

SLIET MECHANICAL ENGINEERING SOCIETY



Department of Mechanical Engineering
Sant Longowal Institute of Engineering and Technology
(Deemed to-be University, Estd. By Govt. of India)
Longowal Distt: Sangrur, Punjab-148106

**SANT LONGOWAL INSTITUTE OF ENGINEERING AND TECHNOLOGY
LONGOWAL-148106, SANGRUR, PUNJAB**

SLIET MECHANICAL ENGINEERING SOCIETY (S.M.E.S)

S.no	Activities	Date
1	Aptitude Test	9th Oct. 2017
2	GK/GS Quiz	10th Oct. 2017

- Title of Programme **Aptitude Test and GK/GS Quiz**

Organized by: - **SLIET MECHANICAL ENGINEERING SOCIETY (S.M.E.S)**

Venue: - **Mechanical Block(LM:-01-09)**

Target participants: - **ICD & DEGREE**

No. of participants attended the program: - **316**

Objectives of the programme: - **To enhance the engineering knowledge of students**

Photographs of the event

SANT LONGOWAL INSTITUTE OF ENGINEERING AND TECHNOLOGY
SLIET MECHANICAL ENGINEERING SOCIETY (S.M.E.S.)
On the wheels to all round excellence...

NOTICE

Ref. No. – SMES/04/17 Date: 06-10-2017

The Sliet Mechanical Engineering Society is going to organise "APTITUDE TEST & G.K./G.S. QUIZ" on 9th,10th October at 4:30PM in Mechanical Block.All interested students of ICD & DEGREE are advice to register your entries to the core committee member from your respective Hostels.

PATRON-IN-CHIEF
Prof. V. K. Jain
Director, SLIET

PATRON
Prof. A.S.ARORA
DEAN (SFW)

CHAIR PERSON
Prof. KULWANT SINGH
H.O.D. (M.E.)

SECRETARY
Mr. S. C. VERMA
A.S.P. (M.E.)

FACULTY ADVISOR
M.d. MAJID
A.P. (M.E.)

STUDENT ADVISOR
GYAN RANJAN
(GWT/110174)

CORDINATOR
ROSHAN KUMAR
(GWT-121940)


EVENT DETAIL


- Aptitude Test:- 9th October
Venue:- L.M.-1 to 9 (Mechanical Block)
- G.K./G.S. Quiz:- 10th October
Venue:- L.M.-1 TO 9 (Mechanical Block)

NOTE

- All students of ICD & DEGREE can participate.
- Seperate prizes for ICD & DEGREE.
- The entree fee for each Quiz is Rs. 5/student.

For further queries contact:-
ROSHAN KUMAR 1/117 9915694671
ABHISHEK KUMAR 9/323 8699240454


M.d. MAJID
(Faculty Advisor)


MR. S.C. Verma
(Secretary)

**SANT LONGOWAL INSTITUTE OF ENGINEERING AND TECHNOLOGY
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SLIET MECHANICAL ENGINEERING SOCIETY (S.M.E.S)

S.no	Activities	Date
1	KWIEZAR'18(MECHMACHO)	16th-18th March 2018
2	One day workshop on solidworks	30th sep. 2018

- Title of Programme **KWIEZAR'18(MECHMACHO)**

Organized by: - **SLIET MECHANICAL ENGINEERING SOCIETY (S.M.E.S)**

Venue: - **Mechanical Block**

Target participants: - **ICD & DEGREE**

Objectives of the programme: - **To enhance the engineering knowledge of students**

Photographs of the event



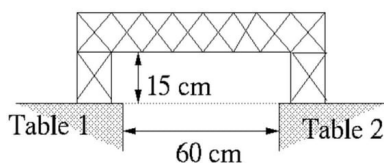
1. BRIDGE MAKING

Objective

To build the bridge within our specifications that has the **highest** payload to weight ratio. The bridge must be constructed of approved materials.

