading edge and fin tip leading edge parallel to body :131
- X_B = distance from nose tip to fin root chord leading edge :1189
- N = number of fins :4

Nose Cone Terms

- $(C_n)_n = 2$ (Constant for all nose cones)
- X_{nf} For Conical = $0.666 L_N$

Conical Transition Terms

- $(C_t)_t = 2 \left(\left(\frac{dr}{d} \right)^2 - \left(\frac{df}{d} \right)^2 \right)$

$$= 2 \left(\left(\frac{70}{70} \right)^2 - \left(\frac{70}{70} \right)^2 \right)$$

$$= 0$$
- $X_t = X_p + \frac{L_t}{3} \left(1 + \frac{1 - \frac{df}{dr}}{1 - \left(\frac{df}{dr} \right)^2} \right)$

$$= 70 + \frac{0}{3} \left(1 + \frac{1 - \frac{70}{70}}{1 - \left(\frac{70}{70} \right)^2} \right)$$

$$= 70$$

B

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Fin Terms

$$\begin{aligned} (C_N)_F &= \left(1 + \frac{R}{S+R}\right) \left(\frac{4N\left(\frac{S}{2}\right)^2}{1 + \sqrt{1 + \left(\frac{11R}{S+R}\right)^2}} \right) \\ &= \left(1 + \frac{35}{418+35}\right) \left(\frac{4 \times 4 \times \left(\frac{418}{2}\right)^2}{1 + \sqrt{1 + \left(\frac{2 \times 137.5}{131+0}\right)^2}} \right) \\ &= 2.49 \end{aligned}$$

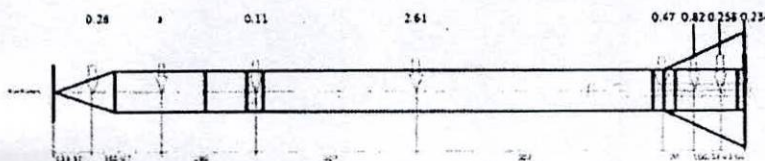
$$\begin{aligned} Nf &= N_B + \frac{N_T}{2} \left(\frac{C_R - 2C_T}{C_R - C_T} \right) + \frac{1}{6} \left((C_R + C_T) - \frac{(C_R C_T)}{(C_R - C_T)} \right) \\ &= 1189 + \frac{131}{3} \left(\frac{131 + 2 \times 0}{131 + 0} \right) + \frac{1}{6} \left((131 + 0) - \frac{(131 \times 0)}{(131 + 0)} \right) \\ &= 1254.5 \end{aligned}$$

Finding the Center of Pressure

$$\begin{aligned} (C_N)_R &= (C_N)_N + (C_N)_T + (C_N)_F \\ &= 2 + 0 + 2.49 = 4.49 \end{aligned}$$

The Distance of Center of Pressure from Nose Tip:

$$\bar{X} = \frac{(C_N)_N X_N + (C_N)_T X_T + (C_N)_F X_F}{(C_N)_R} = \frac{2 \times 0.667 \times 200 + 70 \times 0 + 2.49 \times 1254.5}{4.49} = 755.03 \text{ mm}$$



Force(N)	Distance(mm)	Distance from datum(mm)	Moment (Nmm)
0.28	133.33	133.33	37.33
2.17	166.67	300	651
0.11	186	486	53.46
2.61	307	793	2069.73
0.47	307	1100	517
0.87	70	1170	1017.9
0.258	106.34	1276.34	329.29
0.254	43.66	1320	306.24
SUM = 7.002			SUM = 4981.95

$$\text{Now, } CG = \frac{\sum m}{\sum m} = \frac{4981.95}{7.002} = 711.503 \text{ mm}$$

Calibers of Stability

$$\begin{aligned} &= \frac{CG - CP}{\frac{d}{2}} \\ &= \frac{755.03 - 711.503}{\frac{70}{2}} \\ &= 1.248 \text{ cal} \end{aligned}$$

If $1 < \text{cal} < 2$: stable

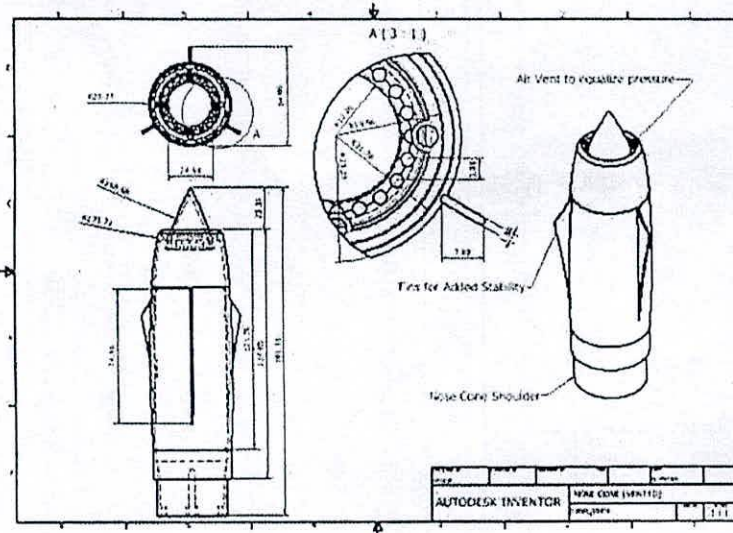
If $\text{cal} < 1$: unstable

If $\text{cal} > 2$: Marginally stable

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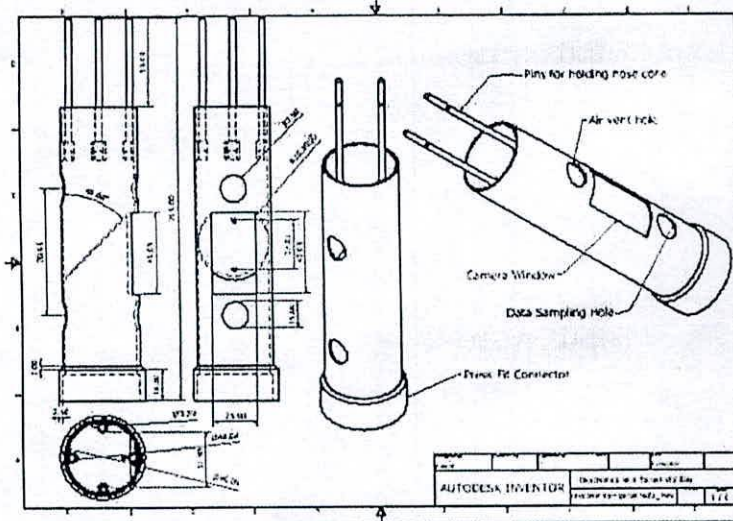
CAD MODELS – Design for Additive Manufacturing

- Nose Cone



CAD MODELS – Design for Additive Manufacturing

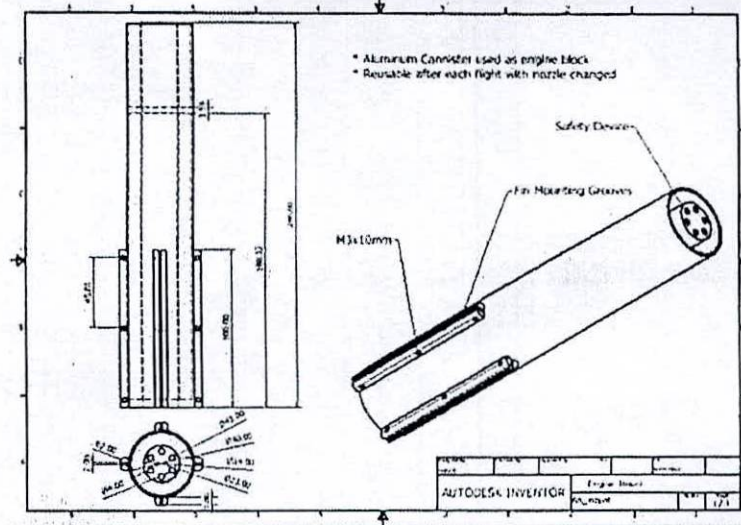
- Electronics and Parachute Mount



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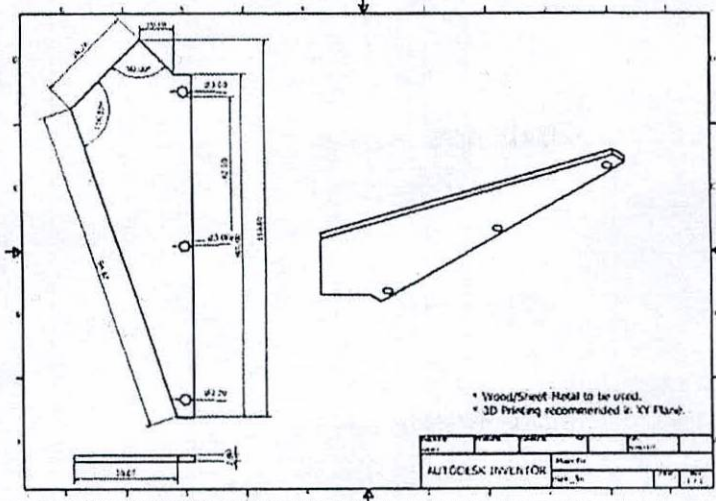
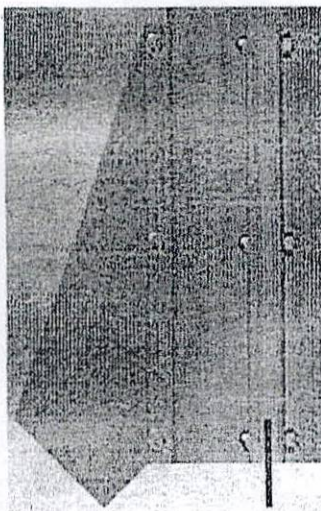
CAD MODELS – Design for Additive Manufacturing

• Engine Mount



CAD MODELS – Design for Additive Manufacturing

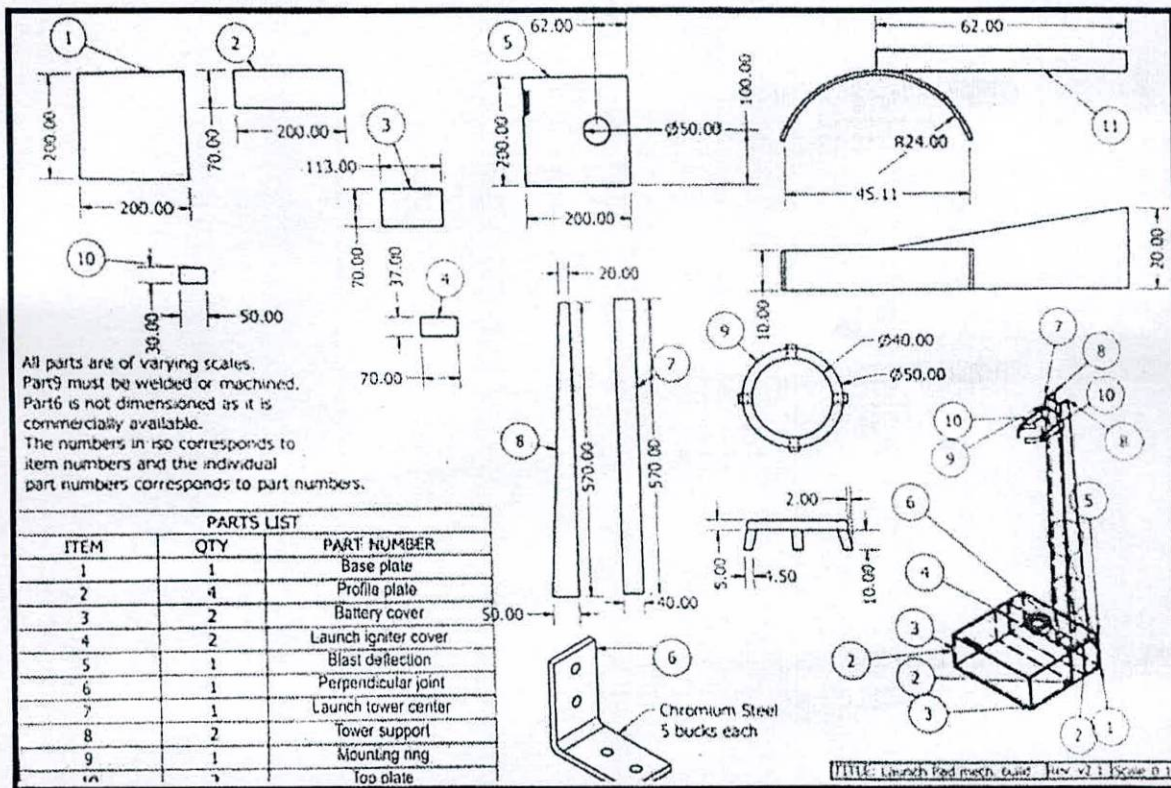
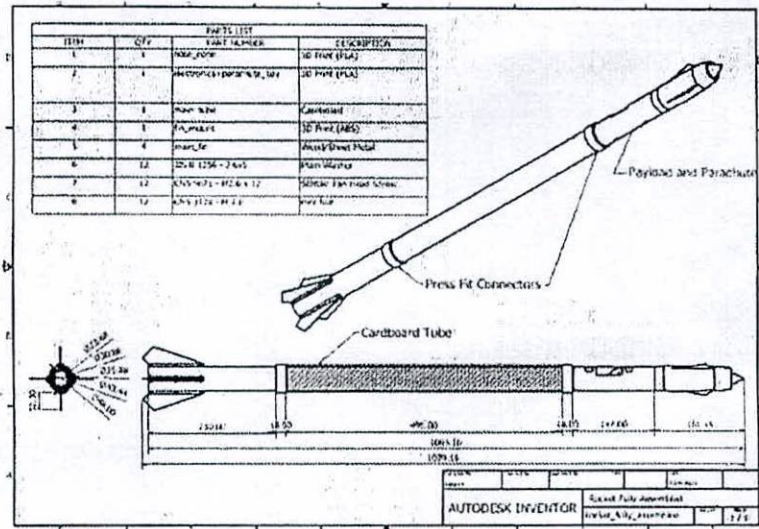
• Main Fin



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CAD MODELS – Design for Additive Manufacturing

- Fully Assembled Rocket



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Annexure-3

PartList/Bill of Materials

Parts	Quantity	Price
Cardboard Tubes (45mm OD, 700mm Long)	2 Pieces	Rs. 200
ACP Sheet	2 sq. m	Rs. 600
L Joints	30 Pieces	Rs. 150
C PVC Pipe	300 mm	Rs. 250
ESP32	1	Rs. 450
Relay Module	1	Rs. 150
ESP8266	1	Rs. 430
Glow Plug	1	Rs. 950
3D Printing Parts	As Needed	Rs. 3000

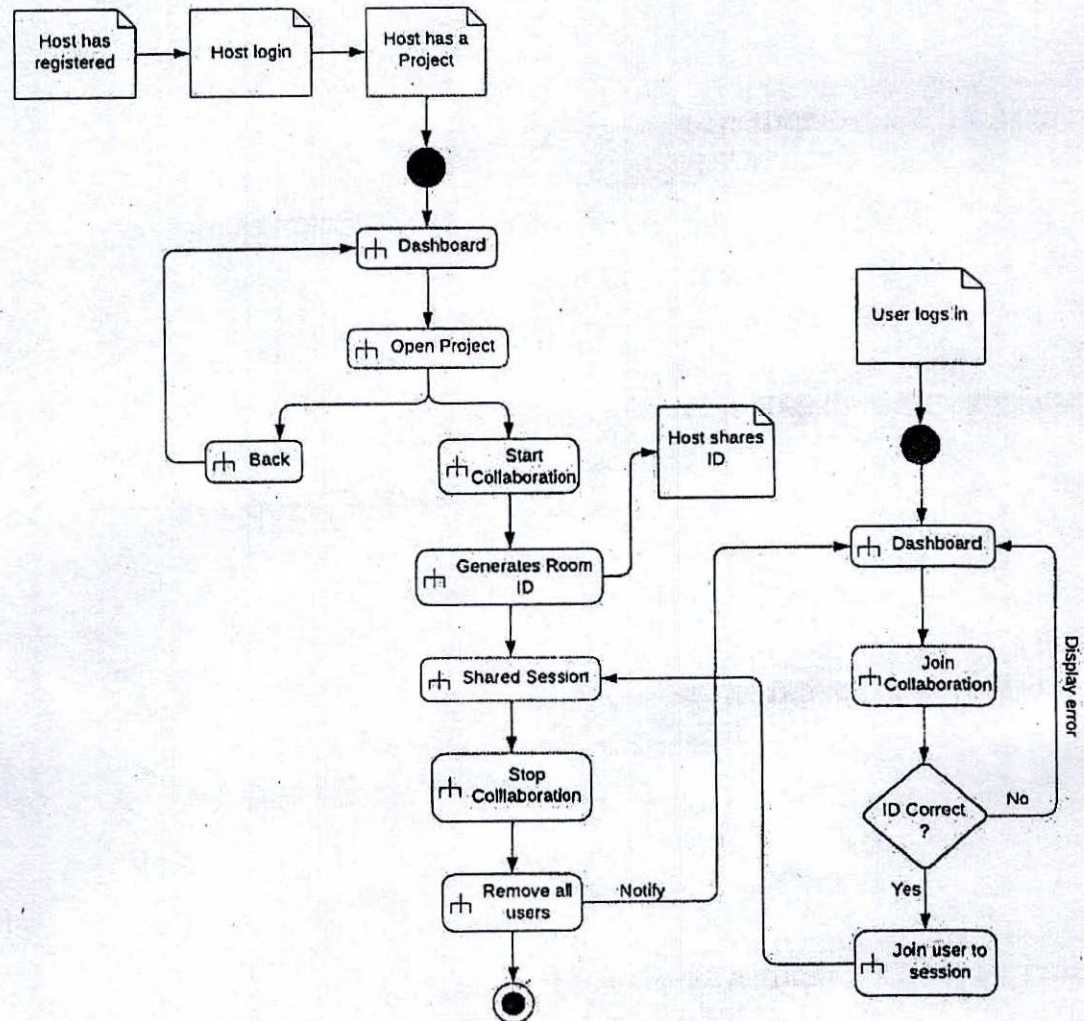
Total:

Rs. 6180



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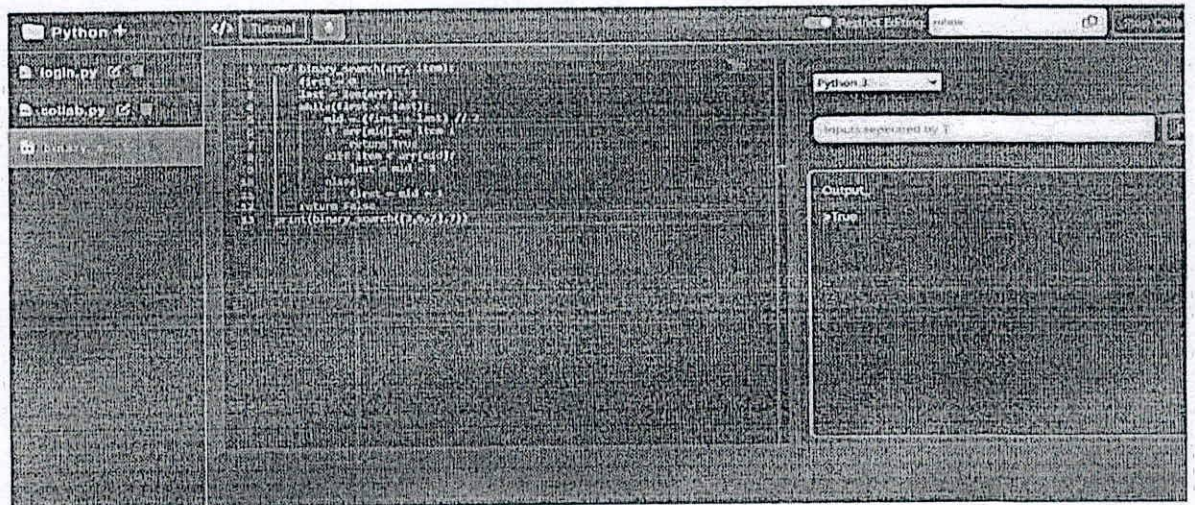
Activity Diagram



