



## Mechanical Engineering Department

|                         |                                    |
|-------------------------|------------------------------------|
| Academic Year – 2022-23 | Class: F.E.                        |
| Semester – I            | Date : 03/15/2022                  |
| CO: C01                 | PO: PO1, PO6, PO7, PO9, PO10, PO12 |

## Innovative Teaching Methods

**Title of Innovation method/activity:** Innovative Teaching Learning Method (Cardboard Sheet Task).

1. Name of Faculty: Mr. M.N.Sonawane
2. Subject: Systems in Mechanical Engineering
3. Objective of Method:
  - I. To know opinion about technical knowledge shared
  - II. To know opinion about presentation/argument skills acquired
  - III. To know opinion about thought process initiated
  - IV. To obtain the knowledge of Power plant and conversions of different energy

## 4. Topic Covered through Activity

1. Wind Power Plant
2. Hydroelectric Power Plant
3. Nuclear Power plant
4. Thermal Power Plant
5. Geothermal Power Plant
6. Solar Power plant
7. Tidal Power Plant

## 5. Description of method with Benefits (8 – 10 lines):

The best kind of play with sheets is unstructured play when you give student the opportunity to explore a versatile open-ended material without an end result in mind.

Benefits of method:

- It tests the candidate's skills such as communication skills, teamwork, listening ability, General awareness, confidence, problem-solving skills.
- It teaches students to share ideas with classmates.

- It helps students to think individually about a topic.
- The participants in a group listen and understand other participants points of view, making them think about the topic.
- It helps to understand the attitude and behavior of the candidates towards other participants in a group.
- Every participant shares his/her thoughts in the group, which makes the diversities in the ideas.
- It can build skills such as creativity, imagination and resourcefulness.
- It inspires creativity and imagination as the student build upon, transform and reinvent them.
- It also helps them explore imaginary places in their minds.

### **Roles and Responsibilities**

- **Teacher**
  - Provide the Introduction to all the topic.
  - Provide the study material.
  - Remain available during the completion of task.
  - Prepare assessment methodology.
- **Student**
  - Actively participate in group and contribute by means of discussion, hand-out.
  - Go through all the material provided on topics
  - Once topic assigned, understand it and work accordingly.
  - After this each student should be paired with another student or a small group and discuss any doubt with his partner. Then students have to discuss individually within the group.
- **Group**
  - Form the group of members as per the guidelines by teachers.
  - Assign the points within the group to achieve the task within stipulated time period.

## 6. Assessment Rubrics

### 1. Poster Design [20 Mark]

- ✓ Poster is attractive in terms of design, layout and neatness. (5)
- ✓ Creativity & Attractive poster with Neatness related to the topic (5Mark)
- ✓ Making the material easy to understand (1 Mark)
- ✓ Knowledge of energy and its conversions. (5Mark).
- ✓ Teamwork (3 Mark).
- ✓ There are no grammatical/spelling mistakes. (1 Mark)

| Criteria      | Excellent   | High   | Good   | Average   | Acceptable  |
|---------------|---|--|--|---|---|
| Poster Design | Creativity & Attractive poster with Neatness related to the topic, Making the material easy to understand, Knowledge of energy and its conversions, Teamwork, There are no grammatical/spelling mistakes. | Somewhat effective Creativity & Attractive poster with Neatness related to the topic, Making the material easy to understand, Knowledge of energy and its conversions, Teamwork, There are no grammatical/spelling mistakes. | Moderate Creativity & Attractive poster with Neatness related to the topic, Moderate Making the material easy to understand, Moderate Knowledge of energy and its conversions, Teamwork, There are no grammatical/spelling mistakes. | Average Creativity & Attractive poster with Neatness related to the topic, Making the material easy to understand, Average Knowledge of energy and its conversions, Teamwork, There are no grammatical/spelling mistakes. | Less Creativity & Attractive poster with Neatness related to the topic, <del>Making the material easy to understand,</del> <del>Knowledge of energy and its conversions,</del> Teamwork, <del>There are no grammatical/spelling mistakes.</del> |