Apparatus

- Building Materials: (All materials provided)
 1. Popsicle sticks (**maximum length 110 mm, width 13 mm and thickness 3 mm**).
 2. Paper.
 3. Elmer's glue.
 4. Thread
- Dimensions:
 1. Min **Span Length - 60cm** - min is required. There will be a **60cm "gap"** which must be spanned by the bridge (i.e., extra 2cm extension of the bridge from each side will be accepted).
 2. Max **Bridge Width - 15 cm** - min.
 3. Min **Bridge Height - 25 cm to 30cm** - min. There must be 15 centimeters between the table surface and the lowest point on the bridge span.
 4. Diagram presented for clarification:



5. The bridge must be able to stand on its own.
6. The length of the way span should be **60cm**. A roadway is defined as a flat surface upon which traffic can travel unimpeded.
7. The roadway must be continuous, flat, and level. There should be no gaps between roadway sticks nor any obstructions along the roadway.



8. The roadway must have a min. **10 cm width and 8cm height** clearance at all points to accommodate traffic.
9. The bridge must **weigh 1 kg** or less.

Date of Event: - 17th March 2018

Time: -2:30pm - 5:00pm

Venue: - Car Parking, Mechanical Block

Rules & Regulations:-

Teams:-

1. Each team can consist a maximum of 5 members.
2. Members of a team may belong to the different institutions.
3. Students may not be members of more than one team.
4. Each team may only submit one bridge for competition.

The Competition

1. Teams must submit their bridge 1/2 hour before the competition for inspection. Teams will be given 15 minutes to modify bridges which do not pass inspection.
2. Inspection will test that the construction rules were followed and will record the mass of the bridge.
3. Certified bridges will be placed over "**Crusher Canyon**" by the team members, who may make final adjustments in its position. The canyon will consist of a **60 cm** space between two flat desktops. Nothing will be provided to keep the base of the bridge in place during loading.
4. Once the bridge is in position, the loading tray will be attached in the position indicated above. The load will be applied.
5. Bridges will then be subjected to loading, the **10 kg weight** will be passed over the length of the roadway or load will hang vertically at the mid of the span of the bridge. Bridge failure will be considered the point at which the bridge breaks or the point at which the loading tray drops more than **5 centimeters** from the unloaded position.
6. The competition will be completed in two round.
7. Round first will be **passing round**. In this round simply the load is applied and deflection will be recorded. Deflection should not exceeds **20 mm** will pass the first round.
8. Round second will includes: there will no limitations of load till the failure of the bridge.

Rule Violations

1. There will be a deduction of 5 points (out of 40) for each dimension not met (i.e., if the bridge is too narrow in width AND too short in length, these are two separate deductions totaling 10 points). Bridges which do not fit on the testing jig and/or cannot be loaded safely will not be loaded and will be awarded 0 points for Strength/Efficiency.
2. Deduction of 5 marks on each 100 grams increment in weight. (i.e., if the bridge weighs 1170 grams 5*2=10 marks will be deducted).

Testing and Judging Criteria

- Teams will be awarded points based on their bridge's performance in our different categories of the bridge competition (**Structural Efficiency, Economic Efficiency, Aesthetics and Technical Report**). At the end of the competition, all points will be tallied and compared to the scores of all the competing teams. There is a maximum of 100 points in this competition.
- Structural Efficiency: -
 - Vertical load: Awarded based on the maximum load supported by the bridge divided by its weight prior to failure. The bridge that supports the greatest load-to-weight ratio prior to failure, will be awarded **40 points**. All other bridges will be awarded points based on the percentage of this maximum load-to-weight ratio that they achieve.
 - Horizontal pull: Bridge should take a minimum horizontal load of **100 N** at the mid of the span without deflecting more than **20mm**. 10 points will be awarded if the bridge passes these criteria.
- Economic Efficiency: The economic efficiency will be calculated based upon the fact that the cost of a bridge is depending on its weight. **20 points** will be awarded to the team with the highest score in this category, and all others will be awarded points based on their economic efficiency as a fraction of the highest score.
- Aesthetics: Awarded based on the level of craftsmanship, cleanliness, and artistry of the bridge's design and construction. **15 points** will be awarded to the team with highest score in this category, and all other teams will be awarded points based on their subsequent rankings in this category.
- Technical Report: Awarded based on the quality of the written report describing the design and construction phases of the bridge. This section carries **points equal to 15** with the same rules applicable as above.

Registration:

- Teams have to submit a drawing of the model on a graph sheet with appropriate scale.
- The abstract should be concise and to the point.
 - Must have a title sheet clearly identifying the school and the team members.
 - Report shall be **2-4 pages** long, not including illustrations or photographs.
 - Must include a drawing with dimensions of the bridge.
 - It must include photographs of bridge.
- Once the abstract is submitted then the participants will not be able to make any change to the design, but still if they wish to change they will have to reapply and submit the new design.
- Abstract should be mailed to sliet.smes@gmail.com with subject of the mail "Bridge It_ Team name_ Abstract".
- Last date of registration is **15th March, 2018**
- Last date of submission of abstract is **16th March, 2018**.