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Annexure - 3

Output



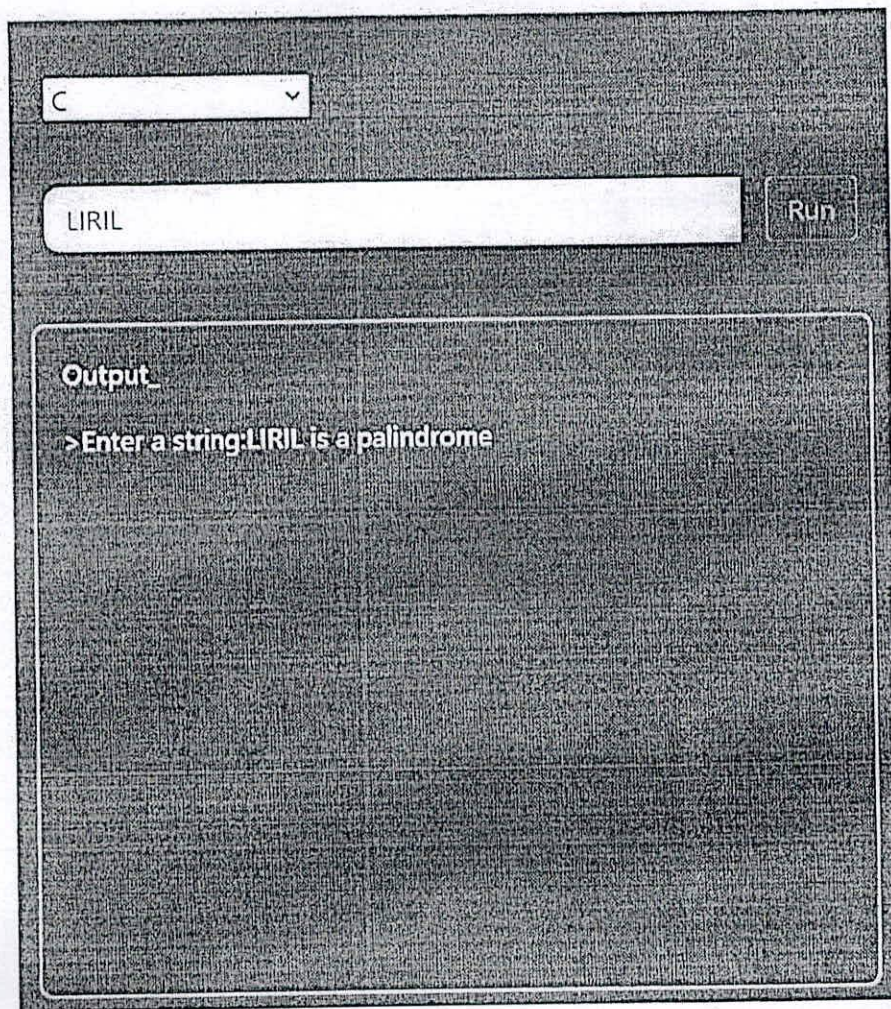
The screenshot displays a Python IDE interface. On the left, a file explorer shows 'login.py' and 'collab.py'. The main editor window contains a Python script for a binary search algorithm. The code defines a function 'binary_search' that takes a sorted list 'arr' and a target 'x' as input. It uses a while loop to find the target element, returning its index if found, or -1 otherwise. The script includes a test case: 'arr = [1, 2, 3, 4, 5, 6, 7, 8, 9, 10]', 'x = 5', and 'print(binary_search(arr, x))'. On the right, the 'Python 3' interpreter output shows '5', indicating the successful execution of the binary search for the value 5 in the array.

```
1 def binary_search(arr, x):
2     low = 0
3     high = len(arr) - 1
4     while low <= high:
5         mid = (low + high) // 2
6         if arr[mid] == x:
7             return mid
8         elif arr[mid] < x:
9             low = mid + 1
10        else:
11            high = mid - 1
12    return -1
13
14 arr = [1, 2, 3, 4, 5, 6, 7, 8, 9, 10]
15 x = 5
16 print(binary_search(arr, x))
```

