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

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|----|-------------------------------------------------------------------|-----------------------------------------------------|---------------------------------|
| 01 | Academic Year : | 2020-2021 | |
| 02 | Semester : | 8th | |
| 03 | Name of the College : | SRI SAIRAM COLLEGE OF ENGINEERING, ANEKAL | |
| 04 | Branch: | MECHANICAL | |
| 05 | Project Title: | DESIGN AND FABRICATION OF SESAME PEELING MACHINE | |
| 06 | Project Discipline: | Agriculture | |
| 07 | Principal | Name: | Dr. B. SHADAKSHARAPPA |
| | | Contact No: | 9900545101 |
| | | Email id: | principal@saiiamce.edu.in |
| 08 | HOD | Name: | Prof. BALAJI V |
| | | Contact No: | 9886249811 |
| | | Email id: | hod.mech@saiiamce.edu.in |
| 09 | Project Guide | Name: | Prof. BALAJI V |
| | | Contact No: | 9886249811 |
| | | Email id: | balaji.mech@saiiamce.edu.in |
| 10 | Project Co-Guide(If any) | Name: | NA |
| | | Contact No: | |
| | | Email id: | |
| 11 | Project Committee coordinator (Identified by the college) : | Name: | Mr. Harish Babu L |
| | | Contact No: | 9036527118 |
| | | Email id: | harishbabu.mech@sairamce.edu.in |

| | | |
|---------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|
| 12 | Name of project group Members | |
| | 1.Group leader and Member | |
| | Name: KAPIL SINGH BISHT |  |
| | USN No. : 1SB17ME020 | |
| | Contact No: 6360859407 | |
| | Email id: sce17me037@sairamtap.edu.in | |
| | 2.Member | |
| | Name: KAILAS JAYA KUMAR |  |
| | USN No. : 1SB17ME018 | |
| | Contact No: 7676831068 | |
| | Email id: sce17me059@sairamtap.edu.in | |
| | 3.Member | |
| | Name: KARTHIK NAGANATH |  |
| | USN No. : 1SB17ME021 | |
| | Contact No: 8553901865 | |
| | Email id: sce17me049@sairamtap.edu.in | |
| | 4.Member | |
| | Name: CG OMPRAKASH |  |
| | USN No. : 1SB17ME007 | |
| | Contact No:7892941002 | |
| Email id: sce17me023@sairamtap.edu.in | | |

| | | |
|----|---------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 13 | Scope / Objectives of the project: | Design and fabrication of sesame peeling machine which can peel sesame seeds from sesame plants without any help of human labor. The process will be fully automatic and machine will be compact in size so that it can be easily movable. |
| 14 | Methodology of work: (Including diagram, flow chart and design calculations) | <p>We are using 2 methodology</p> <p>1. <u>THRESHING</u></p> <p>Threshing is the process of loosening the edible part of grain (or other crop) from the straw to which it is attached. It is the step in grain preparation after reaping. Threshing does not remove the bran from the grain. Threshing may be done by beating the grain using a flail on a threshing floor.</p> <p>2. <u>VIBRATION SIEVING</u></p> <p>In vibrational sieving, the sample is submitted to three dimensional movements. A circular movement superimposes a vertical throwing motion. This mechanism causes the particles to be uniformly distributed across the entire sieving surface and to be thrown into the air where they ideally change their orientation in a way that enables them to be compared to the sieve apertures in all probable dimensions.</p> |

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| | | |
| 15 | Expected Outcome of the project: | Labor and time will be reduced for the harvesting of the sesame crops. The machine will be compact in size making it movable from one place to another. |
| 16 | Application of the project : | Farmers who are involved in sesame harvesting activities will get huge benefit from our project as it is compact in size, requires less investment and saves time and labor |
| 17 | Budget details with Materials required: | <p><u>Cost of electrical components = 4,000 INR</u></p> <ul style="list-style-type: none"> • 1 HP Motor = 3,500 INR • Switch Box with Wiring = 500 INR <p><u>Cost of mechanical components = 7,100 INR</u></p> <ul style="list-style-type: none"> • Belt = 800 INR • Pulley = 300 INR • Slider Mechanism = 1,000 INR • Raw Material (Sheet Metal and Structural Parts) = 5,000 INR <p><u>Fabrication = 8,000INR</u></p> <p><u>Other Material Cost and Miscellaneous = 5,000 INR</u></p> <p>Total estimated cost of project = 24,100 INR</p> |
| 18 | Date of commencement of the Project : | First week of march |
| 19 | Probable date of completion of the project : | Last week of july |