## 7. Evaluation sheet of attendee

| Civil Engineering |                            |       | Electronics & Telecommunication Engineering |                             |       |
|-------------------|----------------------------|-------|---|-----------------------------|-------|
| Roll NO           | Name of Students           | Marks | Roll NO                                     | Name of Students            | Marks |
| 1                 | AHER RUTUJA DATTATRAY      | 19    | 1   | AHER SHUBHAM BALASAHEB      | 19    |
| 2                 | BAGADE PRATHAMESH PRASHANT | 20    | 2   | AHER SARVESH NARENDRA       | 14    |
| 3                 | BEDSE SANKET BHAGAWAN      | 20    | 3   | AHER ANURAG SANJAY          | 18    |
| 4                 | BHAGURE MAYUR PUNJA        | 15    | 4   | OM YOGESH AHIRRAO           | 19    |
| 5                 | BHAMARE TEJAS PRASHANT     | 22    | 5   | AKHADE PRERNA POPAT         | 17    |
| 6                 | BHANUSHALI RISHI NAVNEET   | 18    | 6   | AMRITKAR SOHAM KRISHNA      | 16    |
| 7                 | BHIKULE VILASINI VINAYAK   | 16    | 7   | BACHHAV HIMANSHU KAILAS     | 15    |
| 8                 | BHOJ ANIKET DILIP          | 18    | 8   | BAVNE PRIYANKA BABURAO      | 19    |
| 9                 | BORSE SARTHAK VISHWAS      | 20    | 9   | BHAMARE LALIT SITARAM       | 18    |
| 10                | CHAURE SAURABH SOMNATH     | 19    | 10  | KEDAR DHANSHREE VISHNU      | 18    |
| 11                | CHITTE TRUPTI GHANSHYAM    | 14    | 11  | BURKUL SANJANA BHARAT       | 18    |
| 12                | DAREKAR JITESH SANTOSH     | 14    | 12  | CHAUDHARI BHARGAV BHUPENDRA | 14    |
| 13                | DATIR ROHIT SHASHIKANT     | 15    | 13  | DAWARE NILAM SANJAY         | 18    |
| 14                | DAWANGE YASH NANASAHEB     | 20    | 14  | DEORE PRATYUSH SUNIL        | 16    |
| 15                | DEOKAR ANUSHKA AMIT        | 21    | 15  | DESAI SHRADDHA CHANDRAKANT  | 20    |
| 16                | DEORE SAURABH PRAVIN       | 23    | 16  | DEVKAR SANIKA DINESH        | 18    |
| 17                | DERE RAHUL APPASAHEB       | 18    | 17  | DHAMANE TANMAY DILIP        | 19    |
| 18                | DESHMUKH RUTUJA BHARAT     | 18    | 18  | GANGURDE RAJESH SANTOSH     | 19    |
| 19                | DESHMUKH SAKSHI DATTATRAY  | 19    | 19  | GAVALI SAKSHI MUKUND        | 15    |
| 20                | DETHE VAISHNAVI SUBHASH    | 19    | 20  | GAWALI SAHIL CHANDRAKANT    | 18    |
| 21                | DHAKANE RUTUJA SHASHIKANT  | 17    | 21  | HATKAR KRUSHNA VINOD        | 22    |
| 22                | GAURI HARI DHIKALE         | 18    | 22  | JADHAV SNEHA SAMIR          | 21    |
| 23                | GAIKWAD ADITYA RAMDAS      | 19    | 23  | JAGTAP PIYUSH SHAILENDRA    | 17    |
| 24                | GAIKWAD DHANASHRI HEMANT   | 20    | 24  | JOSHI AVDHUT KISHOR         | 17    |
| 25                | GAIKWAD ATHARVA ASHISH     | 14    | 25  | KAKADE AKSHADA JAGDISH      | 22    |
| 26                | GAIKWAD SAMEER BHAGWAN     | 18    | 26  | KARDILE SNEHA CHANDAN       | 19    |
| 27                | GANGURDE UJWAL SANJAY      | 18    | 27  | KHAIRNAR LOKESH DEEPAK      | 17    |
| 28                | GAWALI DARSHAN SANDEEP     | 14    | 28  | KOKATE ABHAY SUNIL          | 15    |
| 29                | GHULE ABHISHEK GANPAT      | 20    | 29  | KOSHTI ATHARVA MILIND       | 16    |
| 30                | GORE SAKSHI VIJAY          | 20    | 30  | KSHIRSAGAR MONIKA PANDURANG | 19    |