Python 3
Output: 5

Editor


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Compiler


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```

1 // palindrome in python.
2 a=input('enter a string :')# palindrome in string
3 b=a[::-1]
4 if a==b:
5
6     print(a,'is a palindrome')
7 else:
8     print(a,'is not a palindrome')
9     print('a is not equal to b')
10 if a!=b:
11     print(b, 'the reverse of', a)
12 #output:
13 -----
14 case-I
15 # not palindrome
16 enter a string :1254
17 1254 is not a palindrome
18 a is not equal to b
19 4521 the reverse of 1254
20 -----
21 case-II
22 # palindrome
23 enter a string :12321
24 12321 is a palindrome

```

A.I. Auto Suggest



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Annexure – 4

Applications of the Project

- Sahapaathi can be used for educational purpose.
- Teachers can use this platform to teach programming languages much effectively.
- Students can clarify their doubts by asking teachers and teachers can demonstrate the code in real-time.
- The platform can also be used by professionals to collaborate in real-time and work on same projects or research together in a group from anywhere in the world.


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Annexure – 5

Budget Details and Materials Required

Decipline	Details	Amount (Rs.)
a) AWS EC2 t2.micro instance	750 Hours of compute: 450 per month * 8	3600.00
b) AWS S3	5 GB of storage : 200 per month * 8	1600.00
c) Printing and binding	Report Preparation	1000.00
Total		6200.00


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SAPTHAGIRI COLLEGE OF ENGINEERING

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Department of Information Science & Engineering



Date: 24/06/2022

To,

The Principal
SCE,
Bengaluru

As per your direction department committee is formed as given below, for the selection of two Final Year Students Innovative Projects under the scheme VTU-FAFSIP. The presentation of four innovative final year projects is scheduled in the presence of committee in the department board room on 27/06/2022 at 2pm. The four innovative projects are shortlisted as per the emerging areas / themes given in the VTU circular.

The list of four innovative projects shortlisted for presentation is enclosed with this.

Committee Details

Sl. No.	Name	Designation	Role	Signature
1	Dr.H. Ramakrishna	Principal	Chairman	
2	Dr. H. R. Ranganatha	Prof. & HOD (ISE)	Member	
3	Dr.Harish.R	Prof. (Phy) & IQAC Co-ordinator	Member	
4	Prof. Prerana Chaithra	Project Co-ordinator	Subject Expert	
5	Prof. Sudarsanan D	Prof. Dept. of ISE	Subject Expert	

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HOD

Dr H.R Ranganatha
Prof. & H.O.D
Dept.of Information Science & Engg.
Sapthagiri College of Engineering
14/5 Chikkasandra, Hesarghatta Main Road
BENGALURU-560 057

List of Innovative Projects Shortlisted For Presentation

Sl. No.	Name of the Project	Name of Students	USN	Guide	Topics / Theme
1.	Efficient Eye Blink Detection Method to assist Paralyzed Patients using Artificial Intelligence	Sahana A	1SG18IS089	Prof. Prerana Chaithra	User friendly devices for aged or physically challenged people
		Roshan Anegundi	1SG18IS086		
		Anmol Singh	1SG18IS013		
		Sadvi H D	1SG18IS088		
2.	Plant Disease Detection based on Deep learning Approach	Darshini A	1SG18IS031	Prof. Manasa P M	Advancement in Agriculture
		Harshitha P V	1SG18IS039		
		Monika P	1SG18IS061		
		Nagashree V S M	1SG18IS062		
3.	Collaborative Compiler with Pair Programming	Shreyas M Kaushik	1SG18IS101	Prof. Sudarsanan D	Technology Relevant in the aftermath of Covid-19
		Neha M P	1SG18IS068		
		Prajwal C Patil	1SG18IS077		
		Yashaswini P	1SG18IS126		
4.	Availability of car parking slot using YOLOv2 Algorithm	Navya Shree K S	1SG18IS066	Prof. Roopa K T	Automobile
		Nikitha B K	1SG18IS070		
		Ramyashree Jogi	1SG18IS085		
		Sanjana M	1SG18IS091		



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H.R. Ranganatna
 HOD
Dr H.R Ranganatna
 Prof. & H.O.D
 Dept.of Information Science & Engg.
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Department of Information Science & Engineering

Date: 08/07/2022

To,

The Principal
SCE,
Bengaluru

Sir,

The following two final year innovative projects have been selected to apply for VTU funding during the presentation held on 08/07/2022 in the department board room in the presence of committee members.

Two Final Year Innovative Projects Selected to Apply for VTU Funding (VTU-FAFSIP)

Sl. No.	Name of the Project	Name of Students	USN	Guide
1.	Efficient Eye Blink Detection Method to assist Paralyzed Patients using Artificial Intelligence	Sahana A	1SG18IS089	Prof. Prerana Chaithra
		Roshan Anegundi	1SG18IS086	
		Anmol Singh	1SG18IS013	
		Sadvi H D	1SG18IS088	
2.	Collaborative Compiler with Pair Programming	Shreyas M Kaushik	1SG18IS101	Prof. Sudarsanan D
		Neha M P	1SG18IS068	
		Prajwal C Patil	1SG18IS077	
		Yashaswini P	1SG18IS126	

Approval Committee

Sl. No.	Name	Designation	Role	Signature
1	Dr.H. Ramakrishna	Principal	Chairman	
2	Dr. H. R. Ranganatha	Prof. & HOD (ISE)	Member	
3	Dr. Harish. R	Prof. (Phy) & IQAC Co-ordinator	Member	
4	Prof. Prerana Chaithra	Project Co-ordinator	Subject Expert	
5	Prof. Sudarsanan D	Prof. Dept. of ISE	Subject Expert	
6.	Dr. Ravishankar C V Prof. & Head, ECE, Sambhram Institute of Technology	VTU Nominee	Member	

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HOD
Dr. H. R. Ranganatha
Prof. & H.O.D
Dept. of Information Science & Engg.
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DEPARTMENT OF INFORMATION SCIENCE & ENGINEERING

Academic Year 2021-22

VTU Sponsored Student Project Proposal Format

1	Academic Year	2021-2022	
2	Semester	8th Semester	
3	Name of the College	Sapthagiri College of Engineering	
4	Branch	Information Science and Engineering	
5	Project Title	Efficient Eye Blink Detection Method to Assist Paralyzed Patients Using Artificial Intelligence.	
6	Project Discipline	User friendly devices for aged people or physically challenged people.	
7	Principal	Name	Dr. Ramakrishna
		Contact No.	9880703600
		Email.Id	principal@sapthagiri.edu.in
8	HOD	Name	Dr. H R. Ranganatha
		Contact No.	9900319781
		Email.Id	hodise@sapthagiri.edu.in
9	Guide	Name	Prof. Prerana Chaithra
		Contact No.	9886715998
		Email.Id	preranachaithra@sapthagiri.edu.in
11	Project Committee Co-ordinator	Name	Prof. Prerana Chaithra
		Contact No.	9886715998
		Email.Id	preranachaithra@sapthagiri.edu.in

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PERT Chart

Sl.NO	Activities Planned	Month / week	Month / week	Month / week	Month / week	Month / week	Month / week
1	Literature Review	Nov					
2	Planning / Design		Dec	Jan			
3	Assembly / Fabrication work			April	May		
4	Final Testing					June	
5	Result & Calculations / Conclusions					June	
6	Preparation of Report / Submission						July

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DECLARATION BY THE STUDENTS

We the project group members hereby declare that the details enclosed in the project proposal are true and correct to the best of our knowledge. We undertake to inform VTU, of any changes in the project title, students name will be intimated immediately. In case, any of the above information is found to be false or untrue or misleading, we are aware that we may be held liable for it.

We are aware that the project group ha to exhibit / demonstrate the project for evaluation in the VTU Regional centre and for exhibition at VTU, Belagavi. If the project group fails to attend the evaluation in Regional centre and for Exhibition in VTU, Belagavi, the sponsored project amount will be returned back to VTU immediately.

We also hereby, enclose the endorsement form to VTU Belagavi.

Sl. No.	Name of the Student	Signature with date
01	Sahana A	<i>Sahana A</i> 8/7/2022
02	Roshan Anegundi	<i>Roshan</i> 8/7/22
03	Anmol Singh	<i>Anmol Singh</i> 8/7/2022
04	Sadvi H D	<i>Sadvi H D</i> 8/7/2022

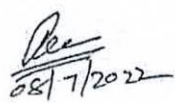
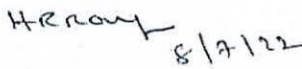
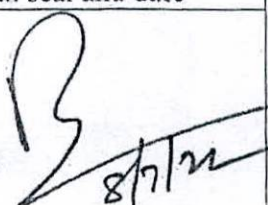

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ENDORSEMENT

This is to certify that

- 1] Sahana A
- 2] Roshan Anegundi
- 3] Anmol Singh
- 4] Sadvi H D

Are the bonafide students of the Department of Information Science & Engineering of our institution. If the project proposal submitted by these students under VTU Sponsored Student Project Proposal is selected by VTU, we will provide the required laboratory / Computer / infrastructure support in our college / Institution. Further we also take necessary steps that the project group will exhibit / demonstrate their project in the Regional centre and for exhibition at VTU , Belagavi. If the student group fails to attend the evaluation in Regional centre and exhibition at VTU, Belagavi, the supported project amount will be returned back to the VTU immediately.

Signature of Project Guide with date	Signature of HOD with seal and date	Signature of the Principal with seal and date
 08/7/2022	 8/7/22	 8/7/22
Name: Prof. Prerana Chaithra	Name: Dr. H. R. Ranganatha	Name: Dr.H. Ramakrishna Principal

Dr H.R Ranganatha
Prof. & H.O.D

Dept.of Information Science & Engg.
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Annexure-1

Scope / Objectives of Work:

- To propose a human computer interface for a paralyzed patient using eye motion and eye detection.
- To control muscles movement around the eye muscles as blinks are the only way for the patient to communicate.
- To build an interface which communication friendly is often intrusive, which require special hardware sensors.

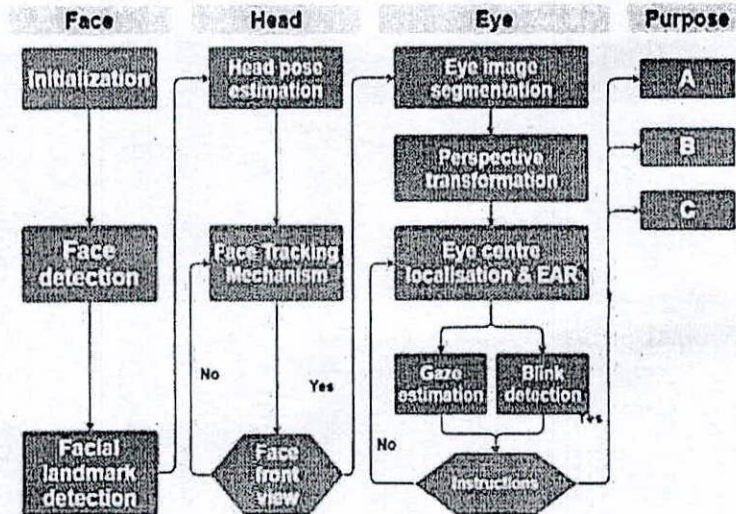


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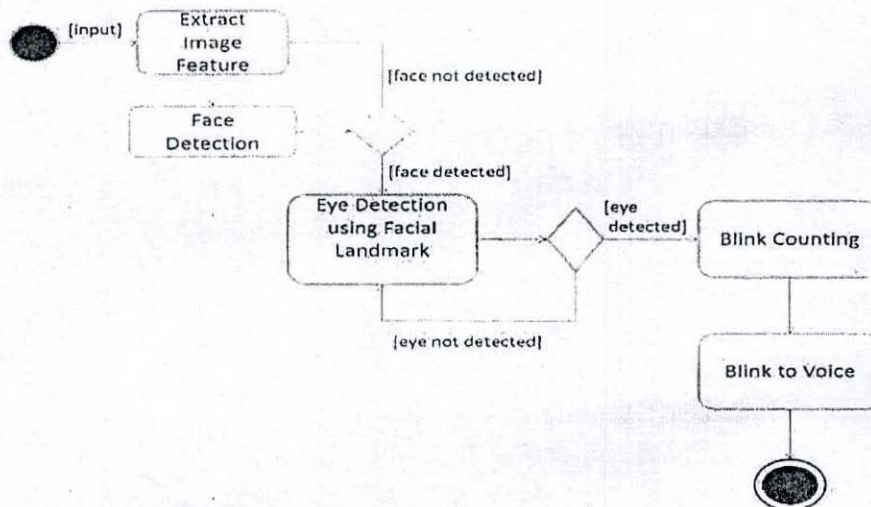
Annexure-2

Methodology of Work:

(Including diagram, flow chart & 3D Model)



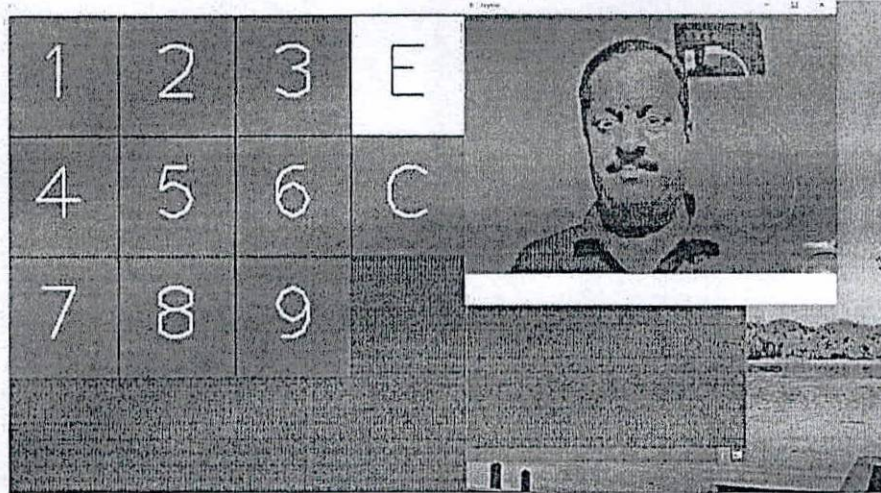
System Design



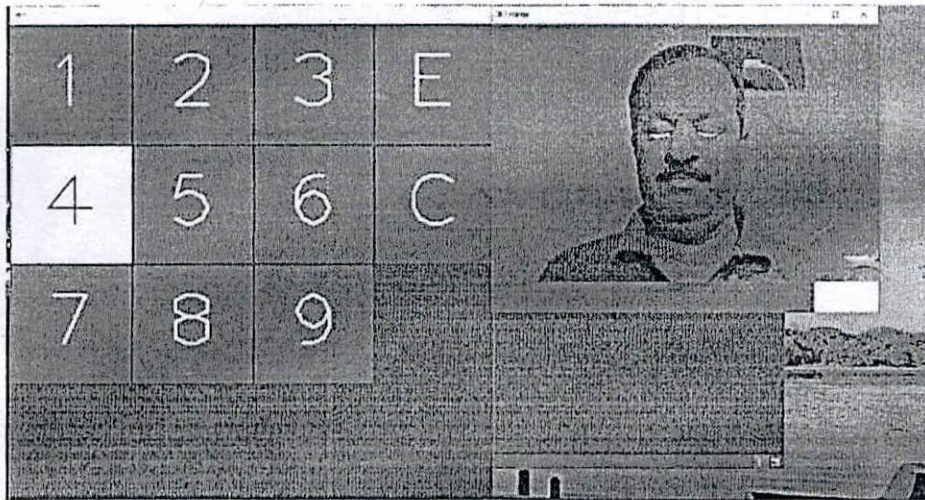
Activity Diagram

Annexure-3

Expected Outcome of the Project



Before Blinking



After Blinking


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Annexure-4

Applications of the Project

- Through an effective eye blink detection system we are trying to make a complacent mode of communication.
- This project performs Hands-free operation.
- After Eye Blink detection the message converted to voice



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Annexure-5

Parts List/Bill of Materials

Parts	Details	Amount (Rs.)
a) Cosumables		4000.00
b) Printing and binding	Report Preparation	1000.00
c) Miscellaneous expenses	Stationery/materials	1000.00
Total		6000.00


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**DEPARTMENT OF INFORMATION SCIENCE AND ENGINEERING
Academic Year 2021-22**

VTU Sponsored Student Project Proposal Format



1	Academic Year	2021-2022	
2	Semester	8th Semester	
3	Name of the College	Sapthagiri College of Engineering	
4	Branch	Information Science and Engineering	
5	Project Title	Collaborative Compiler with Pair Programming.	
6	Project Discipline	Technology relevant aftermath of Covid-19	
7	Principal	Name	Dr. H Ramakrishna
		Contact No.	9880703600
		Email ID	principal@sapthagiri.edu.in
8	HOD	Name	Dr. H R Ranganatha
		Contact No.	9900319781
		Email ID	hodise@sapthagiri.edu.in
9	Guide	Name	Prof. Sudarsanan D
		Contact No.	9535937675
		Email ID	sudarsanand@sapthagiri.edu.in
11	Project Committee Co-ordinator	Name	Prof. Prerana Chaithra
		Contact No.	9886715998
		Email ID	preranachaithra@sapthagiri.edu.in

Principal

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 Bengaluru - 560 057


Name of Project Group Members	
1.Group Leader & Member	
Name	SHREYAS M KAUSHIK 
USN No. :	1SG18IS101
Contact No.	8867229568
Email id:	<u>shreyasmk.mathur@gmail.com</u>
2. Name	NEHA M P 
USN No. :	1SG18IS068
Contact No.	9742900936
Email id:	nehamp930@gmail.com
3.Name	YASHASWINI P


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	USN No. :	1SG18IS126	
	Contact No.	8095480481	
	Email id:	yashprashanthn@gmail.com	
	4.Name	PRAJWAL C PATIL	
			
	USN No. :	1SG18IS077	
	Contact No.	9481453360	
	Email id:	prajwalpatil128@gmail.com	
13	Processing Fees Details	Bank Name :	
		Branch :	
		DD NO. with date: OR Cheque No. With date:	
14	Scope / Objectives of Work	Annexure -1	
15	Methodology of Work (including diagram, flow chart & design calculations)	Annexure -2	
16	Excepted outcome of	Annexure- 3	


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	Project		
17	Application of the Project	Annexure - 4	
18	Budget Details with material Required	Annexure - 5	
19	Date of Commencement of Project		1-11-2021
20	Probable date of completion of Project		20-07-2022
21	Duration of Project Work		9 months
22	PERT chart for completion of project in said duration as per planned activities		


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PERT Chart

SL.NO	Activities Planned	Month / week	Month / week	Month / week	Month / week	Month / week	Month / week
1	Literature Review	Nov					
2	Methodology / Design		Dec	Jan			
3	System Architecture			April	May		
4	Code Implementation and Testing					June	
5	Result & Calculations / Conclusions					June	
6	Preparation of Report / Submission						July


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DECLARATION BY THE STUDENTS

We the project group members hereby declare that the details enclosed in the project proposal are true and correct to the best of our knowledge. We undertake to inform VTU, of any changes in the project title, students name will be intimated immediately. In case, any of the above information is found to be false or untrue or misleading, we are aware that we may be held liable for it.

We are aware that the project group has to exhibit / demonstrate the project for evaluation in the VTU Regional centre and for exhibition at VTU, Belagavi. If the project group fails to attend the evaluation in Regional centre and for Exhibition in VTU, Belagavi, the sponsored project amount will be returned back to VTU immediately.

We also hereby, enclose the endorsement form to VTU Belagavi.

Sl. No.	Name of the Student	Signature with date
01	Shreyas M Kaushik	<i>Shreyas</i> 8/7/22
02	Neha M P	<i>Neha M.P</i> 8/7/22
03	Prajwal C Patil	<i>Prajwal C. Patil</i> 8-7-22
04	Yashaswini P	<i>Yashaswini P</i> 8/7/22

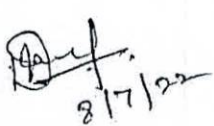

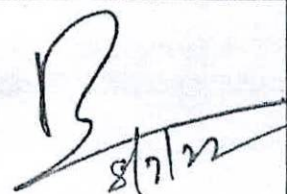

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14/5, Chikkasandra, Hesarghatta Main Road
Benevolence

ENDORSEMENT

This is to certify that

- 1] Shreyas M Kaushik
- 2] Neha M P
- 3] Prajwal C Patil
- 4] Yashaswini P

Are the bonafide students of the Department of Information Science & Engineering of our institution. If the project proposal submitted by these students under VTU Sponsored Student Project Proposal is selected by VTU, we will provide the required laboratory / Computer / infrastructure support in our college / Institution. Further we also take necessary steps that the project group will exhibit / demonstrate their project in the Regional centre and for exhibition at VTU, Belagavi. If the student group fails to attend the evaluation in Regional centre and exhibition at VTU, Belagavi, the supported project amount will be returned back to the VTU immediately.

Signature of Project Guide with date	Signature of HOD with seal and date	Signature of the Principal with seal and date
 8/7/22	 8/7/22	 8/7/22
Name: Prof. Sudarsanan D	Name: Dr. H. R. Ranganatha	Name: Dr. H. Ramakrishna

Dr H.R Ranganatha
Prof. & H.O.D

Dept. of Information Science & Engg
Sapthagiri College of Engineering
14/5 Chikkasandra, Hesaraghatta Main Road
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Annexure - 1

Scope / Objectives of Work:

- Interactive web based IDE for multiple users to collaborate, teach and work with code execution support.
- To design A.I. code suggestion and auto completion for enhanced software development support.
- To provide real-time communication with chat and voice call features.
- Restricting students from editing during programming sessions.

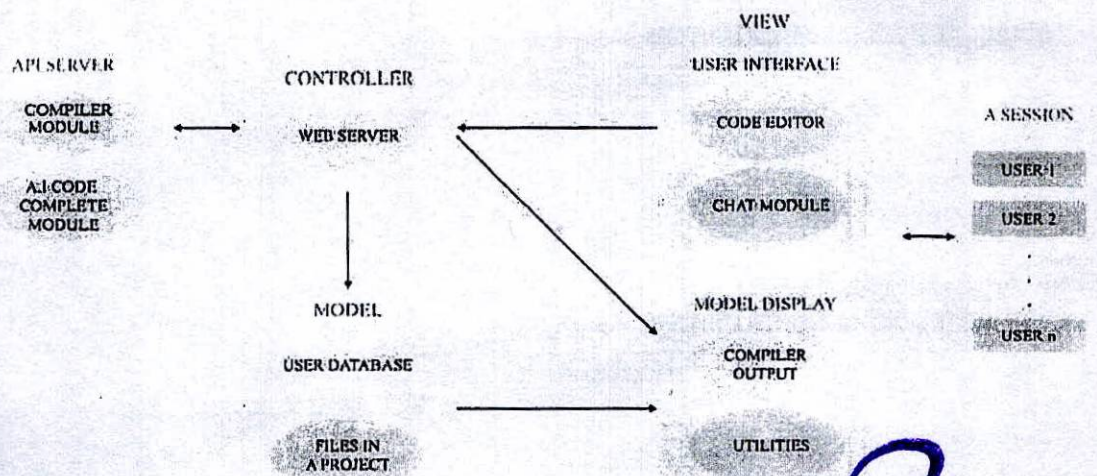


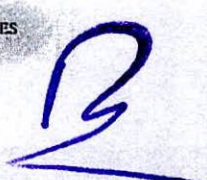
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Annexure - 2

Methodology of Work:
(Including diagram, flow chart & 3D Model)

SYSTEM DESIGN : MVC Architecture




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Date: 21/06/2022

Circular

This is to bring to your notice that, VTU is funding for two Final Year Students Innovative Projects under the scheme VTU-FAFSIP. Hence all the heads of department are hereby directed to form a department committee consisting of following members to select two best innovative projects for VTU funding. These two best projects can be selected from four shortlisted innovative projects through presentations by the students in the presence of committee. The details of committee members and date of presentation should be finalized and forwarded to the office on or before 24/06/2022.

Committee Members:

Principal – Chairman

HOD – Member

Dr.R.Harish – IQAC Co-ordinator

Two members - Subject experts / Senior Professors / Industry Partners

Copy- All HOD'S

Office

IQAC Co-ordinator

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Principal
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Bengaluru-560057



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Department of Electronics & Communication Engineering



Date: 24/06/2022

To,

The Principal
SCE,
Bengaluru

As per your direction department committee is formed as given below, for the selection of two Final Year Students Innovative Projects under the scheme VTU-FAFSIP. The presentation of four innovative final year projects is scheduled in the presence of committee in the department on 28/06/2022 at 10 am. The four innovative projects are shortlisted as per the emerging areas / themes give in the VTU circular.

The list of four innovative projects shortlisted for presentation is enclosed with this.

Committee Details

Sl. No.	Name	Designation	Role	Signature
1	Dr.H. Ramakrishna	Principal	Chairman	
2	Dr. H C Sateesh Kumar	Prof.&H.O.D (ECE)	Member	
3	Dr.Harish.R	Prof. (Phy) & IQAC Co-ordinator	Member	
4	Dr. Prakash Jadhav Dr. Sudha M.S.	Project Co-ordinator	Subject Expert	
5	Prof. Agalya S Prof. Shobha S	Project Co-ordinator	Subject Expert	

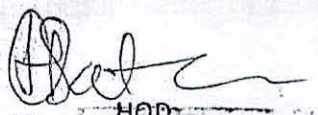
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14/5, Chikkasandra, Hesarghatta Main Road
Bengaluru - 560 057

Head of Department
Electronics & Communication
Sapthagiri College of Engineering
Bengaluru - 560 057.

List of Innovative Projects Shortlisted For Presentation

Sl. No.	Name of the Project	Name of Students	USN	Guide	Topics / Theme
1.	Driver dormant Monitoring system to alert fatal accidents using image processing	Deepa B	1SG18EC023	Dr. Prakash Jadhav	Societal / Public / Transportation Alertness
		Harshitha V	1SG18EC037		
		Lavanya N	1SG18EC049		
		Megha S	1SG18EC058		
2.	Solar Powered wheel chair with voice controller for physically challenged persons	Manu K M	1SG19EC410	Prof. Manasa M G	Natural resource usage
		Doreswamy V B	1SG19EC407		
		Prathap B R	1SG19EC413		
		Ranganath M	1SG19EC415		
3.	A blind stick navigator with Braille system and obstacle detection for visually and hearing impaired persons	Archana.D	1SG18EC010	Dr. H C. Sateesh Kumar	Physically Challenged Persons
		Aishwarya katare	1SG18EC002		
		Apoorva YJ	1SG18EC007		
4.	Forest monitoring system	Vishal N	1SG18EC120	Prof. Shobha H	Environmental Conservation
		Shashank DR	1SG18EC093		
		Sharath Kumar BG	1SG18EC092		
		Anand V	1SG18EC005		


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HOD
Head of the Department
Electronics & Communication
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Department of Electronics and Communication Engineering

Date: 08/07/2022

To,

The Principal
SCE,
Bengaluru

Sir,

The following two final year innovative projects have been selected to apply for VTU funding during the presentation held on 08/07/2022 in the department board room in the presence of committee members.

Two Final Year Innovative Projects Selected to Apply for VTU Funding (VTU-FAFSIP)


Sl. No.	Name of the Project	Name of Students	USN	Guide
1.	Driver dormant Monitoring system to alert fatal accidents using image processing	Deepa B	ISG18EC023	Dr. Prakash Jadhav
		Harshitha V	ISG18EC037	
		Lavanya N	ISG18EC049	
		Megha S	ISG18EC058	
2.	Solar Powered wheel chair with voice controller for physically challenged persons	Manu K M	ISG19EC410	Prof. Manasa M G
		Doreswamy V B	ISG19EC407	
		Prathap B R	ISG19EC413	
		Ranganath M	ISG19EC415	

Approval Committee

Sl. No.	Name	Designation	Role	Signature
1	Dr. H. Ramakrishna	Principal	Chairman	
2	Dr. H C Sateesh Kumar	Prof.&H.O.D (ECE)	Member	