2. KATAPULT

The goal of this competition is to encourage high college/school students to discover more about the field of engineering by designing and building an egg catapult.

Objective

Each entrant must design, build and present a catapult that will accurately propel a raw egg toward a frying pan placed at a distance between **30 to 60 feet** (specific distance to be given at the competition) away from the initial position of the catapult. Scoring will be based on accuracy, design, adherence to cost restraints, and presentation. The catapult must be a TREBUCHET. No kits are allowed. There is software that could be used to help design your trebuchet.

General Rules:

- Each team can consist a maximum of 4 members.
- Members of a team may belong to the different institutions.
- Students may not be members of more than one team.
- Each team may only submit one Katapult for competition.
- The catapult should be of sufficient mass to ensure that it remains behind the launch line after the projectile has been launched.
- Catapults must be safe and controllable. Participants are responsible for the safety of the operation of their design. Prior to competition, judges will disqualify any catapult that appears unsafe.

Date of Event-18th March 2018

Time-10:00am - 1:00pm

Venue-Near Car Parking, Mechanical Block

Dimensions:

- All equipment and material are given by committee at the event.
- The length of Katapult should not exceed **2 feet**.
- The height of Katapult should not more than **1 feet**.

The Competition:

- The Katapult will be fabricated on the spot.
- The appropriate material and equipment will be provided at the event by committee.
- 45 minutes is given to each team to fabricate the Katapult.
- In each turn, entrant will set up his or her catapult on the launch pad.
- The center of the target (a circular ring) will be placed at a distance somewhere between 30 feet and 60 feet to be established at the competition, from the front edge of the launch area. The elevations of the target and launch pad are relatively the same.
- The judges will supply the projectiles for the competition: fresh, Grade A, large eggs. The first launch from the official launch area will be practice only. The next launches will be considered competitive launches.
- A launch shall be considered such when the egg leaves the forward plane of the launch area, whether intentional or not.
- The best score of the two competitive launches will be recorded as the distance in inches from the center of the frying pan target to the location where the egg first touches the ground.

Certificate policy:

- Certificate of Excellence will be given to all the winners.
- Certificate of Participation will be awarded to the teams who are able to withstand minimum vertical load of **10 kg**.

NOTE:

- Further necessary instructions related to the event will be announced at spot.
- Necessary amendments in Rules & Regulations can be made by the committee and should be followed by the participants.
- Any kind of indiscipline will disqualify the participant from the event.

Prizes:

- Winner team will be awarded prize worth **Rs. 5000/-**.
- Runner team will be awarded prize worth **Rs. 2000/-**.
- Momentos will be provided to every members of Winner & Runner teams.

- The egg must break contact with the catapult when firing.
- Once the egg crosses the forward plane of the launch area, contestants may no longer control the catapult.
- The catapult will receive zero points for accuracy if it crosses or moves into the launch line.

***Decisions and interpretations of the rules by the judges are final and binding.**

Judging

Stage 1: Judges will score teams based on the first three criteria: Accuracy, Design, and Task completion time. The maximum points in each of the first three categories are as follows:

Accuracy (30 points possible): Scoring will be based on the following formula: (Average of best 2 out of 3)

$$P = 30 - 0.25D$$

P is points for accuracy

D is the distance from center of frying pan to point of contact of egg after launch, in inches
120 is the maximum distance from the target, in inches, within which the contestant may obtain points for accuracy.

Design (40 points possible): Judge's score will be based on aesthetics, creativity and efficiency of design as described in the attached scoring guidelines.

Task completion time (30 points possible): The maximum points are given to the team who has completed the task in minimum time.

NOTE:

- We encourage coaches/teachers to provide instruction and support, but student teams must complete all project work.
- Further necessary instructions related to the event will be announced at spot.
- Necessary amendments in Rules & Regulations can be made by the committee and should be followed by the participants.
- Any kind of indiscipline will disqualify the participant from the event.

Certificate policy:

- Certificate of Excellence will be given to all the winners.
- Certificate of Participation will be awarded to the teams who are able to fabricate catapult in time.