| 20 | Duration of project work : | 5 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 | March 1 st week | | | | | |
| 02 | Planning/ Designing | | April 2 nd week | | | | |
| 03 | Assembly/ Fabrication work | | | July 2 nd week | | | |
| 04 | Final Testing | | | | July 3 rd week | | |
| 05 | Result & Calculation/ Conclusion | | | | | July 4 th week | |
| 06 | Preparation of Report & Submission | | | | | | July 4 th week |

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 | KAPIL SINGH BISHT |  |
| 02 | KAILAS JAYA KUMAR |  01/04/2021 |
| 03 | KARTHIK NAGANATH |  |
| 04 | C G OMPRAKASH |  1/04 |



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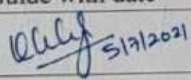
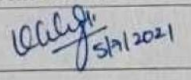
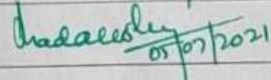


ENDORSEMENT

This is to certify that

- 1] KAPIL SINGH BISHT
- 2] KAILAS JAYAKUMAR
- 3] KARTHIK NAGANATH
- 4] C G OMPRAKASH

Are bonafide students of Department of Mechanical Engineering in 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 Principal with seal and date |
|-------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
|  5/7/2021 |  5/7/2021 |  05/07/2021 |
| Prof. Balaji V | Prof. Balaji V | Dr. B. Shadaksharappa |

Head of the Department
Dept. of Mechanical Engineering
Sri Sairam College of Engineering
Anekal, Bengaluru - 562 106.

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Anekal, Bengaluru - 562 106



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VTU Sponsored Student Project Proposal Format

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| 01 | Academic Year: | 2020-2021 | |
| 02 | Semester: | 8 th | |
| 03 | Name of the College: | SRI SAIRAM COLLEGE OF ENGINEERING | |
| 04 | Branch: | Mechanical engineering | |
| 05 | Project Title: | DESIGN AND FABRICATION OF SMART SURFACE VEHICLE FOR AQUACULTURE | |
| 06 | Project Discipline: | AQUACULTURE | |
| 07 | Principal | Name: | Dr. B SHADAKSHARAPPA |
| | | Contact No: | 9900545101 |
| | | Email id: | principal@sairamce.edu.in |
| 08 | HOD | Name: | Prof. BALAJI. V |
| | | Contact No: | 9886249811 |
| | | Email id: | hod.mech@sairamce.edu.in |
| 09 | Project Guide | Name: | Prof. MUTHUVEL. A |
| | | Contact No: | 8667059309 |
| | | Email id: | muthuvel.mech@sairamce.edu.in |
| 10 | Project Co-Guide (If any) | Name: | NA |
| | | Contact No: | |
| | | Email id: | |
| 11 | Project Committee coordinator (Identified by the college) : | Name: | Mr. Harish Babu L |
| | | Contact No: | 9036527118 |
| | | Email id: | Harishbabu.mech@sairamce.edu.in |

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| 12 | Name of project group Members | |
| | 1.Group leader and Member | |
| | Name: M RAJA |  |
| | USN No. :1SB16ME037 | |
| | Contact No:9066999420 | |
| | Email id: mraja9855@gmail.com | |
| | 2.Member | |
| | Name:SANKETH GANESH REVANKAR |  |
| | USN No. :1SB15ME089 | |
| | Contact No:8861877326 | |
| | Email id: sankethgr7@gmail.com | |
| | 3.Member | |
| | Name: K . AATISH PATNAIK |  |
| | USN No. :1SB15ME037 | |
| | Contact No:8109615593 | |
| | Email id: sce15me069@sairamtap.edu.in | |
| 4.Member | | |
| Name: THILAK B R |  | |
| USN No. :1SB16ME089 | | |
| Contact No:8431633854 | | |
| Email id: thilakbr8431@gmail.com | | |
| 13 | Scope / Objectives of the project: | <p>Shrimp Industry - Volume Reached 0.67 million ton in 2018 and will reach 1.13 Million tons by 2024. Oil & Gas -Expected hold maximum share on ROV market and Valuation of USD 1,477.3 Million by 2023. Global ROV market is set to scale valuation of USD 3,127.7 Million by the end of 2023. Farmers are losing about 60 of their investment due to these diseases in every crop in the season due to major diseases and improper water quality management systems in India. Proper monitoring systems, emergency responding and information providing systems to the farmers are not there in India. Shrimp feeding and medicine industries spending lot of moneys for their employees to monitoring and inspection of the shrimp ponds to check the water quality. Due to these problems' farmers are facing physiological as well as physical health problems. Around 800 to 900 USD losing by DO problem due to aerator failures in shrimp farms. Spending 200 TO 250 USD for water</p> |