3	Dr. Harish.R	Prof. (Phy) & IQAC Co-ordinator	Member	
4	Dr. Prakash Jadhav Dr. Sudha M.S.	Project Co-ordinator	Subject Expert	
5	Prof. Agalya S Prof. Shobha S	Project Co-ordinator	Subject Expert	
6	Dr. Ravishankar C V Prof. & Head ECE Sambhram Institute of Technology	VTU Nominee	Member	

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H.O.D
Electronics & Communication
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	DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING Academic Year 2021-22

VTU Sponsored Student Project Proposal Format

1	Academic Year	2021-22	
2	Semester	8th	
3	Name of the College	Sapthagiri College Of Engineering	
4	Branch	Department Of Electronics And Communication Engineering	
5	Project Title	Driver Dormant Monitoring System To Avert Fatal Accidents Using Image Processing	
6	Project Discipline		
7	Principal	Name	Dr. H. Ramakrishna
		Contact No.	9448978350
		Email.Id	principal@sapthagiri.edu.in
8	HOD	Name	Dr. H. C. Sateesh kumar
		Contact No.	9986633223
		Email.Id	hodece@sapthagiri.edu.in
9	Guide	Name	Dr. Prakash Jadhav
		Contact No.	9844393488
		Email.Id	prakashjadhav@sapthagiri.edu.in
11	Project Committee Co-ordinator	Name	Dr. Prakash Jadhav
		Contact No.	9844393488
		Email.Id	prakashjadhav@sapthagiri.edu.in






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12	Name of Project Group Members	
	1.Group Leader & Member	
	Name	MEGHA S
	USN No. :	1SG18EC058
	Contact No.	9008396730
	Email id:	meghas9155@gmail.com
	2. Name	DEEPA B
	USN No. :	1SG18EC023
	Contact No.	9945168324
	Email id:	deepainchu@gmail.com
	3.Name	HARSHITHA V
	USN No. :	1SG18EC037
	Contact No.	7892091808
	Email id:	harshithavkarkera182@gmail.com


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 Bengaluru

	4.Name	LAVANYA N	
	USN No. :	1SG18EC049	
	Contact No.	8217665083	
	Email id:	natarajulavanya@gmail.com	
13	Processing Fees Details	Bank Name : Branch : DD NO. with date: OR Cheque No. With date:	
14	Scope / Objectives of Work	1.To detect the alcohol consumption and if the alcohol is consumed by the driver, then the ignition will not turn on. 2.To design a system to detect driver's drowsiness based on measurement of face and eye detection. 3.To implement buzzer system to further increase vigilance of the driver.	4.Further to increase the protection of the driver, the indicator is turned on followed by switching off the ignition. 5.To mail the image of the driver to the owner/ immediate family member to apprise.
15	Methodology of Work (including a diagram, flow chart & design calculations)	Block diagram 	Flow Chart


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16	Expected outcome of Project	  															
17	Application of the Project	1. Providing performance feedback to a fatigue management program.	2. Providing real-time drowsiness feedback to the driver.														
18	Budget Details with material Required	<table border="1"> <thead> <tr> <th>Budget</th> <th>Amount</th> </tr> </thead> <tbody> <tr> <td>Materials</td> <td>8000/-</td> </tr> <tr> <td>Labor</td> <td>1000/-</td> </tr> <tr> <td>Travel</td> <td>2000/-</td> </tr> <tr> <td>Report</td> <td>2500/-</td> </tr> <tr> <td>Miscellaneous</td> <td>200/-</td> </tr> <tr> <td>Total</td> <td>12700/-</td> </tr> </tbody> </table>	Budget	Amount	Materials	8000/-	Labor	1000/-	Travel	2000/-	Report	2500/-	Miscellaneous	200/-	Total	12700/-	
Budget	Amount																
Materials	8000/-																
Labor	1000/-																
Travel	2000/-																
Report	2500/-																
Miscellaneous	200/-																
Total	12700/-																
19	Date of Commencement of Project	September 01 2021															
20	Probable date of completion of Project	June 30 2022															
21	Duration of Project Work	10 Months															
22	PERT chart for completion of project in said duration as per planned activities																

PERT Chart

Sl.N O	Activities Planned	October/ 3 rd week	November /2 nd week	February/ 3 rd week	March/ 2 nd week	May / 2 nd week	June / 1 st week
1	Literature Review						
2	Planning / Design						
3	Assembly / Fabrication work						


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4	Final Testing						
5	Result & Calculations / Conclusions						
6	Preparation of Report / Submission						

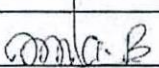
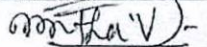
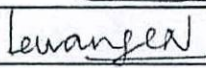
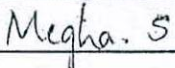

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Sapthagiri College of Engineering
14/5, Chikkasandra, Hosareghatta Main Road
Bengaluru - 560 057


DECLARATION BY THE STUDENTS

We, the project group members hereby declare that the details enclosed in the project proposal are true and correct to the best of our knowledge. We undertake to inform VTU, of any changes there in the project title, students name will be intimated immediately. In case, any of the above information is found to be false or untrue or misleading, we are aware that we may be held liable for it.

We are aware that the project group has to exhibit / demonstrate the project for evaluation in the VTU Regional centre and for exhibition at VTU, Belgavi. If the project group fails to attend the evaluation in Regional centre and for Exhibition in VTU Belgavi, the sponsored project amount will be returned back to VTU immediately

We also hereby, enclose the endorsement form to VTU, Belgavi.

SL.NO	Name of the Student	Signature with date
01	DEEPA B	 27/06/2022
02	HARSHITHA V	 27/06/2022
03	LAVANYAN	 27/06/2022
04	MEGHA S	 27/06/2022


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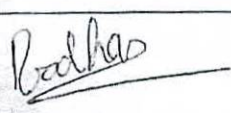

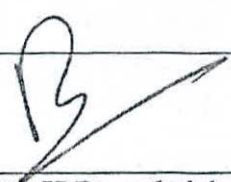
ENDORSEMENT

(Endorsement to be taken in the institution on Department Letter head)

This is to certify that

- 1]. DEEPA B
- 2]. HARSHITHA V
- 3]. LAVANYA N
- 4]. MEGHA S

Are bonafide students of Department in Electronics and Communication, of our institution. If the project proposal submitted by these students under VTU Sponsored Student project Proposal is selected by VTU, we will provide the required laboratory / Computer / infrastructure support in our college / institution. Further we also take necessary steps that the project will exhibit / demonstrate their project in the Regional Centre and for exhibition at VTU, Belagavi. If the student group fails to attend the evaluation in Regional Centre and exhibition at VTU Belagavi, the supported project amount will be returned back to VTU immediately.

Signature of Project Guide with date	Signature of HOD with seal and date	Signature of the Principal with seal and date
		
Name: Dr. Prakash Jadhav	Name: Dr. Sateesh Kumar Head of the Department Electronics & Commu.	Name: Dr. H Ramakrishna Principal Sapthagiri College of Engineering Chikkasandra, Hesaraghatta Road, Bangalore-560 057

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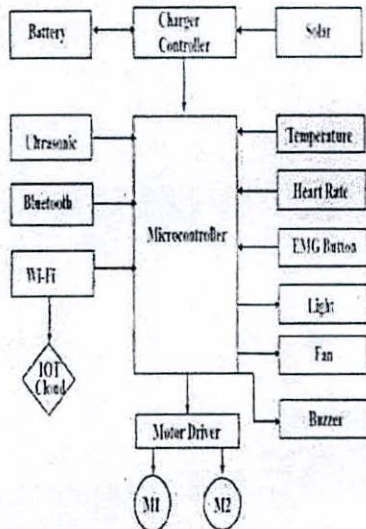
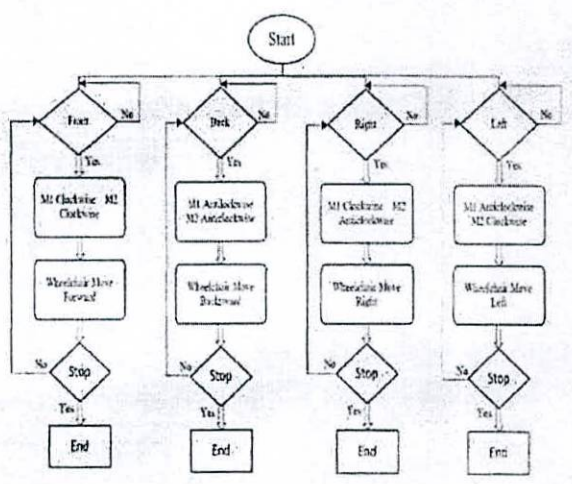
**DEPARTMENT OF ELECTRONICS & COMMUNICATION
ENGINEERING****Academic Year 2021-22****VTU Sponsored Student Project Proposal Format**

1	Academic Year	2021-22	
2	Semester	8th	
3	Name of the College	SAPTHAGIRI COLLEGE OF ENGINEERING	
4	Branch	DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING	
5	Project Title	Solar Powred Wheel Chair wWith Bluetooth Controller and IOT Cloud System For Physically Challenged Persons	
6	Project Discipline	Technology relevant in the physically callenged presons	
7	Principal	Name	Dr. H. Ramakrishna
		Contact No.	9448978350
		Email.Id	principle@sapthagiri.edu.in
8	HOD	Name	Dr. H. C. Sateesh kumar
		Contact No.	9986633223
		Email.Id	hodece@sapthagiri.edu.in
9	Guide	Name	Manasa M G
		Contact No.	8431765929
		Email.Id	manasamg@sapthagiri.edu.in
10	Project Co-guide (if any)	Name	NA
		Contact No.	NA
		Email.Id	NA
11	Project Committee Co- ordinator	Name	Dr. Prakash Jadhav
		Contact No.	9844393488
		Email.Id	prakashjadhav@sapthagiri.edu.in


 Principal
 Sapthagiri College of Engineering
 14/5, Chikkasandra, Heasaghatta Main Road
 Bengaluru - 560 057

12	Name of Project Group Members	
	1.Group Leader & Member	
	Name	Doreswamy V B 
	USN No. :	1SG19EC407
	Contact No.	8431630557
	Email id:	Doreswamyvb2001@gmail.com
	2. Name	Mnau K M 
	USN No. :	1SG19EC410
	Contact No.	8073434778
	Email id:	Manugowda740@gmail.com
	3.Name	Prathap B R 
	USN No. :	1SG19EC413
	Contact No.	9008116821
	Email id:	Prathapbr777@gmail.com

4.Name		Ranganath M	
USN No. :		ISG19EC415	
Contact No.		8197348358	
Email id:		Rangamgowda5@gmail.com	
5.Name		NIL	
USN No. :		NIL	
Contact No.		NIL	
Email id:		NIL	

13	Processing Fees Details	Bank Name :	
		Branch :	
		DD NO. with date: OR Cheque No. With date:	
14	Scope / Objectives of Work	1. To design a solar-powered wheelchair 2. To improve voice control system to control the way of wheelchair	3. To improving IOT cloud-based healthcare monitoring 4. Smart obstacle avoidance
15	Methodology of Work (including diagram, flow chart & design calculations)		
16	Excerpted	1. Our proposed project will	2. patient controlled wheelchair by using

	outcome of Project	demonstrate a great potential by Solar energy, automation working and health parameters monitoring. Uniqueness of this project is the wheelchair is charged and run by using solar energy.		Android app. The patient health parameters upload to cloud every 30 seconds. The proposed framework gives more confidence to the special people. Obstacle sensor and emergency buttons are used to avoid unauthorized accidents.
17	Application of the Project	1. Physically challenged persons.		2. Paralyzed persons.
18	Budget Details with material Required	Budget	Amount	Wheel, Solar cell, Battery and functions, DC motor forward rear control, Bluetooth, power operation, circuit construction, microcontroller, I/O holes and functions, RS232 communication, Charger controller, WI-FI, Sensors,
		Materials	16000	
		Labor	3000	
		Travel	1000	
		Report	1500	
		Miscellaneous	1000	
		Total	22500	
19	Date of Commencement of Project			September 01 2021
20	Probable date of completion of Project			June 30 2022
21	Duration of Project Work			10 Months
22	PERT chart for completion of project in said duration as per planned activities			

PERT Chart

SL.N O	Activities Planned	October/ 3 rd week	November /2 nd week	February/ 3 rd week	March/ 2 nd week	May / 2 nd week	June / 1 st week
1	Literature Review						
2	Planning / Design						
3	Assembly / Fabrication work						
4	Final Testing						
5	Result & Calculations / Conclusions						
6	Preparation of Report / Submission						

DECLARATION BY THE STUDENTS

We, the project group members hereby declare that the details enclosed in the project proposal are true and correct to the best of our knowledge. We undertake to inform VTU, of any changes there in the project title, students name will be intimated immediately. In case, any of the above information is found to be false or untrue or misleading, we are aware that we may be held liable for it.

We are aware that the project group has to exhibit / demonstrate the project for evaluation in the VTU Regional centre and for exhibition at VTU, Belgavi. If the project group fails to attend the evaluation in Regional centre and for Exhibition in VTU Belgavi, the sponsored project amount will be returned back to VTU immediately

We also hereby, enclose the endorsement form to VTU, Belgavi.

SL.NO	Name of the Student	Signature with date
01	Doreswamy V B	<i>Doreswamy v B</i>
02	Manu K M	<i>Manu</i>
03	Prathap B R	<i>Prathap</i>
04	Ranganath M	<i>Ranganath M</i>

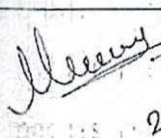
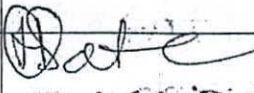
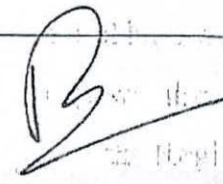
ENDORSEMENT

(Endorsement to be taken in the institution on Department Letter hear)

This is to certify that

- 1]. Doreswamy V B
- 2]. Manu K M
- 3]. Prathap B R
- 4]. Ranganath M

Are bonafide students of Department in Electronics and Communication, of our institution. If the project proposal submitted by these students under VTU Sponsored Student project Proposal is selected by VTU, we will provide therequired laboratory / Computer / infrastructure support in our college / institution. Further we also take necessary steps that the project will exhibit / demonstrate theirproject in the Regional Centre and for exhibition at VTU, Belagavi. If the student group fails to attend the evaluation in Regional Centre and exhibition at VTU Belagavi, the supported project amount will be returned back to VTU immediately.

Signature of Project Guide with date	Signature of HOD with seal and date	Signature of the Principal with seal and Date
 24/06/22	 24/6/2022 Head of the Department Electronics & Communication Sapthagiri College of Engineering	
Name: Prof. Manasa M G	Name: Dr. H. C. Kumar H.C.	Name: Dr. H. Ramakrishna Principal Sapthagiri College of Engineering Chikkasandra, Hesaraghatta Road, Bengaluru-560 057



SAPTHAGIRI COLLEGE OF ENGINEERING

(Affiliated to VTU, Belagavi, Approved by AICTE, New Delhi)

Accredited by NAAC with "A" Grade, Accredited by NBA for ECE, CSE, ISE, ME, EEE, ISO 9001:2015 Certified Institution, #14/5, Chikkasandra, Hesarghatta Main Road, Bengaluru



Date: 21/06/2022

Circular

This is to bring to your notice that, VTU is funding for two Final Year Students Innovative Projects under the scheme VTU-FAFSIP. Hence all the heads of department are hereby directed to form a department committee consisting of following members to select two best innovative projects for VTU funding. These two best projects can be selected from four shortlisted innovative projects through presentations by the students in the presence of committee. The details of committee members and date of presentation should be finalized and forwarded to the office on or before 24/06/2022.

Committee Members:

Principal – Chairman

HOD – Member

Dr.R.Harish – IQAC Co-ordinator

Two members - Subject experts / Senior Professors / Industry Partners

VTU Nominee-

Copy- All HOD'S

Office

IQAC Co-ordinator

Principal
Sapthagiri College of Engineering
14/5, Chikkasandra, Hesarghatta Main Road
Bengaluru - 560 057

Principal
Sapthagiri College of Engineering
Chikkasandra, Hesarghatta Road,
Bangalore-560 057



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Department of Electrical & Electronics Engineering

Date: 24/06/2022

To,

The Principal
SCE,
Bengaluru

As per your direction department committee is formed as given below, for the selection of two Final Year Students Innovative Projects under the scheme VTU-FAFSIP. The presentation of four innovative final year projects is scheduled in the presence of committee in the department board room on 27/06/2022 at 2pm. The four innovative projects are shortlisted as per the emerging areas / themes give in the VTU circular.

The list of four innovative projects shortlisted for presentation is enclosed with this.

Committee Details

Sl. No.	Name	Designation	Role	Signature
1	Dr.H. Ramakrishna	Principal	Chairman	
2	Dr. Narayanappa	Prof. & H.O.D (EEE)	Member	
3	Dr. Harish.R	Prof. (Phy) & IQAC Co-ordinator	Member	
4	Prof. Ramya M	Assistant Professor	Project Co-ordinator	
5	Dr. Raghavendra G	Associate Professor	Subject Expert	
6	Dr. Rekha S N	Associate Professor	Subject Expert	
7	Mr. Dhamodaran A	Assistant Professor	Subject Expert	

Principal
Sapthagiri College of Engineering
14/5, Chikkasandra, Hesarghatta Main Road
Bengaluru - 560057

HOD

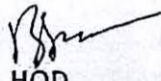
PROF & HOD

Department of Electrical & Electronics Engineering
Sapthagiri College of Engineering
Bangalore - 560057

List of Innovative Projects Shortlisted for Presentation

Sl. No.	Name of the Project	Name of Students	USN	Guide	Topics / Theme
1.	Electric Bicycle	CHETHANKUMAR M M	ISG19EE402	Mr. Dhamodaran A	Environmental
		CHIRAG B V	ISG19EE403		
		ESHWAR KAMBAR	ISG19EE405		
		NISHANK V	ISG19EE410		
2.	Smart Movable Road Divider	SRUJANA V HUGAR	ISG18EE084	Dr. Rekha S N	Society /security and safety
		RAJATH	ISG18EE062		
		SINDHU N	ISG18EE077		
		SNEHA V	ISG18EE078		
3.	Crop protection against rainfall with automated agriculture	NISARGA P	ISG18EE054	Mrs. Ramya M	Agriculture application
		SAHANA S	ISG18EE067		
		SOUMYA L	ISG18EE080		
		UMADEVI M	ISG18EE090		
4.	Child Rescue system on open bore wells	CHAITRA N	ISG18EE018	Mr. Muralikrishna K	Society
		HARSHITHA A B	ISG18EE036		
		J S HARITHA	ISG18EE040		
		MAHALAKSHMI B R	ISG18EE046		


 Principal
Sapthagiri College of Engineering
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 HOD
PROF & HOD
 Department of Electrical & Electronics Engineering
 Sapthagiri College of Engineering
 Bangalore - 560057



SAPTHAGIRI COLLEGE OF ENGINEERING

(Affiliated to VTU, Belagavi, Approved by AICTE, New Delhi)

Accredited by NAAC with "A" Grade, Accredited by NBA for ECE, CSE, ISE, ME, EEE, ISO 9001:2015 and 14001:2015 Certified Institution, #14/5, Chikkasandra, Hesarghatta Main Road, Bengaluru-560057

Department of Electrical & Electronics Engineering

Date: 8/07/2022

To,

The Principal
SCE,
Bengaluru

Sir,

The following two final year innovative projects have been selected to apply for VTU funding during the presentation held on 8/07/2022 in the department board room in the presence of committee members.

Two Final Year Innovative Projects Selected to Apply for VTU Funding

Sl. No.	Name of the Project	Name of Students	USN	Guide
1.	Electric Bicycle	CHETHANKUMAR M M	ISG19EE402	Mr. Dhamodaran A
		CHIRAG B V	ISG19EE403	
		ESHWAR KAMBAR	ISG19EE405	
		NISHANK V	ISG19EE410	
2.	Smart Movable Road Divider	SRUJANA V HUGAR	ISG18EE084	Dr. Rekha S N
		RAJATH	ISG18EE062	
		SINDHU N	ISG18EE077	
		SNEHA V	ISG18EE078	

(VTU-FAFSIP)

Approval Committee

Sl. No.	Name	Designation	Role	Signature
1	Dr.H. Ramakrishna	Principal	Chairman	
2	Dr.Narayanappa	Prof. & H.O.D (EEE)	Member	
3	Dr.Harish.R	Prof. (Phy) & IQAC Co-ordinator	Member	
4	Dr. Rekha S N.	Associate Professor	Subject Expert	
5	Mr. Dhamodaran A	Assistant Professor	Subject Expert	
6.	Dr Ravishankar C V , Prof. & Head of ECE, Sambhram Institute of Technology	VTU Nominee	Member	

Principal

Sapthagiri College of Engineering
14/5, Chikkasandra, Hesarghatta Main Road
Bengaluru - 560 057

H.O.D

PROF & HOD

Department of Electrical & Electronics Engineering
Sapthagiri College of Engineering
Bengaluru - 560057

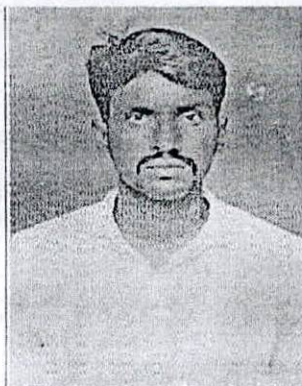





Visvesvaraya Technological University
 “JnanaSangama”
 Belagavi: 590018
 Karnataka, India.
 Tele: 0831-2498225 ,2405454

VTU Sponsored Student Project Proposal Format

01	Academic Year :	2021-2022
02	Semester :	VIII
03	Name of the College:	Sapthagiri College of Engineering
04	Branch:	Electrical and Electronics Engineering
05	Project Title:	Electric Bicycle
06	Project Discipline:	Green Energy
07	Principal	Name: Dr.H.RamaKrishna
		Contact No: 9880703600
		Email id: principal@sapthagiri.edu.in
08	HOD	Name: Dr.Narayanappa
		Contact No: 8310198493
		Email id: narayanappa@sapthagiri.edu.in
09	Project Guide	Name: Prof.A. Dhamodaran
		Contact No: 9620540352
		Email id: adhamodaran@sapthagiri.edu.in
10	Project Co-Guide(if any)	Name: NA
		Contact No:
		Email id:
11	Project Committee coordinator (Identified by the college) :	Name: Dr.Harish
		Contact No: 9448349733
		Email id: iqac@sapthagiri.edu.in

Principal
 Sapthagiri College of Engineering
 14/5, Chikkasandra, Hesaraghatta Main Road
 Bengaluru - 560 057

12	Name of project group Members	
1.Group leader and Member		
Name:Chetankumar M M		
USN No. :1SG19EE402		
Contact No:8088814357		
Email id:chetankumarmm@gmail.com		
2.Member		
Name: Chirag B V		
USN No. :1SG19EE403		
Contact No:7338237593		
Email id: chiragbvbv@gmail.com		
3.Member		
Name: Eshwar Kambar		
USN No. :1SG19EE405		
Contact No: 6360693293		
Email id:eshwarmoto@gmail.com		

4.Member		
Name: Nishank V		
USN No. :1SG19EE410		
Contact No: 6360941069		
Email id: nishanknishu@gmail.com		
5.Member(If any)		
Name:		Passport size photo
USN No. :		
Contact No:		
Email id:		
13	Scope / Objectives of the project:	<p>The main purpose of this project is to save the environment. In order to attain this, the following objectives are specified:</p> <ul style="list-style-type: none"> • To design and develop an E-bike which reduces physical effort of the rider compared to traditional bicycles. • ii. To propel the vehicle by the combination of pedaling and a battery powered electric motor.

		<p>and powered by a lithium iron phosphate battery.</p> <ul style="list-style-type: none"> • The whole unit was controlled by a control unit. The estimated range of an E-bike is 25Km, with the speed of 25-30 kmph and the torque obtained on the wheels is 7 N-m. • As it is having two modes of drive electric and manual pedaling it will significantly improve rider's health than motorbikes and reduces rider fatigue than traditional bicycle. • E-bikes are claimed to have a significantly lower environmental impact than conventional automobiles and generally seen as eco-friendly.