Registration:

- The participant has to register their name till **17th March, 2018**.
- Team should be mailed to sliet.smes@gmail.com .In with subject "Katapult_ Team name_Absract".

Prizes:

- Winner team will be awarded prize worth **Rs. 1500/-**.
- Runner team will be awarded prize worth **Rs. 500/-**.
- Momentos will be provided to every member of Winner & Runner teams.

3. HYDRAULIC ARM

EVENT DESCRIPTION

Participants are expected to design a hydraulic arm with three degrees of freedom. The base of the arm should stay stationary in the arena and the arm should be able to pick up the cups and balls in its range and it should be able to place it on platforms of different elevations.

MATERIALS ALLOWED

Any material from this list can be used in making the machine.

- Syringes/cylinder
- Tubes
- Wood (Card board)
- Metallic frames
- Rubber bands
- Cycle spokes
- Screws
- Nuts
- Bio degradable waste

Dimensions:

- a) The dimension of base should not exceeds **50cmX35cmX1.5cm**.
- b) The height should not exceeds **45cm**.
- c) The diameter of cylinder used be under **4cm**.
- d) The weight will be not more than **3.5 kg**.
- e) The fluid will be used is water.

Rules:

- 1) Each team can consist a maximum of 4 members.
- 2) Members of a team may belong to the different institutions.
- 3) Students may not be members of more than one team.
- 4) Each team may only submit one hydraulic arm for competition.

Date of Event: - 17th March 2018

Time: - 10:30am - 1:00pm

Venue: - Car Parking, Mechanical Block

Competition:

- 1) Teams must submit their hydraulic arm 1/2 hour before the competition for inspection. Teams will be given 15 minutes to modify bridges which do not pass inspection.
- 2) Inspection will test that the construction rules were followed and will record the mass of the hydraulic arm.
- 3) The competition will be completed in two round.
- 4) Round one is passing round. In this round minimum **5 kg** weight should be lifted by hydraulic arm.

4. 3D OBJECT FABRICATION

Event detail

This events includes the **3D** object fabrication from **2D** drawing

Rules and Regulations:

1. All the participants have to fabricate the **3-D** object according to the **2-D** drawing given.
2. The appropriate material and a knife and/or blade will be provided at the event.
3. Following instruments are to be brought by the participants themselves-
 - a. Geometry Box
 - b. Pencil and Pen
 - c. Master Circle (not compulsory)
4. This event is going to be held under Techno-Cultural fest KWEIZAR'18.
5. The participants have to ensure the final submission of job within the given time.
6. **2-D** drawings will be provided from which **3-D** object has to be cut.
7. The performances will be judged based upon the "**submission time**" and "**job accuracy**".

Note:

1. Further necessary instructions related to the event will be announced at spot.
2. Necessary amendments in Rules & Regulations can be made by the committee and should be followed by the participants.
3. Any kind of indiscipline will disqualify the participant from the event.

Registration:

1. The participant has to register their name till **15th March, 2018**.
2. Participant should be mailed to sliet.smes@gmail.com .In with subject of the email "3D Object Fabrication_Name_Abtract".

Date of Event: - 16th March 2018

Time: - 2:30pm - 4:00pm

Venue: - LM-3, Mechanical Block

Certificate policy: Certificate of Excellence will be given to all the winners.

Prizes:

- Winner team will be awarded prize worth Rs. **1500/-**.
- Runner team will be awarded prize worth Rs. **500/-**.
- Momentos will be provided to each and every members of Winner & Runner Teams.

- 5) Round two includes no limits of load until it fails.

Judging:

1. The total marks be 100.
2. Teams will be awarded points based on their hydraulic arm's performance in our different categories of the bridge competition (Structural Efficiency, Economic Efficiency, Aesthetics and Technical Report). At the end of the competition, all points will be tallied and compared to the scores of all the competing teams. There is a maximum of 100 points in this competition.
3. Structural Efficiency carry **40 points**. All team awarded points (out of 40) according to weight lifting capacity.
4. Economic Efficiency: The economic efficiency will be calculated based upon the fact that the cost of a hydraulic arm is depending on its weight. **20 points** will be awarded to the team with the highest score in this category, and all others will be awarded points based on their economic efficiency as a fraction of the highest score.
5. Aesthetics: Awarded based on the level of craftsmanship, cleanliness, and artistry of the hydraulic arm's design and construction. **20 points** will be awarded to the team with highest score in this category, and all other teams will be awarded points based on their subsequent rankings in this category.
6. Technical Report: Awarded based on the quality of the written report describing the design and construction phases of the hydraulic arm. This section carries points equal to **20** with the same rules applicable as above.