|    |                                 |    |    |                              |    |
|----|---------------------------------|----|----|------------------------------|----|
| 31 | HAGAWANE JAGANNATH<br>BALASAHEB | 19 | 31 | KULKARNI NIKITA<br>DEVENDRA  | 21 |
| 32 | JADHAV VARSHA BALASAHEB         | 20 | 32 | KUMBHARE HARSHAL<br>SANJAY   | 19 |
| 33 | KADAM MANSI SANTOSH             | 19 | 33 | MAHAJAN DIVYA<br>SUBHASH     | 21 |
| 34 | KADLAG AJIT RAVINDRA            | 18 | 34 | MAHAJAN ROHIT KISHOR         | 18 |
| 35 | KADLAG PRATIK BALASAHEB         | 17 | 35 | MARATHE SHRUTI<br>HITENDRA   | 16 |
| 36 | KATE ANJALI PRAMOD              | 14 | 36 | MEMANE SAKSHI<br>SANTOSH     | 20 |
| 37 | KATHE RAMKRUSHNA SANDESH        | 19 | 37 | MORE PRAJAKTA<br>SHASHIKANT  | 20 |
| 38 | KATKADE SIDDHI SANDIP           | 18 | 38 | MORE ITESH UDAY              | 18 |
| 39 | KEDAR SHWETA DILIP              | 19 | 39 | MORE DIPESH HEMKANT          | 18 |
| 40 | KHAIRE SNEHAL SACHIN            | 19 | 40 | PADOL RUTIK<br>BHAUSAHEB     | 19 |
| 41 | KHAIRNAR HARSHAL SANJAY         | 20 | 41 | PAGARE TANUSHREE             | 18 |
| 42 | KOLHE KAVERI EKNATH             | 17 | 42 | PATHAK UDAYKUMAR             | 14 |
| 43 | KOTHAWADE NEHA SATISH           | 19 | 43 | PATIL AASTHA VILAS           | 19 |
| 44 | MEHRA SAGAR SUBHASH             | 16 | 44 | PATIL VEDANTI KISHOR         | 19 |
| 45 | MOGAL OM SACHIN                 | 14 | 45 | PATIL VEDEHI RAHUL           | 16 |
| 46 | PAGAR SWAPNIL SHANTARAM         | 14 | 46 | PAWAR MOHIT<br>JAYWANTRAO    | 18 |
| 47 | PAGAR YASHWARDHAN SURESH        | 15 | 47 | PAWAR SUYASH SANDIP          | 18 |
| 48 | PAGAR TEJAS PRABHAKAR           | 18 | 48 | PAWAR YASH RAJENDRA          | 19 |
| 49 | PANGARE AADITYA PRABHAKAR       | 17 | 49 | PISAL MANSL TUSHAR           | 15 |
| 50 | PANGAVHANE ROHIT RAVSAHEB       | 18 | 50 | SANGLE SANSKRITEE<br>SANJAY  | 14 |
| 51 | PARDESHI SHRUTI NANDKISHOR      | 20 | 51 | SARODE VAIBHAV<br>AMBADAS    | 18 |
| 52 | PATIL CHAITNYADIP RAMDAS        | 18 | 52 | SASANE PRIYANKA<br>SURESH    | 18 |
| 53 | PAWAR SRUSHTI PAMKAJKUMAR       | 20 | 53 | SHEJWAL PRATHAMESH<br>KAILAS | 17 |
| 54 | PINGLE SHIVAM PRADIP            | 14 | 54 | SHELKE TEJASWINI<br>PRADIP   | 19 |
| 55 | RAYATE SUCHITA VIKAS            | 18 | 55 | SHETE KAUSHALYA<br>SUHAS     | 19 |
| 56 | SAWANT ANIKET PRAVIN            | 18 | 56 | SHINDE AARYA VIVEK           | 14 |
| 57 | SHARDUL ROHIT SHIVAJI           | 14 | 57 | SHINDE PRAJAKTA<br>MANOHAR   | 15 |
| 58 | SHEJWAL SAKSHI RAVINDRA         | 20 | 58 | SHINDE SANIKA NANDLAL        | 21 |
| 59 | SHEJWAL SNEHAL BALASAHEB        | 16 | 59 | SHINDE SHIVANI<br>SOMNATH    | 18 |
| 60 | SHETE ABHAY PRADEEP             | 16 | 60 | SHIRUDE SAKSHI PRAMOD        | 18 |
| 61 | SHINDE TANMAYEE SHAILESH        | 18 | 61 | SOMVANSHI VIDYA<br>SANJAY    | 15 |
| 62 | SONAWANE DIYA BALASAHEB         | 14 | 62 | SONAWANE SARTHAK<br>SANDEEP  | 18 |
| 63 | SONAWANE YASH ANIL              | 14 | 63 | TATHE SANGRAM SUNIL          | 18 |
| 64 | SURYAVANSHI YASH ANIL           | 18 | 64 | TILE SANIKA PRAKASH          | 19 |