16	Application of the project :	<ul style="list-style-type: none"> • It provides cost effective, eco-friendly, hustle free & less maintenance transport option. • It can easily replace motor bike for intercity commutation. • It can be used by many delivery services provided by gaint companies. Ex- zomato, swiggy
17	Budget details with Materials required:	<p>Battery – Rs. 5000/-</p> <p>Motor (1 nos.) – Rs. 6000/-</p> <p>Motor Controller – Rs. 1500/-</p> <p>Throttle – Rs. 500/-</p> <p>E-Breaks – Rs. 350/-</p> <p>Miscellaneous Electronic Components – Rs. 1000/-</p> <p>Miscellaneous expenses on building project – Rs. 700</p>

	Total –Rs. 15,050/-	
18	Date of commencement of the Project:	Jan 2022
19	Probable date of completion of the project:	July 2022
20	Duration of project work:	7 Months
21	Pert chart for completion of the project in said duration as per planned activities:	

Sl.No	Activities Planned	1 Month/ Week	2 Month/ Week	3 Month/ Week	4 Month/ Week	5 Month/ Week	6 Month/ Week
01	Literature review						
02	Planning/ Designing						
03	Assembly/ Fabrication work						
04	Final Testing						
05	Result & Calculation/ Conclusion						
06	Preparation of Report & Submission						

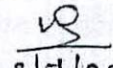

 Principal
 Sapthagiri College of Engineering
 14/5, Chikkasandra, Heeraghatta Main Road
 Bengaluru - 560 057

DECLARATION BY THE STUDENTS

We, the project group members hereby declare that the details enclosed in the project proposal are true and correct to the best of our knowledge. We undertake to inform VTU, of any changes there in the project title, students name will be intimated immediately. In case, any of the above information is found to be false or untrue or misleading, we are aware that we may be held liable for it.

We are aware that the project group has to exhibit / demonstrate the project for evaluation in the VTU Regional centre and for exhibition at VTU, Belagavi. If the project group fails to attend the evaluation in regional centre and for Exhibition in VTU Belagavi, the sponsored project amount will be returned back to VTU immediately

We also hereby, enclose the endorsement form to VTU, Belagavi.

SL.No	Name of the Student	Signature with date
01	Chetankumar M M	Chetankumar M M 8/7/22
02	Chirag B V	Chirag B V 8/7/22
03	Eshwar Kambar	 8/7/22
04	Nishank V	Nishank V 8/7/2022

ENDORSEMENT

This is to certify that

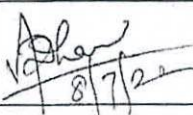
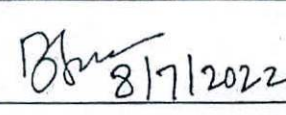

1] Chetankumar M M

2] Chirag B V

3] Eshwar Kambar

4] Nishank V

Are bonafide students of Department in Electrical and Electronics Engineering, of our institution. If the project proposal submitted by these students under VTU Sponsored Student Project Proposal is selected by VTU, we will provide the required laboratory / Computer / infrastructure support in our college / Institution. Further we also take necessary steps that the project group will exhibit / demonstrate their project in the Regional centre and for exhibition at VTU, Belagavi. If the student group fails to attend the evaluation in Regional centre and exhibition at VTU Belagavi, the supported project amount will be returned back to VTU immediately.

Signature of Project Guide with date	Signature of HOD with Seal and date	Signature of the Principal with Seal and date
		
Name: Prof A.Dhamodaran	Name: Dr. Narayanappa	Name: Dr. H. RamaKrishna
Dept. of Electrical & Electronics Engineering Sapthagiri College of Engineering 14/5, Chikkasandra, Hesaraghatta Main Road, Bangalore - 560 057	PROF & HOD Department of Electrical & Electronics Engineering Sapthagiri College of Engineering Bangalore - 560057	Principal Sapthagiri College of Engineering Chikkasandra, Hesaraghatta Road, Bangalore-560 057






Visvesvaraya Technological University
 “JnanaSangama”
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 Tele: 0831-2498225 ,2405454


VTU Sponsored Student Project Proposal Format

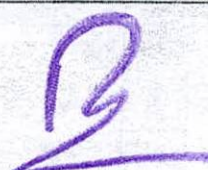
01	Academic Year :	2021 - 2022	
02	Semester :	VIII	
03	Name of the College:	Sapthagiri College of Engineering	
04	Branch:	Electrical and Electronics Engineering	
05	Project Title:	Smart Movable Road Divider	
06	Project Discipline:	Modified Transfer System	
07	Principal	Name:	Dr.H.RamaKrishna
		Contact No:	9880703600
		Email id:	principal@sapthagiri.edu.in
08	HOD	Name:	Dr.Narayanappa
		Contact No:	8310198493
		Email id:	narayanappa@sapthagiri.edu.in
09	Project Guide	Name:	Dr. Rekha S.N
		Contact No:	9448387319
		Email id:	rekhasn@sapthagiri.edu.in
10	Project Co-Guide(if any)	Name:	NA
		Contact No:	
		Email id:	
11	Project Committee coordinator (Identified by the college) :	Name:	Dr.Harish
		Contact No:	9448349733
		Email id:	iqac@sapthagiri.edu.in

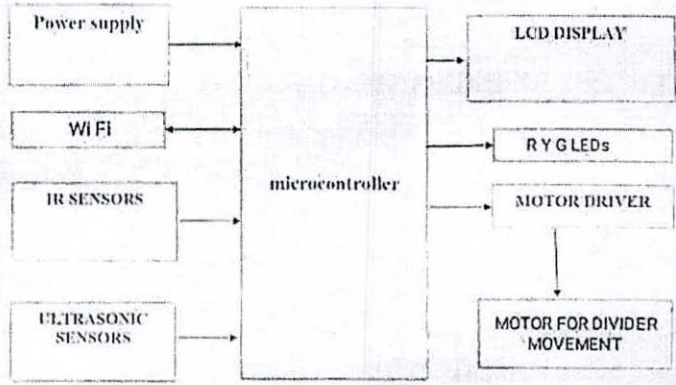

 Principal
 Sapthagiri College of Engineering
 14/5, Chikkasandra, Heeraghatta Main Road
 Bengaluru - 560 057

12	Name of project group Members	
1.Group leader and Member		
Name: Rajath N Gowda		
USN No. :1SG18EE062		
Contact No: 7090951583		
Email id: rajathngowda3@gmail.com		
2.Member		
Name: Sindhu N		
USN No. :1SG18EE077		
Contact No: 9743402077		
Email id: sindhu2001n@gmail.com		
3.Member		
Name: Sneha V		
USN No. :1SG18EE078		
Contact No: 8317412014		
Email id: savidacchu06@gmail.com		



4.Member		
Name: Srujana V Hugar		
USN No. : ISG18EE084		
Contact No: 9353624753		
Email id: kvsrujana@gmail.com		
5.Member(If any)		
Name:		Passport size photo
USN No. :		
Contact No:		
Email id:		
13	Scope / Objectives of the project:	<p>The main objective is TO DESIGN & DEVELOP A SMART ROAD DIVIDER</p> <ul style="list-style-type: none"> • Ultrasonic and IR sensor to detect traffic congestion. • Microcontroller to process the signal & give commands. • DC motor to shift the Road-Divider depending on Traffic density. • Embedded system platform to monitor and control the Traffic, detection of traffic Violation and also, we can control by using Google Application.
14	Methodology of work: (Including diagram, flow chart and design calculations)	<ul style="list-style-type: none"> • Ultrasonic sensors are used in the proposed system. It is also known as trans-receivers as they send as-well-as receive the signals and more commonly known as transducers. These sensors generate high frequency sound waves & also



		<p>determines the time interval in between sending signal and receiving of echo to determine the distance of an object & indicate the congestion of Traffic.</p> <ul style="list-style-type: none"> In the analysis process, the information is analyzed the mistreatment raspberry pi through image process. This would be the input for the IoT system. After the analysis process, the decision can be made whether or not to move the Road-Divider.  <ul style="list-style-type: none"> Alternatively, Since the traffic level alternates during each part of the day (i.e., morning and evening session), Road- Divider can be moved automatically according to the time period using IoT system. To achieve this, Timers are connected to Arduino controller.
15	Expected Outcome of the project:	<p>Results obtained from simulation and implementation of the design indicates that the traffic control system with the PIC18F4550 microcontroller and the infrared sensors gives a better performance compared to the conventional traffic light control system.</p>

16	Application of the project :	Smart movable road divider is implemented where the divider is moved based on the density of the traffic using IR Sensors. If the density of the traffic is high on one side, the divider is moved to the other side. Then the density of traffic is stored in cloud which is possible through IoT.		
17	Budget details with Materials required:	Sl.No	Devices Quantity	Price (Rs.)
		1	Arduino ATmega328	2000
		2	LCD	800
		3	LCD base	700
		4	IR sensors	1200
		5	Ultrasonic sensor	800
		6	Motor	2000
		7	Relay Driver	1000
		8	Signal Unit	2000
		9	Wi-Fi	1000
		10	Connecting Cables	500
		Total Cost (Rs.) 12000		
18	Date of commencement of the Project:		January 2022	
19	Probable date of completion of the project:		July 2022	
20	Duration of project work:		7 Months	
21	Pert chart for completion of the project in said duration as per planned activities:			

Sl.No	Activities Planned	1 Month/ Week	2 Month/ Week	3 Month/ Week	4 Month/ Week	5 Month/ Week	6 Month/ Week
01	Literature review						

02	Planning/ Designing						
03	Assembly/ Fabrication work						
04	Final Testing						
05	Result & Calculation/ Conclusion						
06	Preparation of Report & Submission						

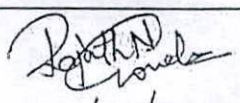
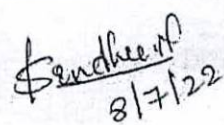
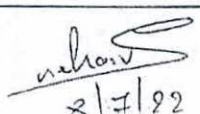
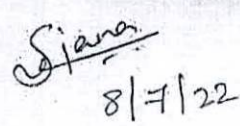

Principal
Sapthagiri College of Engineering
14/5, Chikkasandra, Hesaraghatta Main Road
Bengaluru - 560 057

DECLARATION BY THE STUDENTS

We, the project group members hereby declare that the details enclosed in the project proposal are true and correct to the best of our knowledge. We undertake to inform VTU, of any changes there in the project title, students name will be intimated immediately. In case, any of the above information is found to be false or untrue or misleading, we are aware that we may be held liable for it.

We are aware that the project group has to exhibit / demonstrate the project for evaluation in the VTU Regional centre and for exhibition at VTU, Belagavi. If the project group fails to attend the evaluation in regional centre and for Exhibition in VTU Belagavi, the sponsored project amount will be returned back to VTU immediately

We also hereby, enclose the endorsement form to VTU, Belagavi.

SL.No	Name of the Student	Signature with date
01	Rajath N Gowda	 08/07/2022
02	Sindhu N	 8/7/22
03	Sneha V	 8/7/22
04	Srujana V Hugar	 8/7/22

ENDORSEMENT

This is to certify that

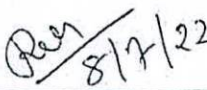

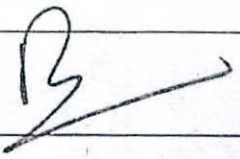
1] Rajath N Gowda

2] Sindhu N

3] Sneha V

4] Srujana V Hugar

Are bonafide students of Department in Electrical and Electronics Engineering, of our institution. If the project proposal submitted by these students under VTU Sponsored Student Project Proposal is selected by VTU, we will provide the required laboratory / Computer / infrastructure support in our college / Institution. Further we also take necessary steps that the project group will exhibit / demonstrate their project in the Regional centre and for exhibition at VTU, Belagavi. If the student group fails to attend the evaluation in Regional centre and exhibition at VTU Belagavi, the supported project amount will be returned back to VTU immediately.

Signature of Project Guide with date	Signature of HOD with Seal and date	Signature of the Principal with Seal and date
		
Name: Dr. Rekha S N	Name: Dr. Narayanappa	Name: Dr. H. RamaKrishna Principal

Dept. of Electrical & Electronics
Sapthagiri College of Engineering
14/5, Chikkasandra, Hesaraghatta
Main Road, Bangalore-560 057

PROF & HOD
Department of Electrical & Electronics
Sapthagiri College of Engineering
Bangalore - 560 057

Sapthagiri College of Engineering
Chikkasandra, Hesaraghatta Road,
Bangalore-560 057

14/5, Chikkasandra, Hesaraghatta Main Road, Bengaluru - 560 057. KARNATAKA,

Ph: 080-28372800, 23130583, Fax: 08028372797

Email: principal@sapthagiri.edu.in web: www.sapthagiri.edu.in


Principal
Sapthagiri College of Engineering
14/5, Chikkasandra, Hesaraghatta Main Road
Bengaluru - 560 057



SAPTHAGIRI COLLEGE OF ENGINEERING

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Accredited by NAAC with "A" Grade, Accredited by NBA for ECE, CSE, ISE, ME, EEE, ISO 9001:2015 and 14001:2015 Certified Institution, #14/5, Chikkasandra, Hesarghatta Main Road, Bengaluru-560057



Date: 21/06/2022

Circular

This is to bring to your notice that, VTU is funding for two Final-Year Students Innovative Projects under the scheme VTU-FAFSIP. Hence all the heads of department are hereby directed to form a department committee consisting of following members to select two best innovative projects for VTU funding. These two best projects can be selected from four shortlisted innovative projects through presentations by the students in the presence of committee. The details of committee members and date of presentation should be finalized and forwarded to the office on or before 24/06/2022.

Committee Members:

Principal – Chairman

HOD – Member

Dr.R.Harish – IQAC Co-ordinator

Two members - Subject experts / Senior Professors / Industry Partners

VTU Nominee-Dr. Ravishankar C V, Professor & Head-ECE, Sambhram Institute of Technology,
Bengaluru.

Copy- All HOD'S

Office

IQAC Co-ordinator

Principal
Sapthagiri College of Engineering
14/5, Chikkasandra, Hesarghatta Main Road,
Bengaluru - 560 057

Principal



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Department of Biotechnology

Date: 22/06/2022

To,

The Principal
SCE,
Bengaluru

As per your direction department committee is formed as given below, for the selection of two Final Year Students Innovative Projects under the scheme VTU-FAFSIP. The presentation of four innovative final year projects is scheduled in the presence of committee in the department on 27/06/2022 at 2pm. The four innovative projects are shortlisted as per the emerging areas / themes give in the VTU circular.

The list of three innovative projects shortlisted for presentation is enclosed with this.

Committee Details

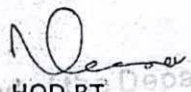
Sl. No.	Name	Designation	Role	Signature
1	Dr.H. Ramakrishna	Principal	Chairman	
2	Dr. Veena S. More	Prof.&H.O.D (BT)	Member	
3	Dr.Harish.R	Prof. (Phy) & IQAC Co-ordinator	Member	
4	Dr. Sowmya C.	Project Co-ordinator	Subject Expert	
5	Dr. Allwin Ebinesar	Prof. Dept. of BT	Subject Expert	


HOD, BT Department
Dept. of Bio-Technology
Sapthagiri College of Engineering
No. 57/1, Chikkasandra
Hesaraghatta Main Road
Bengaluru - 57

Principal
Sapthagiri College of Engineering
#14/5, Chikkasandra, Hesarghatta Main Road
Bengaluru - 560 057

List of Innovative Projects Shortlisted For Presentation

Sl. No.	Name of the Project	Name of Students	USN	Guide	Topics / Theme
1.	Removal of cationic dyes used for staining slik clothes by nano photochemical process-effluent source from Kamakshipalaya (Bangalore city)	Pooja R	1SG18BT032	Prof. Ramya D L and Dr. J S S Allwin Ebinesar	Water resource purification
		Pooja D L	1SG18BT031		
2.	An Isothermal effect for effective charge neutralization through coagulation process of high concentrated diary waste by using <i>Moringa oleifera</i> -Design of unbaffled batch reactor	Varsha K	1SG18BT048	Dr. J S S Allwin Ebinesar and Prof. Ramya D L	Water resource management
		Bhagyashree M	1SG18BT009		
3.	Removal of nitrate and phosphorus from contaminated water by using fungal and bacterial strains in Batch reactor	Chaitra V S	1SG18BT013	Prof. Kavya M V and Dr.Soumya C	Water resource purification
		Monisha S	1SG18BT024		
		Yashaswini K	1SG18BT050		
4	Bioplastic Production from vegetable and Fruit waste	Abhinandan Kanjekar	1SG18BT001	Dr.Soumya C	Environment safety
		Chandramouli S	1SG18BT014		
		Kaushik P M	1SG18BT022		
		Nisar Ahmed Parasar	1SG18BT028		


 Head of Department
 Dept. of Bio-Technology
 Sapthagiri College of Engineering
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Department of Biotechnology

Date: 08/07/2022

To,

The Principal
SCE,
Bengaluru

Sir,

The following two final year innovative projects have been selected to apply for VTU funding during the presentation held on 08/07/2022 in the presence of committee members.

Two Final Year Innovative Projects Selected to Apply for VTU Funding (VTU-FAFSIP)

Sl. No.	Name of the Project	Name of Students	USN	Guide
1.	Removal of cationic dyes used for staining silk clothes by nano photochemical process- effluent source from Kamakshipalaya (Bangalore city)	Pooja R	ISG18BT032	Prof. Ramya D L and Dr. J S S Allwin Ebinesar
		Pooja D L	ISG18BT031	
2.	An Isothermal effect for effective charge neutralization through coagulation process of high concentrated dairy waste by using <i>Moringa oleifera</i> -Design of unbaffled batch reactor	Varsha K	ISG18BT048	Dr. J S S Allwin Ebinesar and Prof. Ramya D L
		Bhagyashree M	ISG18BT009	

Approval Committee

Sl. No.	Name	Designation	Role	Signature
1	Dr.H. Ramakrishna	Principal	Chairman	
2	Dr.Veena S. More	Prof.&H.O.D (BT)	Member	
3	Dr.Harish.R	Prof. (Phy) & IQAC Co-ordinator	Member	
4	Dr. Sowmya C	Project Co-ordinator	Subject Expert	
5	Dr. Allwin Ebinesar	Prof. Dept. of BT	Subject Expert	
6.	Dr. Ravishankar C V Prof. & Head, ECE, Sambhram Institute of Technology	VTU Nominee	Member	

H.O.D, BT Department
Dept. of Bio-Technology
Sapthagiri College of Engineering
No. 57/1, Chikkasandra
Hesarghatta Main Road
Bengaluru - 57



Sapthagiri College of Engineering
14/5, Chikkasandra, Hesarghatta Main Road
Bengaluru - 560 057

	Visvesvaraya Technological University "JnanaSangama" Belagavi: 590018 Karnataka, India. Tele: 0831-2498225,2405454
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VTU Sponsored Student Project Proposal Format

01	Academic Year:	2021-2022	
02	Semester:	VIII	
03	Name of the College:	Sapthagiri College of Engineering	
04	Branch:	Biotechnology	
05	Project Title:	Removal of cationic dyes used for staining silk clothes by nano-photochemical process—Effluent source from Kamakshipalya (Bangalore city)	
06	Project Discipline:	Biotechnology- Water resource recycling	
07	Principal	Name:	Dr. Ramakrishna H
		Contact No:	9448978350
		Email id:	<i>principal@sapthagiri.edu.in</i>
08	HOD	Name:	Dr. Veena S more
		Contact No:	9480491608
		Email id:	<i>hodbt@sapthagiri.edu.in</i>
09	Project Guide	Name:	Ms. Ramya D L
		Contact No:	95382 34078
		Email id:	<i>ramyadl@sapthagiri.edu.in</i>
10	Project Co-Guide (If any)	Name:	Dr. J. S. S. Allwin Ebinesar
		Contact No:	9945316111
		Email id:	<i>allwinjss@sapthagiri.edu.in</i>
11	Project Committee coordinator (Identified by the college):	Name:	Dr. Veena S more
		Contact No:	9480491608
		Email id:	<i>hodbt@sapthagiri.edu.in</i>


Principal
Sapthagiri College of Engineering
 14/5, Chikkasandra, Hesarghatta Main Road
 Bengaluru - 560 057

12	Name of project group Members	
	1.Group leader and Member	
	Name: Pooja R	
	USN number: ISG18BT032	
	College: Sapthagiri college of Engineering	
	Place: Bangalore	
	2.Member	
	Name: Pooja D L	
	USN number: ISG18BT031	
	College: Sapthagiri college of Engineering	
	Place: Bangalore	
13	Scope / Objectives of the project:	<p>Scope: Kamakshipalaya, an urban area situated to Bangalore North. The major occupation of the residents is staining of clothes by using organic, inorganic dyes. After the dyeing process, the processed dyes are discharge in to the ground water and in sewage pipelines without any treatment. In this study, we are concentrating on removal of toxic dyes collected from Kamakshipalaya by using nano-photochemical process.</p> <p>Objective of the work:</p> <ul style="list-style-type: none"> (i) Evaluation of concentration of dyes present in the effluent. (ii) Synthesis of activated carbon from coconut shell by using rotary kiln. (iii) Studies on removal of dyes by using activated carbon in the presence and absence of UV radiation. (iv) Synthesis of Graphene oxide nano particle from activated charcoal. (v) Studies on removal of dyes by using Graphene oxide nano particle in the presence and absence of UV radiation.
14	<p>Methodology of work: (Including diagram, flow chart and design calculations)</p> <p>Evaluation of concentration of dyes present in the effluent: Standard graph for Acid red, Colocid violet and Direct black concentrations: In this study a known amount of (0.1 g) of each dye dissolved in 100 ml of de-ionised water individually and used as a stock solution. After the standard graph for the three dyes are prepared individually by varying the concentration from 10mg/ml to 100 mg/ml. The optical density of the above three dyes (Acid red, colocid violet and Direct black) have to be evaluated at the wavelength of 550, 332 and 508 nm respectively).</p>	

Synthesis of activated carbon from coconut shell by using rotary kiln:

In the process of synthesis, a known amount of 2kg of dried coconut shell has to be kept in rotary kiln at 1200 C for 14 h. After that, the pyrolyzed coconut shell has to be used for preparing micro and nano level activated carbon adsorbent.

Studies on removal of dyes by using activated carbon in the absence of UV radiation.