Registration:

1. Teams have to submit a drawing of the model on a graph sheet with appropriate scale.
2. The abstract should be concise and to the point.
 - a. Must have a title sheet clearly identifying the school and the team members.
 - b. Report shall be 2-4 pages long, not including illustrations or photographs.
 - c. Must include a drawing with dimensions of the hydraulic arm.
 - d. It must include photographs of hydraulic arm.
3. Once the abstract is submitted then the participants will not be able to make any change to the design, but still if they wish to change they will have to reapply and submit the new design.
4. Abstract should be mailed to sliet.smes@gmail.com .In with subject of the email "Hydraulic Arm_Team name_Abtract".
5. Last date of submission of abstract is **16th March, 2018**.

Certificate policy:

1. Certificate of Excellence will be given to all the winners.
2. Certificate of Participation will be awarded to the teams who are able to lift the **5 kg** load.

NOTE:

1. Further necessary instructions related to the event will be announced at spot.
2. Necessary amendments in Rules & Regulations can be made by the committee and should be followed by the participants.
3. Any kind of indiscipline will disqualify the participant from the event.

5. STRUCTURING BY MACHINING

Event detail:

This event includes designing and fabrication of a job with the help of **LATHE** machine.

Rules and Regulations:

1. All the participants have to design the structure to show their machining skills
2. The appropriate material and equipment will be provided at the event by committee.
3. The participants have to ensure the final submission of job within the given time.
4. The performances will be judged based upon the "**submission time**", "**innovation in design**" and "**job accuracy**".

Date of Event: -16th March 2018

Time: -10:00am - 12:00pm

Venue: -Machine Shop, Mechanical Block

Note:

1. Further necessary instructions related to the event will be announced at spot.
2. Necessary amendments in Rules & Regulations can be made by the committee and should be followed by the participants.
3. Any kind of indiscipline will disqualify the participant from the event.

Registration:

1. The participant has to register their name till **15th March, 2018**.
2. Participant should be mailed to sliet.smes@gmail.com with subject "Structuring by Machining_Name_Abtract".

Certificate policy: Certificate of Excellence will be given to all the winners.

Prizes:

- Winner team will be awarded prize worth Rs. **1000/-**.
- Runner team will be awarded prize worth Rs. **500/-**.
- Momentos will be provided to each and every members of Winner & Runner Teams.

6.STRUCTURING BY WELDING

Event detail

This events includes designing and fabrication of welded structure with the help of SMAW process.

Rules and Regulations:

1. All the participants have to fabricate the welded structure from the scrap.
2. The appropriate material and equipment will be provided at the event by committee.
3. The participants have to ensure the final submission of job within the given time.
4. The performances will be judged based upon the "*submission time*", "*innovation in design*" and "*job accuracy*".

Date of Event:-16th March 2018

Time:-10:00am - 12:00pm

Venue:-Welding Shop, Mechanical Block

Note:

1. Further necessary instructions related to the event will be announced at spot.
2. Necessary amendments in Rules & Regulations can be made by the committee and should be followed by the participants.
3. Any kind of indiscipline will disqualify the participant from the event.

Registration:

1. The participant has to register their name till **15th March, 2018**.
2. Participant should be mailed to sliet.smes@gmail.com with subject "Structuring by Welding_Name_Abstract".

Certificate policy: Certificate of Excellence will be given to all the winners.

Prizes:

- Winner team will be awarded prize worth Rs. **1000/-**.
- Runner team will be awarded prize worth Rs. **500/-**.
- Momentos will be provided to each and every members of Winner 7 Runner Teams.

Society Representatives

Chairman (S.M.E.S)

Dr. Kulwant Singh
(Head of Deptt.)
Deptt. of Mechanical Engineering

Faculty Adviser (S.M.E.S):

Md. Majid
Assistant Proff.
Dept. of Mechanical Engineering

Secretary (S.M.E.S):

S.C Verma
Associate Proff.
Dept. of Mechanical Engineering

Coordinator (S.M.E.S):-

Roshan Kumar
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