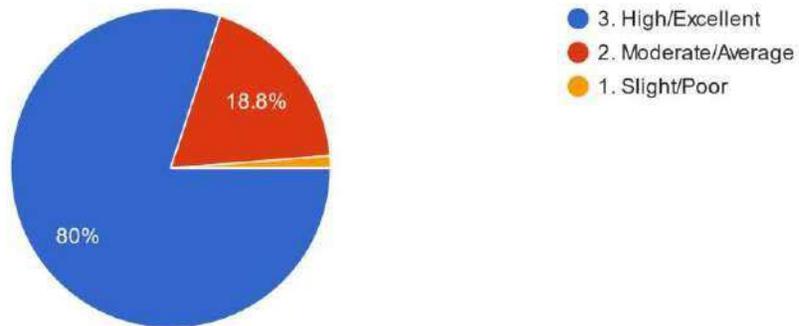
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|----|---------------------------|----|----|-----------------------|----|
| 65 | TAJANPURE PRANAV RAMESH   | 18 | 65 | USHIR SNEHAL KAILAS   | 17 |
| 66 | UPHADE PRATIKSHA DASHRATH | 19 | 66 | WAGH DIPTI YOGESH     | 21 |
| 67 | WAGH KAJAL JAYWANT        | 16 | 67 | WAGH DIPALI RAVINDRA  | 20 |
| 68 | ZUTING SARVESH SADASHIV   | 14 | 68 | YEOLE SHRUSHTI SANDIP | 19 |

## 8. Impact Analysis

| Questions   | 3 - High/ Excellent (%) | 2 - Moderate/ Average (%) | 1 - Slight/ Poor (%) |
|---|-------------------------|---------------------------|----------------------|
| Q.1 Did you understand the cover and objective of the cardboard sheet task?   | 80                      | 18.8                      | 1.2                  |
| Q.2 Do you find that methodology is helpful to cover the content of syllabus? | 73.8                    | 21.3                      | 5                    |
| Q.3 Does this helps you for building a good team work?                        | 76.3                    | 21.3                      | 2.5                  |
| Q.4 Does the content covered is relevant and helpful for life long learning   | 81.3                    | 17.5                      | 1.2                  |
| Q.5 Did you want us to conduct such activity again                            | 67.5                    | 27.5                      | 5                    |

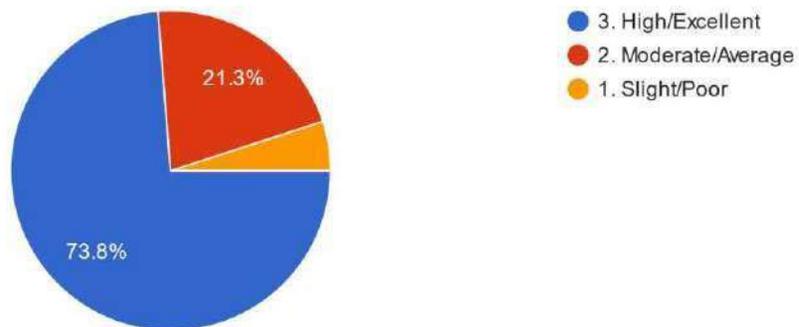
Q.1 Did you understand the cover and objective of the cardboard sheet task?

80 responses



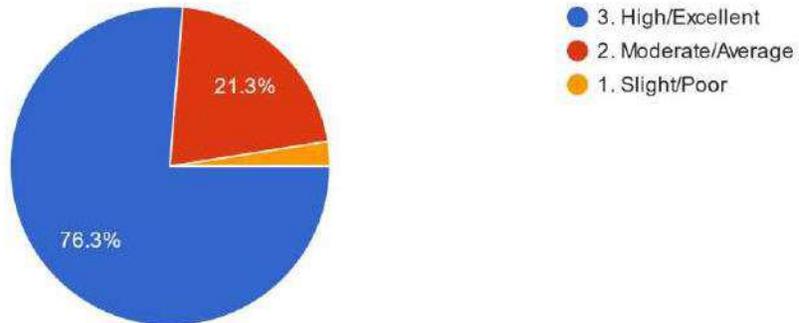
Q.2 Do you find that methodology is helpful to cover the content of syllabus?