The potential on removal of mixture of Acid red, Colocid violet and Direct black concentrations has to analysed by microsize activated carbon in the presence and absence of UV radiation by varying the parameters such as effluent concentration, pH, adsorbent dosage concentrations. In addition to that, the removal efficiency will be tested by various physiochemical parameters such as COD, Turbidity, concentration of dyes after the treatment.

Effect of pH:

In this experiment 20 ml of dye effluent is made up to 100 ml of working volume by adding 80 ml of de ionised water along with 3.5 g activated carbon. Then, the pH of reaction mixture will be varied from 1 to 10. After that, the reaction mixture has to be kept in the orbital shaker for 2 days and then reaction mixture samples should be kept separately without disturbing it for another 4 days. The adsorption capacity of the activated carbon has to elucidated by measuring the concentration of dyes with respect to time in their concern pH condition. The residual concentrations of the dyes will be determined by UV spectrophotometer (Systronics, PC based double beam 2202, India Pvt Ltd). Note: The pH of the effluent should be monitored every day. Additionally, the pH of effluent has to be varied by adding 1M HCl and 0.1, 1M NaOH respectively.

Effect of Dosage concentration:

In this experiment the concentration of dye effluent is kept constant and activated carbon dosage is varied from 0.5 to 4 grams and concentrations of the dyes after treatment with various dosage of activated carbon will be determined by UV spectrophotometer. From the obtained data the amount of dyes adsorbed per unit gram has to be determined with respect to dosage concentrations. Note: The effect of dosage concentration should be monitored for every 24h.

Effect of dye concentration: In this experiment the pH, dosage concentration are kept constant and the dye concentration should be varied from 20% to 100% v/v. Eventually the residual concentration of the dye after the treatment has to be measured by the procedure which was discussed in the above part.

Studies on removal of dyes by using activated carbon in the presence of UV radiation.

In this part the impact of adsorbent on the removal of dyes has to be studied in the presence of UV radiations. The efficiency of the treatment will be evaluated by the protocol followed in the above study. Note: This experiments will be carried out only under optimised condition.

Synthesis of Graphene oxide

Activated carbon (3g) is added to the mixture of H_2SO_4 and H_3PO_4 (9:1) and stirred for

30 minutes. Further the mixture has to be oxidised by adding 9 g of KMnO_4 is added at low temperature of about -20°C and stirred for 30 mins, and then the temperature has to be increased to 60°C and stirred for about 12 hours to enhance the oxidation process. After that, the mixture is cooled to $20\text{--}25^\circ\text{C}$ using ice bath. Eventually, H_2O_2 has to be added until a prominent effervescence occurs in the mixture to arrest the oxidation reaction. Formely, the mixture has to be diluted by adding equal amount of water as that of acid. Then the mixture is centrifuged at 12000 rpm and pellet has to be harvested and washed with 5% HCl , ethanol and D.I water until neutral pH was reached. Once the neutral pH was reached, the pellets will be dried at 60°C for 48 hours.

Studies on removal of dyes by using nanoparticles in the presence of UV radiation:

In this part the impact of nano adsorbent on the removal of dyes has to be studied in the presence of UV radiations. The efficiency of the treatment will be evaluated by the protocol followed in the above study. Note: These experiments will be carried out only under optimised conditions.

Characterisation studies:

In this study, the functional groups involved in the adsorption process has to elucidated by using FTIR analysis in mid-range frequency range. In addition to that, the electrokinetic phenomena between the dye and activated carbon has to be elucidated by using zeta potential.

Flow chart of the process:

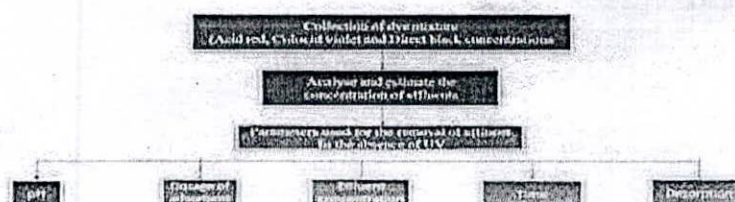


Fig.1 Flow sheet for the protocol for the removal of Acid dye, Colocid dye and Direct black by graphite powder synthesised from coconut shell in the absence of UV source

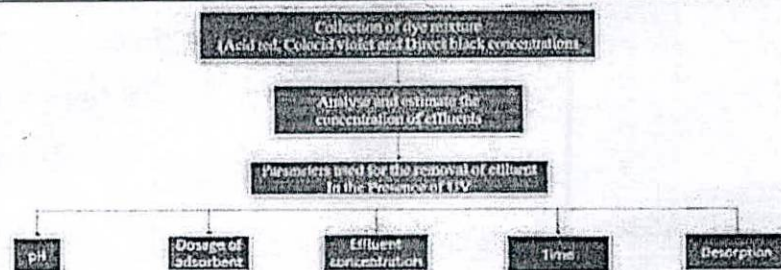


Fig.2 Flow sheet for the protocol for the removal of Acid dye, Colocid dye and Direct black by graphite powder synthesised from coconut shell in the presence of UV source

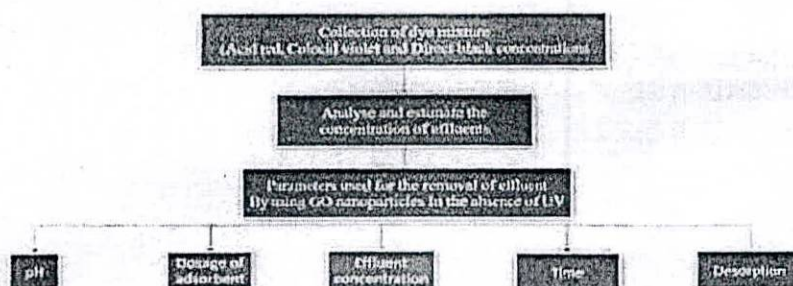


Fig.3 Flow sheet for the protocol for the removal of Acid dye, Colocid dye and Direct black by graphene oxide nanoparticles powder synthesised from coconut shell in the absence of UV source.

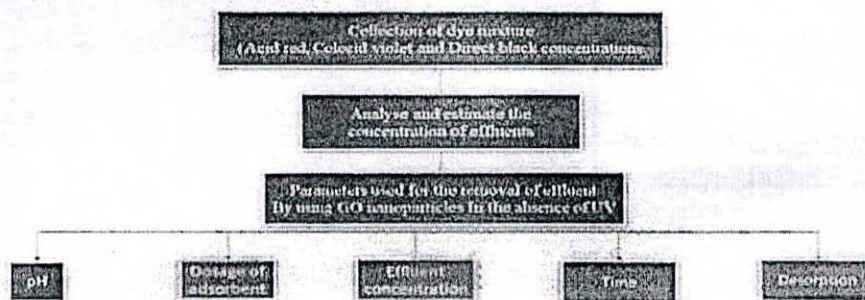


Fig.3 Flow sheet for the protocol for the removal of Acid dye, Colocid dye and Direct black by graphene oxide nanoparticles powder synthesised from coconut shell in the presence of UV source.

15	Expected Outcome of the project:	(i) Rate constants of the four methods and evaluation of
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 Sapthagiri College of Engineering
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		adsorption capacity of micro and nano size particles					
		(ii) Optimisation of variables for the evaluation of adsorption capacity of micro and nano size particles.					
		(iii) Development of photoreactors to degrade the effluent mixture.					
16	Application of the project:	Removal of dyes (Acid red, Colocid violet and Direct black concentrations) Kamakshipalya (Bangalore city)					
17	Budget details with Materials required:						
	S.no	Chemicals Used	Quantity				
	1.	Silver sulphate	1				
	2.	Characterisation studies	FTIR, and Zeta potential				
		Total	5250				
18	Date of commencement of the Project:	1/05/2022					
19	Probable date of completion of the project:	1/08/2022					
20	Duration of project work:	3 months					
21	Pert chart for completion of the project in said duration as per planned activities:						
Sl.No	Activities Planned	2 Week	2 Week	3 week	2 week	2 week	1 week
01	Literature review						
02	Planning/ Designing						
03	Synthesis of Nanoparticles						
04	Characterisation studies						
05	Experimental studies						
06	Report and analysis						

DECLARATION BY THE STUDENTS

We, the project group members hereby declare that the details enclosed in the project proposal are true and correct to the best of our knowledge. We undertake to inform VTU, of any changes there in the project title, students name will be intimated immediately. In case, any of the above information is found to be false or untrue or misleading, we are aware that we may be held liable for it.

We are aware that the project group has to exhibit / demonstrate the project for evaluation in the VTU Regional centre and for exhibition at VTU, Belagavi. If the project group fails to attend the evaluation in Regional centre and for Exhibition in VTU Belagavi, the sponsored project amount will be returned back to VTU immediately

We also hereby, enclose the endorsement form to VTU, Belagavi.

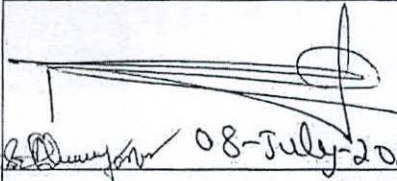
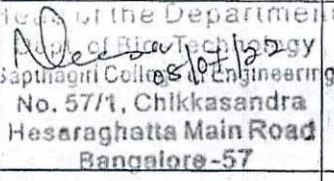
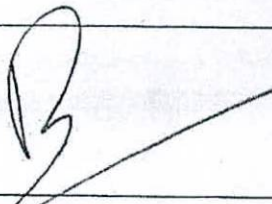
Sl. No	Name of the Student	Signature with date
01	Pooja D L	Pooja 8/7/22
02	Pooja R	Pooja 8/7/22



ENDORSEMENT

This is to certify that 1] Ms. Pooja D L, 2] Ms. Pooja R

are bonafide students of Department in Biotechnology of our institution. If the project proposal submitted by these students under VTU Sponsored Student Project Proposal is selected by VTU, we will provide the required laboratory / Computer / infrastructure support in our college / Institution. Further we also take necessary steps that the project group will exhibit / demonstrate their project in the regional centre and for exhibition at VTU, Belagavi. If the student group fails to attend the evaluation in regional centre and exhibition at VTU Belagavi, the supported project amount will be returned back to VTU immediately.

Signature of Project Guide with date	Signature of HOD with Seal and date	Signature of the Principal with Seal and date
 08-July-2022	 Head of the Department Dept. of Bio-Technology Sapthagiri College of Engineering No. 57/1, Chikkasandra Hesaraghatta Main Road Bangalore-57	
Name: Prof. Ramya D L Name: Dr.JSS Allwin Ebinesar	Name: Dr. Veena S more	Name: DR. RAMAKRISHNA Principal Sapthagiri College of Engineering Chikkasandra, Hesaraghatta Road, Bangalore-560 057





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 “JnanaSangama”
 Belagavi: 590018
 Karnataka, India.
 Tele: 0831-2498225 ,2405454

VTU Sponsored Student Project Proposal Format

01	Academic Year:	2021-2022
02	Semester:	VIII
03	Name of the College:	Sapthagiri College of Engineering
04	Branch:	Biotechnology
05	Project Title:	“An Isothermal effect for effective surface charge neutralization through coagulation process of higher concentration dairy waste by using <i>Moringa oleifera</i> - design of Unbaffled batch reactor”
06	Project Discipline:	Biotechnology-water resource management
07	Principal	Name: Dr. Ramakrishna H
		Contact No: 9448978350
		Email id: principal@sapthagiri.edu.in
08	HOD	Name: Dr. Veena Smore
		Contact No: 9480491608
		Email id: hodbt@sapthagiri.edu.in
09	Project Guide	Name: Dr. J. S. S. Allwin Ebinesar
		Contact No: 9945316111
		Email id: allwinjss@sapthagiri.edu.in
10	Project Co-Guide (If any)	Name: Ms. Ramya D L
		Contact No: 95382 34078
		Email id: ramyadl@sapthagiri.edu.in
11	Project Committee coordinator (Identified by the college):	Name: Dr. Veena S more
		Contact No: 9480491608
		Email id: hodbt@sapthagiri.edu.in


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 Bengaluru - 560 057

12	Name of project group Members	
	1.Group leader and Member	
	Varsha. K	
	USN number: 1SG18BT048	
	College name: Sapthagiri college of Engineering	
	2.Member	
	Bhagyashree.R	
	USN number:1SG18BT009	
	College name: Sapthagiri college of Engineering	
13	Scope / Objectives of the project:	<p>Scope: Milk processing industries are one of the most polluting industries, discharge of such untreated/ partially treated waste water causes various environmental issues. Therefore, to manage this various inorganic trivalent aluminium and iron salts are used as coagulant, but those coagulants are restricted to treat higher concentration of dairy effluent and also it produces secondary products at the end of treatment which is considered to be a secondary pollutant. Therefore, to overcome the problems associated with chemical coagulant in recent years emphasis is on natural coagulant. <i>Moringa olifera</i> is one such biological coagulant that comprises of low molecular weight water soluble protein with a positive surface charge.</p> <p>Objectives of the work:</p> <ol style="list-style-type: none"> 1. Determination of optimum dosage of <i>Moringa olifera</i> for lower



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14/5, Chikkasandra, Hesareghatta Main Road
Bengaluru - 560 057

		<p>concentration dairy effluent treatment at room temperature.</p> <p>2. Determination of optimum dosage of <i>Moringa olifera</i> for lower and higher concentration of dairy effluent at higher temperature.</p> <p>3. Design of unbaffled batch reactor for dairy effluent treatment.</p>
14	Methodology of work:	<p>Sample preparation: A known volume of milk has to be taken from nandini milk packet (Blue cover) and prepared in different concentration from 2 % to 50% (V/V).</p> <p>Preparation of coagulant: Initially, the moringa oleifera seeds are heated at 40 °C temp for 12 h and also the seed coat is removed manually from the MO surface. Then, the dried seed has to be crushed by using mixer for 10 min at room temperature. After that, the various average size moringa oleifera will be separated by using sieve shakers in the range from 250 mm to 150 mm sieves. Finally, the separated powdered form of moringa oleifera seed has to be used for the coagulation process on removal of dairy waste.</p> <p>Turbidity measurement: In this study, the presence of suspended and colloidal matter can be measured using Nephelo turbidity meter. After the coagulation process, 20 ml of the treated samples has to be filtered by using whatman filter paper and the amount of turbidity (NTU) will be measured by using Nephelo turbidity meter.</p> <p>Note: The Nephelo turbidity meter has to be optimised by formazin polymer as the primary standard reference suspension of 400 NTU and 100 NTU during calibration. The coagulation efficiency will be determined by using the below equation.</p> <p>Coagulant efficiency(%) = $\frac{\text{Initial turbidity} - \text{Residual turbidity}}{\text{Initial turbidity}} \times 100$</p>

COD determination: The oxygen demand created by organic and inorganic compounds can be analysed by COD determination. A known volume 10 ml treated water will be oxidised by addition of 5ml potassium dichromate in the presence of 1ml Mercury sulphate, 15ml silver sulphate sulphuric acid and 2-3 drops of ferroin indicator into the conical flask. Finally, the samples will be refluxed at 120 °C and titrated against 0.25N Ferrous ammonium sulphate solution and the volume of FAS run down is noted for the sample titration for estimation of COD using the formula. The same protocol has to be followed for the blank sample.

$$\text{COD} = \frac{8 \times 1000 \times \text{DF} \times \text{N} \times (\text{V}_b - \text{V}_s)}{\text{Volume of sample (ml)}}$$

V_b is the ml of FAS used for blank; V_s is the ml of FAS used for sample; N is the normality of FAS and 8 is milli equivalent weight of oxygen.

Total hardness: The total amount of calcium and magnesium present in the sample after treatment with *Moringa olifera* is determined by EDTA titration, where 1-2 ml buffer of pH 10 along with the addition of pinch of Erichrome black T indicator, 50ml of treated sample is added to the conical flask, finally the contents will be titrated against 0.01M EDTA until a colour change from wine red to blue occurs.

$$\text{Total hardness} = \frac{\text{C} \times \text{D} \times 1000}{\text{Volume of sample}}$$

C- ml of EDTA for titration; D-mg of CaCO_3 equivalent to 1 ml of EDTA.

BOD determination: BOD of treated sample will be determined by the standard dilution technique of APHA. This method consists of filling an air-tight bottle (BOD bottle) with sample and incubating at 20°C for 5 days after which the dissolved oxygen (DO) is measured by addition of 2 ml manganese sulfate solution, 2 ml alkali-iodide-azide reagent to the sample collected in 300 ml BOD bottle and mixed by inverting the bottle for complete fixation of DO as brown color manganese hydroxide precipitation. Further 2 ml conc. H_2SO_4 is added to dissolve the precipitation by gentle inversion, finally the solution has to be titrated against 0.025 N sodium sulphate solution using starch indicator until an end

point of blue to colourless is obtained. The difference in DO will be computed and BOD of effluent is calculated.

TDS determination: It is mainly done to estimate the total amount of ions present in the effluent after treatment with *Moringa olifera*. It is determined by immersing the digital TDS meter probe into a defined volume of the treated sample (20ml) and the values are noted.

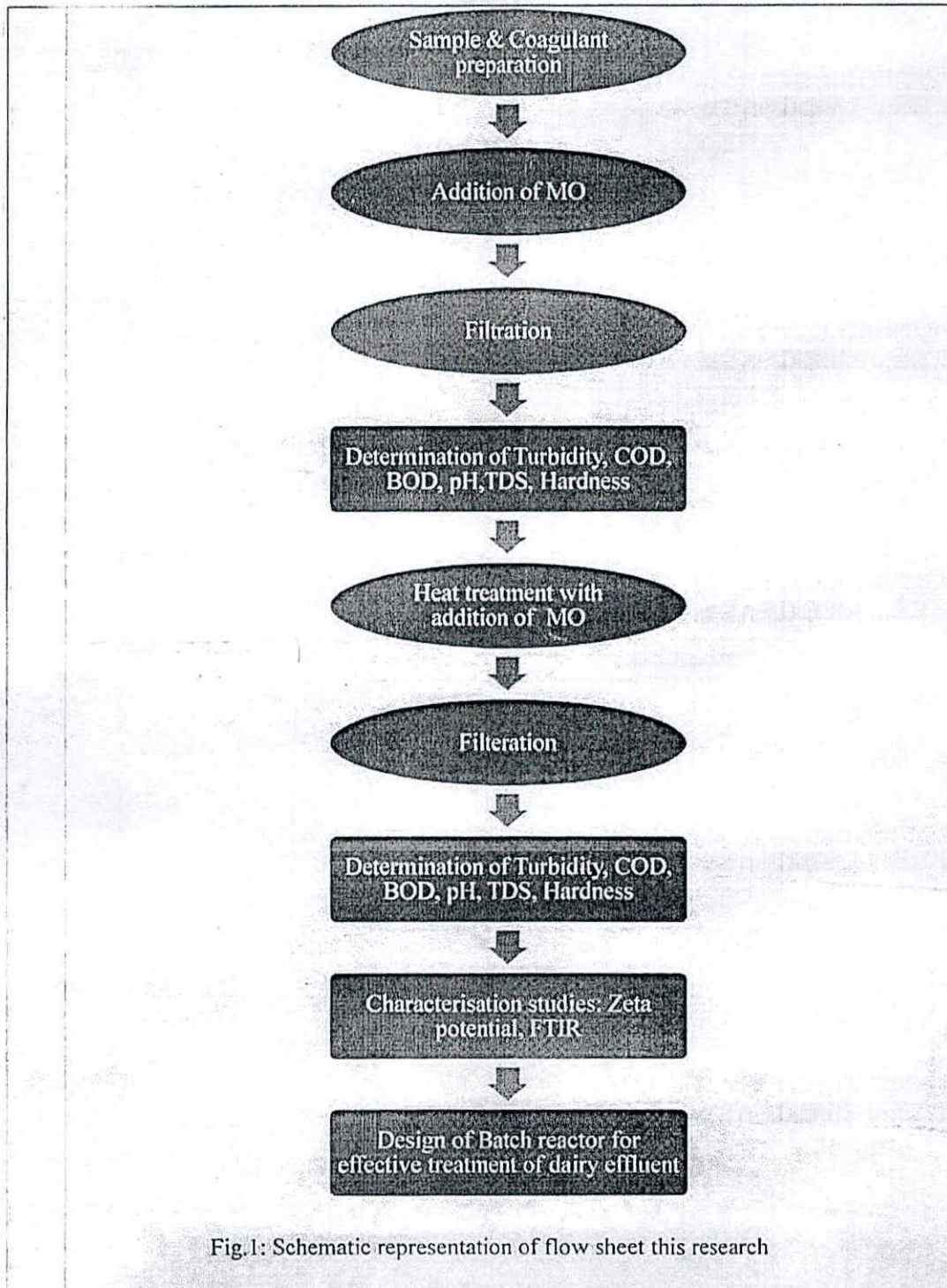
Determination of pH: Initial pH and the final pH of the sample is monitored to observe for the significant changes in the pH after treatment with *Moringa olifera*. This is done using pH meter (Elico, Pvt-Ltd). Initially the pH meter has to be calibrated using buffer of pH 7 followed by pH 9 further the pH of the sample is analysed by immersing the pH probe into a defined volume of solution whose analysis has to be done.

Zeta potential: The mechanism of charge neutralisation process of *Moringa olifera* on dairy effluent during the coagulation will be elucidated by characterisation studies such as zeta potential.

FTIR characterisation: It is mainly done to study the functional group interaction of *Moringa olifera* protein with the components of the dairy effluent.



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15	Expected Outcome of the project:	Treated water with reduced turbidity, COD, BOD, TDS values as recommended by EPA policy																				
16	Application of the project:	Designing of unbaffled batch process with heating system for the removal of dairy waste water.																				
17	Budget details with Materials required:																					
	<table border="1"> <thead> <tr> <th>S.no</th> <th>Consumables</th> <th>Quantity</th> <th>Cost</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Silver sulphate</td> <td>1</td> <td>3250</td> </tr> <tr> <td>2.</td> <td>FAS</td> <td>1</td> <td>760</td> </tr> <tr> <td>3.</td> <td>Mercuric Sulphate</td> <td>1</td> <td>1150</td> </tr> <tr> <td></td> <td></td> <td>Total</td> <td>5160</td> </tr> </tbody> </table>	S.no	Consumables	Quantity	Cost	1.	Silver sulphate	1	3250	2.	FAS	1	760	3.	Mercuric Sulphate	1	1150			Total	5160	
S.no	Consumables	Quantity	Cost																			
1.	Silver sulphate	1	3250																			
2.	FAS	1	760																			
3.	Mercuric Sulphate	1	1150																			
		Total	5160																			
18	Date of commencement of the Project:	01/05/2022																				
19	Probable date of completion of the project:	30/07/2022																				
20	Duration of project work:	3 months																				
21	Pert chart for completion of the project in said duration as per planned activities:																					

Sl.No	Activities Planned	2 Week	2 Week	1.5 Month/	1 Month
01	Literature review				
02	Planning/ Designing				
03	Optimisation, stability study of MO dosage				
04	Determination of Turbidity, COD, BOD, TDS				
05	Design of bioreactors And report				


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Sapthagiri College of Engineering
14/6, Chikkasandra, Hesarghatta Main Road
Bengaluru - 560 057

DECLARATION BY THE STUDENTS

We, the project group members hereby declare that the details enclosed in the project proposal are true and correct to the best of our knowledge. We undertake to inform VTU, of any changes there in the project title, students name will be intimated immediately. In case, any of the above information is found to be false or untrue or misleading, we are aware that we may be held liable for it.

We are aware that the project group has to exhibit / demonstrate the project for evaluation in the VTU Regional centre and for exhibition at VTU, Belagavi. If the project group fails to attend the evaluation in regional centre and for Exhibition in VTU, Belagavi, the sponsored project amount will be returned back to VTU immediately

We also hereby, enclose the endorsement form to VTU, Belagavi.

Sl. No	Name of the Student	Signature with date
01	Bhagyashree. R	Bhagyashree. R 8/7/22
02	Varsha. K	Varsha. K 8/7/22

ENDORSEMENT

This is to certify that 1] Ms. Varsha K , 2] Ms. Bhagyashree R

are bonafide students of Department in Biotechnology of our institution. If the project proposal submitted by these students under VTU Sponsored Student Project Proposal is selected by VTU, we will provide the required laboratory / Computer / infrastructure support in our college / Institution. Further we also take necessary steps that the project group will exhibit / demonstrate their project in the regional centre and for exhibition at VTU, Belagavi. If the student group fails to attend the evaluation in regional centre and exhibition at VTU Belagavi, the supported project amount will be returned back to VTU immediately.

Signature of Project Guide with date	Signature of HOD with Seal and date	Signature of the Principal with Seal and date
<p>1. <i>[Signature]</i> 08-July-2022</p>	<p><i>[Signature]</i> 08/07/22</p>	<p><i>[Signature]</i></p>
<p>Name: Dr. J S S Allwin Ebinesar Name: Prof. Ramya D L</p>	<p>Name: Dr. Vecna S more</p>	<p>Principal Sapthagiri College of Engineering Chikkasandra, Hesaraghatta Main Road, Bangalore-560 057</p>



SAPTHAGIRI COLLEGE OF ENGINEERING

(Affiliated to VTU, Belagavi, Approved by AICTE, New Delhi)

Accredited by NAAC with "A" Grade, Accredited by NBA for ECE, CSE, ISE, ME, EEE, ISO 9001:2015 and 14001:2015 Certified Institution, #14/5, Chikkasandra, Hesarghatta Main Road, Bengaluru-560057



Date: 21/06/2022

Circular

This is to bring to your notice that, VTU is funding for two Final Year Students Innovative Projects under the scheme VTU-FAFSIP. Hence all the heads of department are hereby directed to form a department committee consisting of following members to select two best innovative projects for VTU funding. These two best projects can be selected from four shortlisted innovative projects through presentations by the students in the presence of committee. The details of committee members and date of presentation should be finalized and forwarded to the office on or before 24/06/2022.