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| | | <p>quality monitoring (Ph & DO) by farmer or by the feeding companies in shrimp farms. Underwater inspection by the divers or physical inspection in the aquaculture farms. We are fabricating a smart surface vehicle for the aquaculture. This vehicle is capable of determining the ph level, dissolved oxygen, temperature and other environment parameter of the water. The surface vehicle is automated and can be controlled by the user through a remote. The collected data is obtained by the user through IOT. The vehicle is capable of being controlled by an app</p> |
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| <p>14</p> | <p>Methodology</p> | <pre> graph TD A[Remotely operated or Autonomous mode] --> B[Battery] B --> C[Raspberry pi bord/Pixhawk /Arduino] C --> D[Electronic Speed controller] D --> E[Thrusters] E --> F[Senosrs] F --> G[IOT-Data colletion] G --> H[Data Analysis] H --> I[Warning System] </pre> |
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|--------------|------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|-------|
| | | | | |
| 15 | Expected Outcome of the project: | <ul style="list-style-type: none"> Remotely or Autonomous operated Surface vehicle for aquaculture monitoring Real time farm survey Increase the harvest for the farmers Reduce the work load to the farmers High profit Less maintenance cost | | |
| 16 | Application of the project: | <ul style="list-style-type: none"> Fish Farming Shrimp Farming Mussel Farming Oyster Farming Crab Water quality monitoring Lake survey etc. | | |
| 17 | Budget details with Materials required: | Sl . No | Description | Cost |
| | | 1 | Fabrication cost | 6000 |
| | | 2 | transportation | 5000 |
| | | 3 | Testing cost | 5000 |
| | | 4 | Materials required | 40000 |
| | | 5 | Survey | 20000 |
| | | 6 | Report | 5000 |
| | | 7 | Miscellaneous | 5000 |
| Total | | | 86000 | |
| | Date of commencement of the Project: | 1 st Jan 2021 | | |
| 19 | Probable date of completion of the project: | 30 th July 2021 | | |
| 20 | Duration of project work: | 1 year | | |
| 21 | Pert chart for completion of the project in said duration as per | | | |

planned activities:





| Sl.No | Activities Planned Months | Jan 2021 | Feb 2021 | Mar 2021 | April 2021 | May 2021 | June 2021 |
|-------|------------------------------------|----------|----------|----------|------------|----------|-----------|
| 01 | Literature review | | | | | | |
| 02 | Planning/ Designing | | | | | | |
| 03 | Assembly/ Fabrication work | | | | | | |
| 04 | Final Testing | | | | | | |
| 05 | Result & Calculation/ Conclusion | | | | | | |
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| Sl. No | Name of the Student | Signature with date |
|--------|----------------------------|---------------------------------------------------------------------------------------|
| 01 | M RAJA |  |
| 02 | SANKETH GANESH REVANKAR |  |
| 03 | K AATISH PATNAIK |  |
| 04 | THILAK B R |  |



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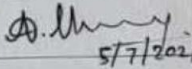
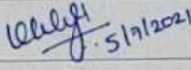
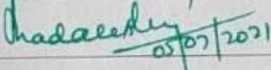


ENDORSEMENT

This is to certify that

- 1] M RAJA
- 2] SANKETH GANESH REVANKAR
- 3] K AATISH PATNAIK
- 4] THILAK B R

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| Signature of Project Guide with date | Signature of HOD with Seal and date | Signature of Principal with seal and date |
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|  5/7/2021 |  5/7/2021 |  05/07/2021 |
| Prof. Muthuvel A | Prof. Balaji V | Dr. B Shadaksharappa |




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