80 responses



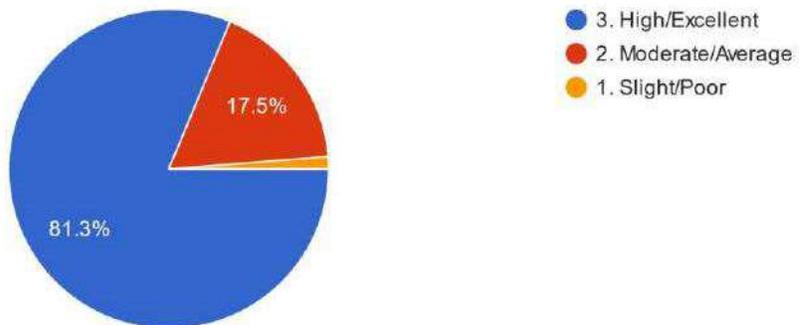
Q.3 Does this helps you for building a good team work?

80 responses



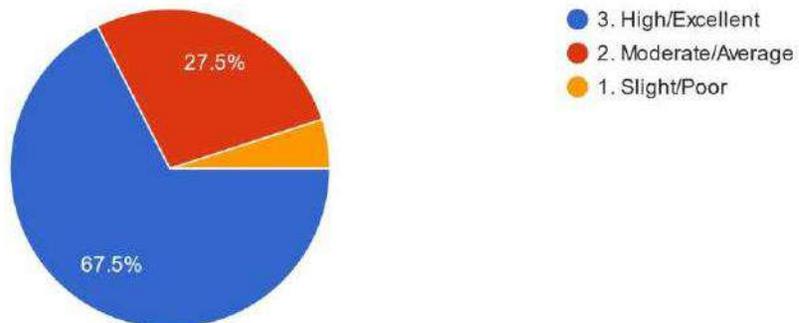
Q.4 Does the content covered is relevant and helpful for life long learning

80 responses



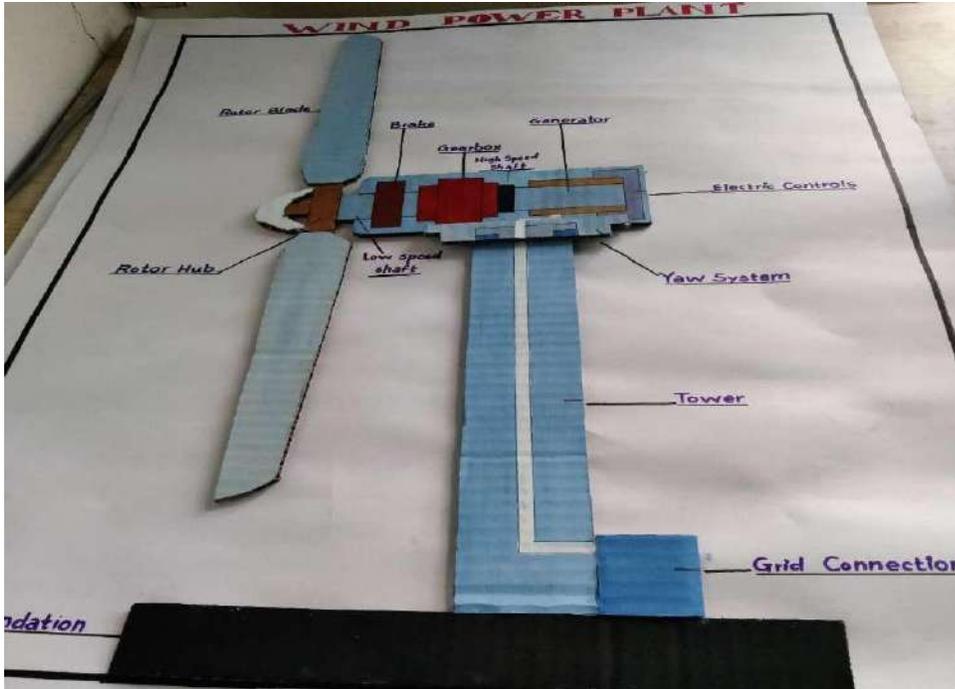
Q.5 Did you want us to conduct such activity again

80 responses



## 9. Activity Picture





10. For review and critique contact: e-mail address of faculty & HOD

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