Committee Members:

Principal – Chairman

HOD – Member

Dr.R:Harish – IQAC Co-ordinator

Two members - Subject experts / Senior Professors / Industry Partners

VTU Nominee-

Copy- All HOD'S

Office

IQAC Co-ordinator

Principal
Sapthagiri College of Engineering
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Bengaluru - 560 057

Principal

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Department of Computer Science and Engineering



Date: 08/07/2022

To,

The Principal
SCE,
Bengaluru

As per your direction department committee is formed as given below, for the selection of two Final Year Students Innovative Projects under the scheme VTU-FAFSIP. The presentation of four innovative final year projects is scheduled in the presence of committee in the department board room on 08/07/2022. The four innovative projects are shortlisted as per the emerging areas / themes give in the VTU circular.

The list of four innovative projects shortlisted for presentation is enclosed with this.

Committee Details

Sl. No.	Name	Designation	Role	Signature
1	Dr.H. Ramakrishna	Principal	Chairman	
2	Dr.Kamalakshi Naganna	Prof.&H.O.D (CSE)	Member	
3	Dr.Harish.R	Prof. (Phy) & IQAC Co-ordinator	Member	
4	Dr.Lavanya N L	Project Co-ordinator	Subject Expert	
5	Prof.Chaitra	Associate Prof. Dept. of CSE	Subject Expert	
6.	Dr.Ravishankar C V	VTU Nominee	Member	

Principal
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Bengaluru - 560 057

HOD
Professor & Head of the Department
Computer Science Engineering
Sapthagiri College of Engineering
Bangalore - 57

List of Innovative Projects Shortlisted For Presentation

Sl. No.	Name of the Project	Name of Students	USN	Guide	Topics / Theme
1.	Cost effective Smart IOT based gate controller for Agriculture Irrigation System	Pallavi R	1SG18CS068	Dr. Kamalakshi Naganna	Automation or new concepts in agriculture
		Panchami A	1SG18CS069		
		Priyanka V	1SG18CS079		
		Shalini G S	1SG18CS100		
2.	Obstacle Detection and Home Appliances control using Smart Wheelchair for Crippled Patients	Megha.P	1SG18CS052	Dr. Kamalakshi Naganna	User friendly devices for aged or physically challenged people.
		Meghana.G	1SG18CS054		
		Madhuravani.N	1SG18CS059		
		Navyashree.K	1SG18CS062		
3.	Chronic kidney disease prediction using machine learning algorithm.	Shanu himkar	1SG18CS101	Prof.Shobha K	Chronic kidney disease prediction using machine learning algorithm
		Nishant rana	1SG18CS066		
4.	Masquerading detection using Machine Learning	Priyanshu kumar	1SG18CS080	Prof.Akshatha Kamath	Phishing detection
		Ankit Raj Mishra	1SG18CS011		
		Utkarsh Gaurav	1SG18CS123		
		Harshit Gupta	1SG18CS033		


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HOD

Professor & Head of the Department
Computer Science Engineering
Sapthagiri College of Engineering
 Bangalore - 57



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Department of Computer Science and Engineering

Date: 08/07/2022

To,

The Principal
SCE,
Bengaluru

Sir,

The following two final year innovative projects have been selected to apply for VTU funding during the presentation held on 08/07/2022 in the department board room in the presence of committee members.

Two Final Year Innovative Projects Selected to Apply for VTU Funding (VTU-FAFSIP)

Sl. No.	Name of the Project	Name of Students	USN	Guide
1.	Cost effective Smart IOT based gate controller for Agriculture Irrigation System	Pallavi R	1SG18CS068	Dr. Kamalakshi Naganna
		Panchami A	1SG18CS069	
		Priyanka V	1SG18CS079	
		Shalini G S	1SG18CS100	
2.	Obstacle Detection and Home Appliances control using Smart Wheelchair for Crippled Patients	Megha.P	1SG18CS052	Dr. Kamalakshi Naganna
		Meghana.G	1SG18CS054	
		Madhuravani.N	1SG18CS059	
		Navyashree.K	1SG18CS062	

Approval Committee

Sl. No.	Name	Designation	Role	Signature
1	Dr.H. Ramakrishna	Principal	Chairman	
2	Dr.Kamalakshi Naganna	Prof.&H.O.D (CSE)	Member	
3	Dr.Harish.R	Prof. (Phy) & IQAC Co-ordinator	Member	
4	Dr.Lavanya N L	Project Co-ordinator	Subject Expert	
5	Prof.Chaitra	Associate Prof. Dept. of CSE	Subject Expert	
6.	Dr.Ravishankar C V	VTU Nominee	Member	

H.O.D


Principal
Sapthagiri College of Engineering
14/5, Chikkasandra, Hesarghatta Main Road
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Professor & Head of the Department
Computer Science Engineering
Sapthagiri College of Engineering
Bengaluru - 560 057





	Visvesvaraya Technological University “JnanaSangama” Belagavi: 590018 Karnataka, India. Tele: 0831-2498225 ,2405454
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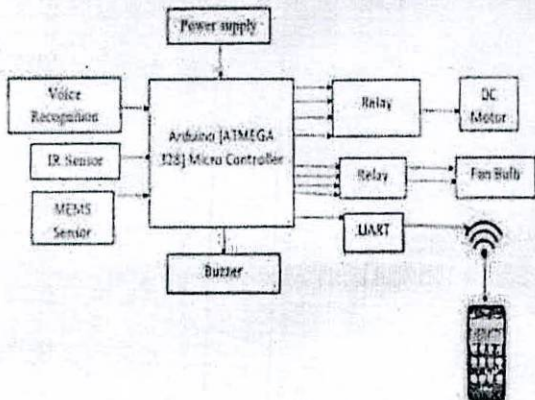
VTU Sponsored Student Project Proposal Format

01	Academic Year :	2022	
02	Semester :	8 th	
03	Name of the College :	Sapthagiri College Of Engineering	
04	Branch:	Computer Science and Engineering	
05	Project Title:	Obstacle Detection and Home Appliances Control Using Smart Wheelchair for Crippled Patients	
06	Project Discipline:	User friendly devices for aged and physically challenged people.	
07	Principal	Name:	Dr. H Ramakrishna
		Contact No:	9880703600
		Email id:	principal@sapthagiri.edu.in
08	HOD	Name:	Dr. Kamalakshi Naganna
		Contact No:	9880285725
		Email id:	hodcse@sapthagiri.edu.in
09	Project Guide	Name:	Dr. Kamalakshi Naganna
		Contact No:	9880285725
		Email id:	hodcse@sapthagiri.edu.in
10	Project Committee coordinator (Identified by the college) :	Name:	Dr. Lavanya N L
		Contact No:	9740496838
		Email id:	lavanyanl@sapthagiri.edu.in




Principal
Sapthagiri College of Engineering
 14/5, Chikkasandra, Hesaraghatta Main Road
 Bengaluru - 560 057

11	Name of project group Members	
1.Group leader and Member		
Name: MADHURAVANI N		
USN No. : ISG18CS059		
Contact No: 9972440069		
Email id: madhuravani026@gmail.com		
2.Member		
Name: MEGHANA.G		
USN No. : ISG18CS054		
Contact No: 9353314938		
Email id: gmeghana2000@gmail.com		
3.Member		
Name: NAVYASHREE K		
USN No. : ISG18CS062		
Contact No: 8296636857		
Email id: navyakgowda2000@gmail.com		
4.Member		
Name: MEGHA.P		
USN No. : ISG18CS052		
Contact No: 9663024524		
Email id: meghaprakash534453@gmail.com		
12	Scope / Objectives of the project:	<ul style="list-style-type: none"> • The main objective of this system will allow crippled people to live with less dependence on others for their movement as a daily need. • To design the system that helps the people who are amputees also useful for paralyzed patients. • To design system that reduce work of the care taker in the hospitals and home as it includes the operation of home appliances and detection

13	Methodology of work: (Including diagram, flow chart and design calculations)	 <ul style="list-style-type: none"> • ATMEGA 328 microcontroller is the main component it acts as the brain each and every component are interconnected to it. Power supply is used to activate the components in the micro-controller. Voice-kit is used to recognize the voice once the voice is feed in the kit it can operate the wheelchair. It will compare the voice feed and then sends signal to the controller to make movement. Two DC motors are used for the movement of the wheelchair. • When both motors are moving in clockwise direction then wheelchair
----	--	--

	<p>moves forward, if both are motors moving in anticlockwise then it moves backward, if right motor is moving clockwise and left motor is moving anticlockwise then wheelchair moves left, if right motor is moving anticlockwise and left motor is moving clockwise then wheelchair moves right.</p> <ul style="list-style-type: none">• Voice recognition module sends signal to the controller it will activate the pins which are connected to relay which is used to control the DC motor.• MEMS accelerometer sensor is used to find the tilt, the movement of the wheelchair can be made by hand gesture who are mute. IR sensor is used detect the obstacle that comes close contact with the wheelchair. Relays act as switch which is used to on and off the fan and bulb.• The Wi-Fi is used to connect the mobile app through which movement of the wheelchair can be monitored.
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14	Expected Outcome of the project:	<ul style="list-style-type: none">• The Design not only reduce the manufacture cost compared with present market but also will give great competitive with other types of wheelchair.• The only thing needed to ride the wheelchair is the synthetic voice command of the person or hand gesture.• A system that can directly enhance the lifestyle of a physically crippled person in the community is implemented. This project has many advantages like safety, comfort, energy saving, full automation etc.
15	Application of the project :	<ul style="list-style-type: none">• In hospitals for Crippled Patients.• It can be used by elderly or physically challenged persons to move inside the home without any difficulty.• In bus stops, railway stations, airports, offices etc.

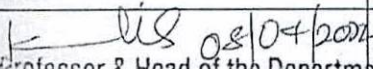
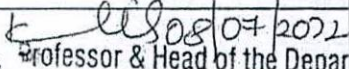
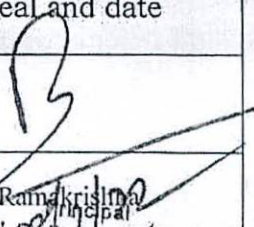

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Sapthagiri College of Engineering
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Bengaluru - 560 057

ENDORSEMENT

This is to certify that


- 1] Ms Madhuravani N
- 2] Ms Meghana G
- 3] Ms Navyashree K
- 4] Ms Megha P

Are bonafide students of Department of Computer Science and Engineering in the degree program of our institution. If the project proposal submitted by these students under VTU Sponsored Student Project Proposal is selected by VTU, we will provide the required laboratory / Computer / infrastructure support in our college / Institution. Further we also take necessary steps that the project group will exhibit / demonstrate their project in the Regional centre and for exhibition at VTU, Belagavi. If the student group fails to attend the evaluation in Regional centre and exhibition at VTU Belagavi, the supported project amount will be returned back to VTU immediately.

Signature of the Project Guide with date	Signature of HOD with Seal and Date	Signature of the Principal with Seal and date
 Professor & Head of the Department Computer Science Engineering Sapthagiri College of Engineering Name: Dr. Kamalakshi Naganna	 Professor & Head of the Department Computer Science Engineering Sapthagiri College of Engineering Name: Dr. Kamalakshi Naganna	 Principal Sapthagiri College of Engineering 14/5, Chikkasandra, Hesaraghatta Main Road Bengaluru - 560 057

16	Budget details with Materials required:	<table border="1"> <thead> <tr> <th data-bbox="778 244 1098 335">Budget</th> <th data-bbox="1098 244 1390 335">Amount</th> </tr> </thead> <tbody> <tr> <td data-bbox="778 335 1098 460">a) Materials/ Consumables</td> <td data-bbox="1098 335 1390 460">8600.00</td> </tr> <tr> <td data-bbox="778 460 1098 551">b) Labour</td> <td data-bbox="1098 460 1390 551">500.00</td> </tr> <tr> <td data-bbox="778 551 1098 630">c) Travel</td> <td data-bbox="1098 551 1390 630">500.00</td> </tr> <tr> <td data-bbox="778 630 1098 709">d) Miscellaneous</td> <td data-bbox="1098 630 1390 709">500.00</td> </tr> <tr> <td data-bbox="778 709 1098 777">Total</td> <td data-bbox="1098 709 1390 777">10100.00</td> </tr> </tbody> </table> <p data-bbox="762 823 1038 868">Materials required:</p> <ul data-bbox="794 902 1110 1276" style="list-style-type: none"> • ATMEGA 328 • Voicekit • Wheelchair Model • Base Board • DC motors • Relays • Sensors • Buzzers • Power supply 	Budget	Amount	a) Materials/ Consumables	8600.00	b) Labour	500.00	c) Travel	500.00	d) Miscellaneous	500.00	Total	10100.00
Budget	Amount													
a) Materials/ Consumables	8600.00													
b) Labour	500.00													
c) Travel	500.00													
d) Miscellaneous	500.00													
Total	10100.00													
17	Date of commencement of the Project :	01 Dec 2021												
18	Probable date of completion of the project :	10 June 2022												
19	Duration of project work :	6 months												
20	Pert chart for completion of the project in said duration as per planned activities:													

Sl.No	Activities Planned	1 Month/ Week	2 Month/ Week	3 Month/ Week	4 Month/ Week	5 Month/ Week	6 Month/ Week
01	Literature Review						
02	Planning/ Designing						
03	Assembly/ Fabrication work						
04	Final Testing						
05	Result & Calculation/ Conclusion						
06	Preparation of Report & Submission						


 Principal
 Sapthagiri College of Engineering
 14/5, Chikkasandra, Hesaraghatta Main Road
 Bengaluru - 560 057

DECLARATION BY THE STUDENTS

We, the project group members hereby declare that the details enclosed in the project proposal are true and correct to the best of our knowledge. We undertake to inform VTU, of any changes there in the project title, students name will be intimated immediately. In case, any of the above information is found to be false or untrue or misleading, we are aware that we may be held liable for it.

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We also hereby, enclose the endorsement form to VTU, Belagavi.

SL.No	Name of the Student	Signature with date
01	Madhuravani N	N. Madhuravani 08/07/22
02	Meghana G	Meghana G 8/7/22
03	Navyashree K	Navya K 8/7/22
04	Megha P	Megha P 08/07/22







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 Belagavi: 590018
 Karnataka, India.
 Tele: 0831-2498225, 2405454

VTU Sponsored Student Project Proposal Format

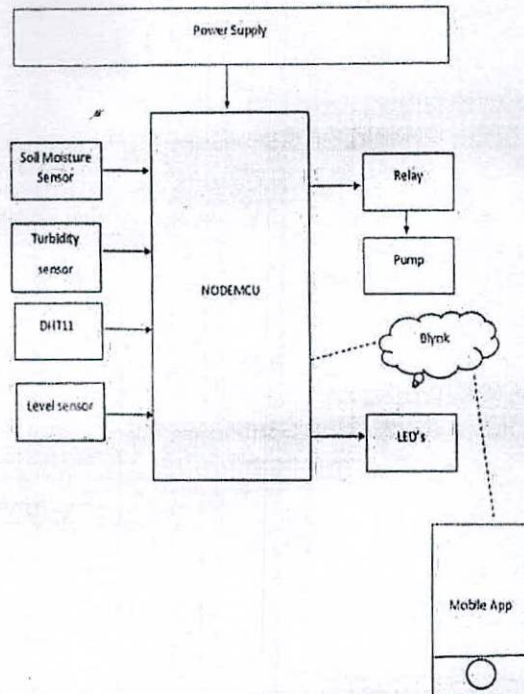
01	Academic Year :	2022
02	Semester :	8
03	Name of the College :	Sapthagiri College of Engineering
04	Branch:	Computer Science and Engineering
05	Project Title:	Cost Effective Smart IOT based Water Gate Controller for Agriculture Irrigation System
06	Project Discipline:	Automation or New Concepts in Agriculture (Irrigation)
07	Principal	Name: Dr. H Ramakrishna
		Contact No: 9986633233
		Email id: Principal@sapthagiri.edu.in
08	HOD	Name: Dr. Kamalakshi Naganna
		Contact No: 9880285725
		Email id: hodcse@sapthagiri.edu.in
09	Project Guide	Name: Dr. Kamalakshi Naganna
		Contact No: 9880285725
		Email id: hodcse@sapthagiri.edu.in
10	Project Committee coordinator	Name: Dr. Lavanya N L
		Contact No: 9740496838
		Email id: lavanyanl@sapthagiri.edu.in


 Principal
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11	Name of project group Members	
	1.Group leader and Member	
	Name:Shalini G S	
	USN No. : ISG18CS100	
	Contact No: 9535320123	
	Email id: shalumegha2222@gmail.com	
	2.Member	
	Name: Pallavi R	
	USN No. : ISG18CS068	
	Contact No: 9008385858	
	Email id: pallavirajanna26@gmail.com	
	3.Member	
	Name: Panchami A	
	USN No. : ISG18CS069	
	ContactNo: 8867148723	
Email id:apanchami04082000@gmail.com		

4.Member			
Name: Priyanka V			
USN No. : 1SG18CS079			
Contact No: 9739068840			
Email id: priyanka2000vm@gmail.com			
12.	Scope / Objectives of the project:	<p>The main objective of this project was to develop a system that uses water judiciously.</p> <ul style="list-style-type: none"> •Reduce the manpower and conserve the water. •Real time sensing and control. •To get the output of the soil water sensor and provide water to crop. •To observe other parameters for better yield. 	

13 Methodology of work:



*The proposed device uses a micro controller (ESP32) that has a Wi-Fi module over it (ESP8266). Blynk mobile App is used as the user interface. Soil moisture sensor, humidity and temperature sensor (DHT11), level sensor, turbidity sensor , LED's along with relay and servo motor are used.

* This relay is connected to a water pump which pumps water to the crops when the relay is ON. The soil moisture sensor senses the moisture level of the soil, depending on the level of moisture.

* NodeMCU decides whether to water the crop or not. By using appropriate functions and conditional statements in the code written for the NodeMCU functioning.

		<p>* The watering of the crop starts by NodeMCU making relay ON when the moisture content is below a threshold value and is made OFF when there is enough moisture content in the soil.</p> <p>* The humidity and temperature sensor gives the humidity and temperature values of the atmosphere which determine whether the crop is suitable for growth. Some crops grow only in particular weather conditions and some give better yield only for a particular temperature range.</p> <p>* Here the project also checks the pH for the water as the water contains some acidic content in it or not, so that plant cannot be affected.</p> <p>* Data reaches the blynk cloud from NodeMCU through Wi-Fi. From this app, the farmer can control the relay through various buttons and switches.</p> <p>* When the NodeMCU gets the command from the app then the appropriate analysis is done and the pump motor is controlled. The data again travels through Wi-Fi again in the same path.</p>
14	Expected Outcome of the project:	<p>* IoT technology is used to sense and analyse temperature, humidity level, soil moisture level, water condition and pump motor.</p> <p>* All these values are transmitted using Wi-Fi to the smart phone. Appropriate water is pumped and rain is also used effectively because of the use of this system.</p> <p>* This system is very useful for farmers because they need to pump water regularly and check the status of each crop.</p>


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		<p>* Farmers can know the values of humidity, temperature and soil moisture from anywhere in the world and if the pump motor is ON on their smartphones via the blynk app.</p>
15	Application of the project :	<ul style="list-style-type: none"> • <i>Real-Time Data:</i> Displays real-time details of humidity, temperature, and soil moisture using sensors placed at the field. This data can be sent for the processing which will lead them to functionalities/applications • <i>Precision farming:</i> Precision farming is also called as precision agriculture, which is about making accurate and efficient data-based decisions. It makes the agriculture process more precise and controlled by realizing smart applications, including vehicle tracking, livestock monitoring, inventory monitoring, field monitoring, etc. • <i>Crop Management:</i> This must be placed on the farm to gather specific information to crop cultivation, from humidity and temperature to water efficiency and to maintain overall health of the crop.

ENDORSEMENT

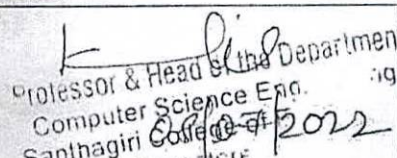
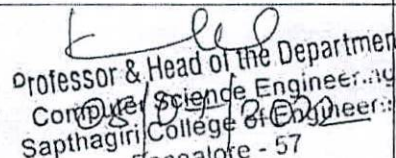
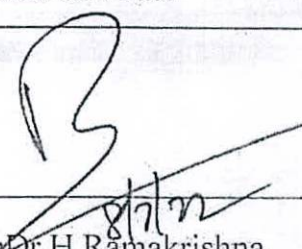
This is to certify that I] Pallavi R

2] Panchami A

3] Priyanka V

4] Shalini GS

Are bonafide students of Department in Computer Science and Engineering, of our institution. If the project proposal submitted by these students under VTU Sponsored Student Project Proposal is selected by VTU, we will provide the required laboratory/Computer/infrastructure support in our college/Institution. Further we also take necessary steps that the project group will exhibit / demonstrate their project in the Regional centre and for exhibition at VTU, Belagavi. If the student group fails to attend the evaluation in Regional centre and exhibition at VTU Belagavi, the supported project amount will be turned back to VTU immediately.

Signature of Project Guide with date	Signature of HOD with Seal and date	Signature of the Principal with Seal and date
 Professor & Head of the Department Computer Science Engg. Sapthagiri College of Engineering 08/07/2022	 Professor & Head of the Department Computer Science Engineering Sapthagiri College of Engineering Bangalore - 57 08/07/2022	 Principal Sapthagiri College of Engineering 14/5, Chikkasandra, Hesaraghatta Main Road Bengaluru - 560 057
Name: Dr. Kamalakshi Naganna	Name: Dr. Kamalakshi Naganna	Name: Dr. H Ramakrishna

16	Budget details with Materials required:	<table border="1"> <thead> <tr> <th data-bbox="751 285 1038 353">Budget</th> <th data-bbox="1038 285 1366 353">Amount</th> </tr> </thead> <tbody> <tr> <td data-bbox="751 353 1038 455">a) Materials / Consumables</td> <td data-bbox="1038 353 1366 455">3710.00</td> </tr> <tr> <td data-bbox="751 455 1038 535">b) Labor</td> <td data-bbox="1038 455 1366 535">100.00</td> </tr> <tr> <td data-bbox="751 535 1038 603">c) Travel</td> <td data-bbox="1038 535 1366 603">200.00</td> </tr> <tr> <td data-bbox="751 603 1038 671">e) Miscellaneous</td> <td data-bbox="1038 603 1366 671">350.00</td> </tr> <tr> <td data-bbox="751 671 1038 739">Total</td> <td data-bbox="1038 671 1366 739">4360.00</td> </tr> </tbody> </table> <p data-bbox="751 750 1038 796">Materials required:</p> <ul data-bbox="791 818 1110 1181" style="list-style-type: none"> • ESP32 • Soil moisture sensor • Rain sensor • Turbidity sensor • DHT11 • Water level sensor • Relay • Pump • Power supply 	Budget	Amount	a) Materials / Consumables	3710.00	b) Labor	100.00	c) Travel	200.00	e) Miscellaneous	350.00	Total	4360.00
Budget	Amount													
a) Materials / Consumables	3710.00													
b) Labor	100.00													
c) Travel	200.00													
e) Miscellaneous	350.00													
Total	4360.00													
17	Date of commencement of the Project :	01 Dec 2021												
18	Probable date of completion of the project :	10 June 2022												
19	Duration of project work :	6 months												
20	Pert chart for completion of the project in said duration as per													
	planned activities:													


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Sl.No	Activities Planned	1 Month/ Week	2 Month/ Week	3 Month/ Week	4 Month/ Week	5 Month/ Week	6 Month/ Week
01	Literature review						
02	Planning/ Designing						
03	Assembly/ Fabrication work						
04	Final Testing						
05	Result & Calculation/ Conclusion						
06	Preparation of Report & Submission						


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DECLARATION BY THE STUDENTS

We, the project group members hereby declare that the details enclosed in the project proposal are true and correct to the best of our knowledge. We undertake to inform VTU, of any changes there in the project title, students name will be intimated immediately. In case, any of the above information is found to be false or untrue or misleading, we are aware that we may be held liable for it.

We are aware that the project group has to exhibit / demonstrate the project for evaluation in the VTU Regional centre and for exhibition at VTU, Belagavi. If the project group fails to attend the evaluation in Regional centre and for Exhibition in VTU Belagavi, the sponsored project amount will be returned back to VTU immediately

We also hereby, enclose the endorsement form to VTU, Belagavi.

SL.No	Name of the Student	Signature with date
01	Pallavi R	<i>Pallavi R</i> 8/7/22
02	Panchami A	<i>Panchami</i> 8/7/22
03	Priyanka V	<i>Priyanka V</i> 8/7/22
04	Shalini G S	<i>Shalini G S</i> 8/7/22


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SAPTHAGIRI COLLEGE OF ENGINEERING

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14001:2015 Certified Institution, #14/5, Chikkasandra, Hesarghatta Main Road, Bengaluru-560057



Department of Civil Engineering

Date: 08/07/2022

To,

The Principal
SCE,
Bengaluru

As per your direction department committee is formed as given below, for the selection of two Final Year Students Innovative Projects under the scheme VTU-FAFSIP. The presentation of four innovative final year projects is scheduled in the presence of committee on 08/07/2022. The four Innovative projects are shortlisted as per the emerging areas / themes give in the VTU circular.

The list of four innovative projects shortlisted for presentation is enclosed with this.

Committee Details

Sl. No.	Name	Designation	Role	Signature
1	Dr.H. Ramakrishna	Principal	Chairman	
2	Dr.Rajeshwari R.	Asso. Prof.& H.O.D ('CV)	Member	
3.	Dr. R Harish	Prof(Phy)& IQAC Co-ordinator	Member	
4	Mr.Akshay J	Asst Professor	Subject Expert	
5	Mrs. Pallavi G A	Asst Professor	Subject Expert	
6	Dr. Ravishankar C.V., Prof & Head of ECE, Sambhram Institute of Technology	VTU nominee	Member	

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HOD

HOD, Dept. of Civil Engg.
S.C.E, Bangalore-560 057

List of Innovative Projects Shortlisted For Presentation

Sl. No	Name of the Project	Name of Students	USN	Guide	Topics / Theme
1.	Determination of optimum binder content for bituminous concrete	Chandana M	ISG18CV011	Mr Akshay J	Technology Relevant in the contrsuction
		Pooja S	ISG18CV035		
		Pragathi r	ISG18CV037		
		Sindhu c	ISG18CV051		
2.	Improving the compressive strength of concrete by using crushed aggregate - granite powder as filler material	Yashas. M	ISG18CV064	Ms.Kavya H P	Waste Management in construction activites
		Darshan.n	ISG18CV013		
		Abhishek mohan	ISG18CV003		
		Vivek hegde	ISG18CV063		
3.	Analysis and Design of Multi-Level Car Parking.	Tilak H S	ISG18CV060	Mrs. Shobha Y N	Software application in the building
		Sachin K C	ISG18CV065		
		Dhanush K L	ISG19CV402		
		Harish S R	ISG19CV403		
4.	Analysis and design of G+5 residential building using Etabs	Adhya NK	ISG18CV005	Mrs. Pallavi G A	Software application in the building to design the load
		Ankith KC	ISG18CV008		
		Bharath P	ISG18CV009		
		Madhusudan BS	ISG18CV029		
5	Translucent concrete	Khalid Maqsood Mir	ISG18CV026	Ms.Kavya H P	Technology Relevant in the contrsuction
		Ishaque Ahmed KM	ISG18CV024		
		Vinay R	ISG18CV062		
		Sanjay Sharma	ISG18CV047		



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HOD

HOD, Dept. of Civil Engg.
 S.C.E, Bangalore-560 057



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Department of Civil Engineering

Date: 08/07/2022

To,

The Principal
SCE,
Bengaluru
Sir,

The following two final year innovative projects have been selected to apply for VTU funding during the presentation held on 08/07/2022 in the department board room in the presence of committee members.

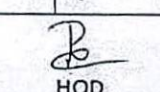
Two Final Year Innovative Projects Selected to Apply for VTU Funding(VTU-FAFSIP)

Sl. No.	Name of the Project	Name of Students	USN	Guide
1.	Determination of optimum binder content for bituminous concrete	Chandana.M	ISG18CV011	Mr Akshay J
		Pooja S	ISG18CV035	
		Pragathi R	ISG18CV037	
		Sindhu C	ISG18CV051	
2.	Improving the compressive strength of concrete by using crushed aggregate - granite powder as filler material	Yashas. M	ISG18CV064	Ms.Kavya H P
		Darshan.n	ISG18CV013	
		Abhishek mohan	ISG18CV003	
		Vivek hegde	ISG18CV063	

Approval Committee

Sl. No.	Name	Designation	Role	Signature
1	Dr.H. Ramakrishna	Principal	Chairman	
2	Dr.Rajeshwari R	Asso. Prof.& H.O.D (CV)	Member	
3	Dr. R Harish	Prof(Phy)& IQAC Co-ordinator	Member	
4	Mr.Akshay J	Asst Professor	Subject Expert	
5	Mrs. Pallavi G A	Asst Professor	Subject Expert	
6	Dr. Ravishankar C.V , Prof & Head of ECE , Sambhram Institute of Technology	VTU nominee	Member	


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**DEPARTMENT OF CIVIL ENGINEERING
Academic Year 2021-22**


VTU Sponsored Student Project Proposal Format

1	Academic Year	2021-2022	
2	Semester	8th Semester	
3	Name of the College	Sapthagiri College of Engineering	
4	Branch	CIVIL	
5	Project Title	"Improving the compressive strength of concrete by using recycled aggregates and Granite powder as Filler material"	
6	Project Discipline	The use of recycled crushed aggregates as an alternative source of coarse & fine aggregates for the production of new concrete can help to solve the problem of depleting natural resources and that of growing waste disposal crisis.	
7	Principal	Name	Dr. H Ramakrishna
		Contact No.	9448978350
		Email.Id	principal@sapthagiri.edu.in
8	HOD	Name	Dr. Rajeshwari R
		Contact No.	99805 05280
		Email.Id	hodcivil@sapthagiri.edu.in
9	Guide	Name	Prof. Kavya .H. P
		Contact No.	96869 95078
		Email.Id	kavyahp@sapthagiri.edu.in
11	Project Committee Co-ordinator	Name	Prof. Akshay J
		Contact No.	78998 88989
		Email.Id	akshavj@sapthagiri.edu.in



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Name of Project Group Members	
Group Leader & Member	
1.Name	Abhishek mohan
Pass Port size Photo	
USN No. :	1SG18CV003
Contact No.	88613 82358
Email id:	abhishekmohan011@gmail.com
2. Name	Darshan.N
Pass Port size Photo	
USN NO. :	1SG18CV013
Contact No.	7348955489
Email id:	darshan.ngowda21@gmail.com
3.Name	vivek hegde
Pass Port size Photo	
USN NO. :	1SG18CV063


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 Sapthagiri College of Engineering
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Contact No.	99803 70674
Email id:	<u>vivekvhegde2@gmail.com</u>
4.Name	Yashas. M
Pass Port size Photo	
USN No.:	1SG18CV064
Contact No.	78992 24201
Email id:	<u>yashasm09@gmail.com</u>

13	Processing Fees Details	Bank Name	
		:	
		Branch :	
		DD NO. with date: OR Cheque No. With date:	
14	Scope / Objectives of Work	Annexure -1	<ul style="list-style-type: none"> ➤ To study and compare the mechanical properties-compressive strength, tensile strength, flexural strength of hardened concrete specimen with and without recycled aggregate. ➤ Investigate the potential use of granite powder in concrete as replacement for natural sand. ➤ Determining the degree of strength improvement in concrete obtained with the addition of granite powder.
15	Methodology of Work (including diagram, flow chart & design	Annexure-2	1. Material properties of ingredients like specific gravities of cement, fine aggregate and coarse aggregate, were determined in Concrete Lab. Moisture contents and water absorptions of fine aggregate and coarse aggregate were also determined in the concrete Lab.


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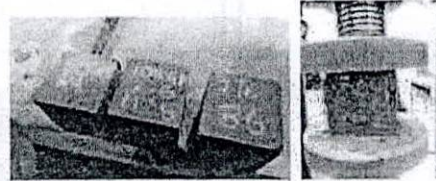
calculations)

2. By Absolute volume method the quantity of materials required are calculated.

3. Six cubes of standard dimensions (150 mm x 150 mm x 150 mm) were cast with plain concrete using normal ingredients: cement, coarse aggregate and fine aggregate and water and cured for 7 and 28 days.

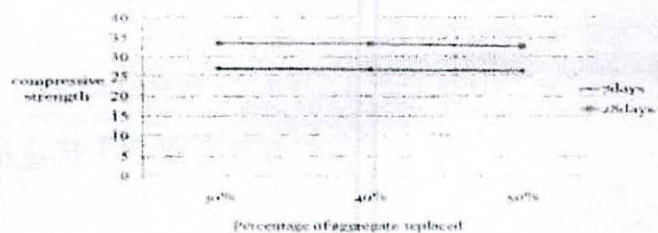
4. Series of concrete cubes of standard dimensions (150 mm x 150 mm x 150 mm) were cast using concrete with replacing of natural aggregates by recycled aggregates of about 30%, 40% & 50% with addition of granite powder for 5% & 10% and cured for 7 to 28 days.

Grade of concrete	Cement	Fine aggregate	Coarse aggregate	W/C
M25	1	2.16	3.48	0.45

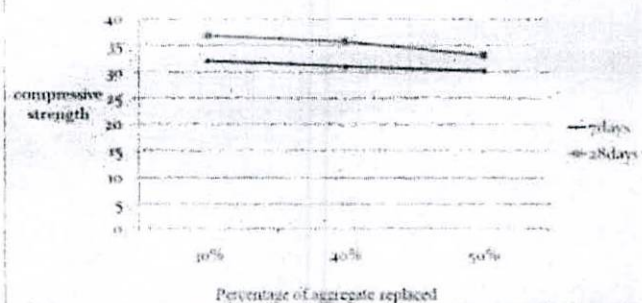


5. The cubes of steps 3 and 4 were tested in compression testing machine and the compressive strengths of the cubes of the step 4 are compared with that of cubes of the step 3.

FOR 5% OF GRANITE POWDER



FOR 10% OF GRANITE POWDER



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16	Excepted outcome of Project	<p>➤ 50%Percentage of coarse aggregate and fine aggregate can be replaced with demolition waste with 5% of granite powder as an additive to achieve 80% of strength.</p> <p>➤ 50% of coarse aggregate and fine aggregate can be replaced with demolition waste with 10% of granite powder as an additive to achieve the 85% of target strength.</p>
18	Date of Commencement of Project	10-11-2021
19	Date of completion of Project	06-07-2022
20	Duration of Project Work	9 months

PERT Chart

SLNO	Activities Planned	Month / week	Month / week	Month / week	Month / week	Month / week	Month / week
1	Literature Review	Nov					
2	Planning/ Mix Design		Dec	Jan			
3	Test on materials			April	May		
4	Cube casting					June	
5	Result & Calculations / Conclusions					June	
6	Preparation of Report / Submission						July

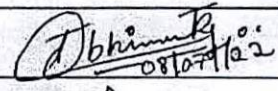
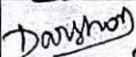
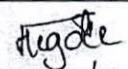
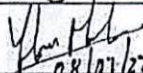

 Principal
 Sapthagiri College of Engineering
 14/5, Chikkasandra, Hosaraghatta Main Road,
 Bengaluru - 560 057

DECLARATION BY THE STUDENTS

We, the project group members hereby declare that the details enclosed in the project proposal are true and correct to the best of our knowledge. We undertake to inform VTU, of any changes there in the project title, students name will be intimated immediately. In case, any of the above information is found to be false or untrue or misleading, we are aware that we may be held liable for it.

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We also hereby, enclose the endorsement form to VTU, Belagavi.

Sl No	Name	Signature with Date
1	ABHISHEK MOHAN	 08/07/22
2	DARSHAN N	 08/07/22
3	VIVEK V HEGDE	 08/07/22
4	YASHAS M	 08/07/22


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14/5, Chikkasandra, Hesaraghatta Main
Bengaluru - 560 077

Annexure-3

Parts List/Bill of Materials

Parts	Details	Amount (Rs.)
a) Purchase of cement	4 bags	1400.00
b) Fine aggregate	500 kgs of fine aggregate	500.00
c) coarse aggregate	2400 kg	2800
d) Granite Powder (Crushing)	-----	1600
e) Crushing of demolition waste	-----	1900
Total		8200.00

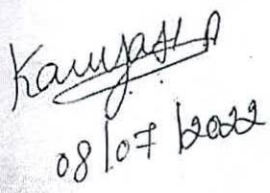
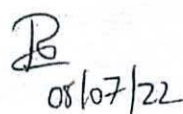
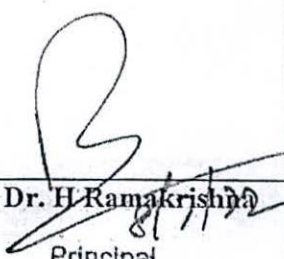

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Bengaluru - 560 057

ENDORSEMENT BY INSTITUTION

This is to certify that.

- 1) ABHISHEK MOHAN (1SG18CV003)
- 2] DARSHAN N (1SG18CV013)
- 3] VIVEK V HEGDE (1SG18CV063)
- 4] YASHAS M (1SG18CV063)

are bonafide students of Department of Civil Engineering of our institution If the project proposal submitted by these students under VTU Sponsored Student Project Proposal is selected by VTU, we will provide the required laboratory / Computer / infrastructure support in our college / Institution. Further we also take necessary steps that the project group will exhibit / demonstrate their project in the regional center and for exhibition at VTU, Belagavi. If the student group fails to attend the evaluation in regional center and exhibition at VTU Belagavi, the supported project amount will be returned back to VTU immediately.

Signature of Project Guide with date	Signature of HOD with Seal and date	Signature of the Principal with Seal and date
 08/07/22	 08/07/22 HOD, Dept. of Civil Engg. S.C.E, Bangalore-560 057	
Name: Prof. Kavya H P	Name: Dr. Rajeshwari R	Name: Dr. H. Ramakrishna Principal

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**DEPARTMENT OF CIVIL ENGINEERING
Academic Year 2021-22**

VTU Sponsored Student Project Proposal

1	Academic Year	2021-2022	
2	Semester	8th Semester	
3	Name of the College	Sapthagiri College of Engineering	
4	Branch	Civil Engineering	
5	Project Title	Determination of Optimum Binder Content for Bituminous Concrete (Grade-1).	
6	Project Discipline	Low-Cost Material Usage in Road Construction/ Sustainable Material Usage	
7	Principal	Name	Dr. H Ramkrishna
		Contact No.	9448978350
		Email.Id	principal@sapthagiri.edu.in
8	HOD	Name	Dr. Rajeshwari R
		Contact No.	9980505280
		Email.Id	hodcivil@sapthagiri.edu.in
9	Guide	Name	Prof. Akshay J
		Contact No.	7899888989
		Email.Id	akshayj@sapthagiri.edu.in
11	Project Committee Co-ordinator	Name	Prof. Akshay J
		Contact No.	7899888989
		Email.Id	akshayj@sapthagiri.edu.in



 Principal
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 14/5, Chikkasandra, Hesarghatta Main Rd
 Bengaluru - 560 057

Name of Project Group Members	
1.Group Leader & Member	
Name	Pragathi R 
USN No. :	1SG8CV037
Contact No.	9148856273
Email id:	pragathir148@gmail.com
2. Name	Chandana M 
USN No. :	1SG18CV011
Contact No.	7899716176
Email id:	chandurgouda26@gmail.com
3.Name	Pooja S 
USN No. :	1SG18CV035
Contact No.	8971877472
Email id:	poojasiddeswara@gmail.com

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	4.Name	Sindhu C		
	USN No. :	1SG18CV051		
	Contact No.	9901077639		
	Email id:	sindhumenan2000@gmail.com		


13	Processing Fees Details	Bank Name :	-
		Branch :	-
		DD NO. with date:	-
		OR Cheque No. With date:	
14	Scope / Objectives of Work	Annexure -1	Refer Annexure 1
15	Methodology of Work (Including diagram, flow chart & design calculations)	Annexure-2	Refer Annexure 2
16	Excepted outcome of Project	<ul style="list-style-type: none"> To prepare proper mix design of aggregates for bituminous concrete(grade-1) To arrive at optimum binder content and to achieve proper balance with aggregates and other parameters required for better pavement performance 	
17	Application of the Project	<ul style="list-style-type: none"> Usage of bitumen (End -residue obtained from refining of crude oil) in economical way for pavement construction. To avoid damages caused to the flexible pavements due improper addition (excess or less) of bitumen binder 	
18	Budget Details with material Required	Annexure-3	Refer Annexure 3


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19	Date of Commencement of Project	10-11-2021
20	Probable date of completion of Project	30-06-2022
21	Duration of Project Work	8 months
22	PERT chart for completion of project in said duration as per planned activities	

PERT Chart

Sl.NO	Activities Planned	Month / week	Month / week	Month / week	Month / week	Month / week	Month / week
1	Literature Review	Nov					
2	Planning / Design		Dec	Jan			
3	Material Testing			April	May		
4	Grading and Mix Preparation					June	
5	Casting of Moulds and Properties Investigation					June	
6	Preparation of Report / Submission						July


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DECLARATION BY THE STUDENTS

We, the project group members hereby declare that the details enclosed in the project proposal are true and correct to the best of our knowledge. We undertake to inform VTU, of any changes there in the project title, students name will be intimated immediately. In case, any of the above information is found to be false or untrue or misleading, we are aware that we may be held liable for it.

We are aware that the project group has to exhibit / demonstrate the project for evaluation in the VTU Regional center and for exhibition at VII), Belagavi. If the project group fails to attend the evaluation in regional center and for Exhibition in VTU, Belagavi, the sponsored project amount will be returned back to VTU immediately

We also hereby, enclose the endorsement form to VTU, Belagavi.

Sl No	Name	Signature with Date
1	Chandana M	Chandana M 08/07/22
2	Pooja S	Pooja S 08/07/2022
3	Pragathi R	Pragathi R 08/07/2022
4	Sindhu C	Sindhu C 08/07/22


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Annexure-1

SCOPE / OBJECTIVES OF WORK:

- Adequate stability or resistance to deformation of the mix to withstand distortion or permanent deformation under expected traffic loads.
- Sufficient bitumen binder content to properly coat the aggregate particles and to provide required durability.
- Sufficient workability of the mix during placement of the mix / paving and compaction.
- Proper aggregate texture and hardness so that the compacted surface has adequate skid resistant under adverse conditions.

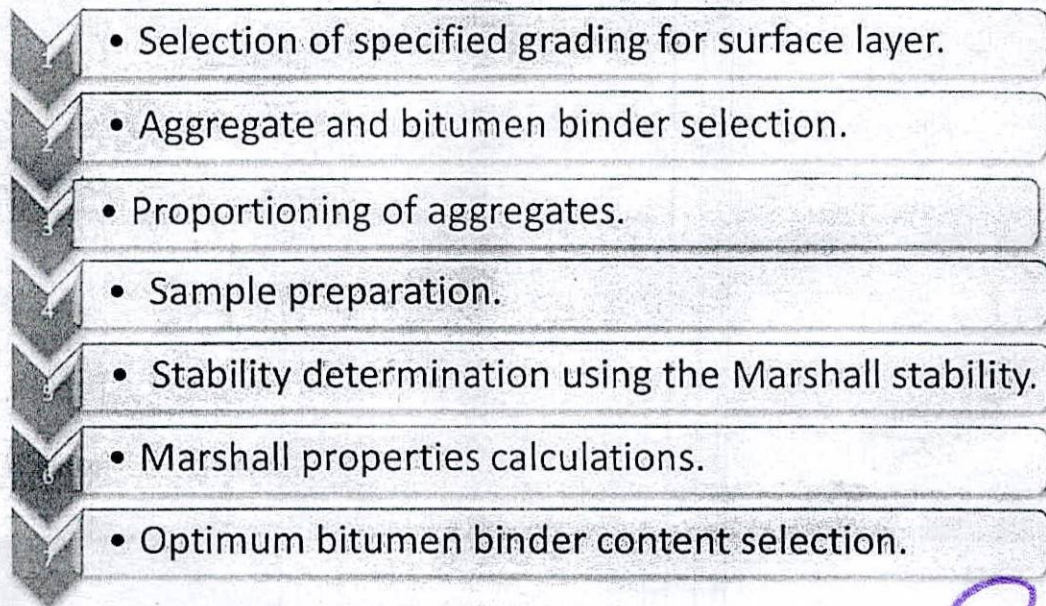


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Annexure-2

METHODOLOGY OF WORK:

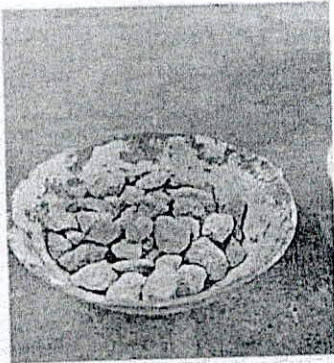
(Including diagram, flow chart)

- 
- Selection of specified grading for surface layer.
 - Aggregate and bitumen binder selection.
 - Proportioning of aggregates.
 - Sample preparation.
 - Stability determination using the Marshall stability.
 - Marshall properties calculations.
 - Optimum bitumen binder content selection.


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IMAGES

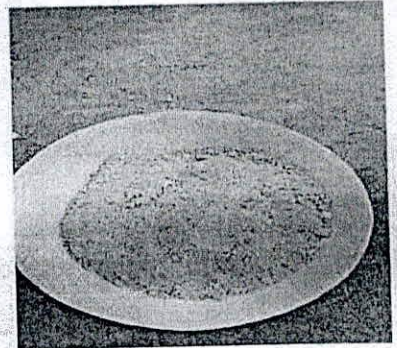
MATERIALS USED



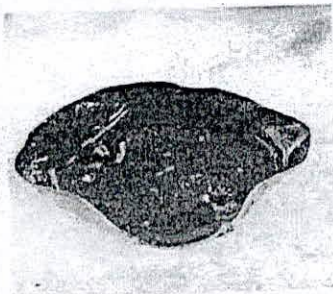
MATERIAL A



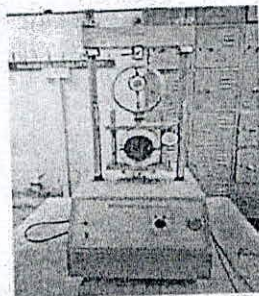
MATERIAL B



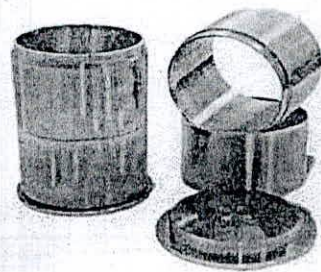
MATERIAL C



BITUMEN



MARSHALL STABILITY TESTING MACHINE



MOULDS


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Annexure-3

Parts List/Bill of Materials

Materials	Details	Amount (Rs.)
a) Purchase of Bitumen and Aggregates	Materials/ Consumables	4500.00
b) Fabrication and Preparation of Molds	Labor (Riveting , Joining, Welding, Assembly)	2000.00
c) Travel	To go to UVCE/RASTA to collect the information about the project	500.00
d) Printing and binding	Report Preparation	500.00
e) Miscellaneous expenses	Stationery/materials	1000.00
Total		8500.00

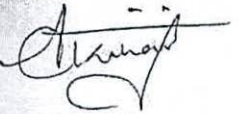
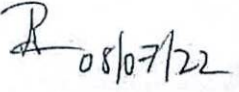


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ENDORSEMENT BY INSTITUTION

This is to certify that.

- 1) Chandana M (1SG18CV011)
- 2) Pooja S(1SG18CV035)
- 3) Pragathi R(1SG18CV037)
- 4) Sindhu C(1SG18CV051)

are bonafide students of Department of Civil Engineering of our institution If the project proposal submitted by these students under VTU Sponsored Student Project Proposal is selected by VTU, we will provide the required laboratory / Computer / infrastructure support in our college / Institution. Further we also take necessary steps that the project group will exhibit / demonstrate their project in the regional center and for exhibition at VTU, Belagavi. If the student group fails to attend the evaluation in regional center and exhibition at VTU Belagavi, the supported project amount will be returned back to VTU immediately.

Signature of Project Guide with date	Signature of HOD with Seal and date	Signature of the Principal with Seal and date
 8/7/2022	 08/07/22 HOD, Dept. of Civil Engg. S.C.E, Bangalore-560 057	
Name: Prof. Akshay J	Name: Dr. Rajeshwari R	Name: Dr. H. Ramakrishna Principal

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