

SCHOOL OF MECHANICAL ENGINEERING
CONTINUOUS ASSESSMENT TEST (CAT) -II
FALL SEMESTER 2025-2026

REG.NO.:

Programme Name & Branch : B. Tech & SELECT, SCORE, SENSE
Course Code : BAEFE101
Course Name : BASIC ENGINEERING
Faculty Name(s) : Dr. Senthil Kumar M, Dr. Baskar P, Dr. Srinivasa Gupta N,
 Dr. Senthilnathan N, Dr. Jeyapandiarajan P, Dr. Sreeja
 Sadasivan, Dr. Devasri Fuloria, Dr. Anoj Giri,
 Dr. Seenuvasaperumal P, Dr. Babu S.
Class Number(s) : VL2025260106164/6169/6167/6173/6255/6263
 6265/ 6274/6377
Date of Examination : 05/10/2025
Exam Duration : 90 minutes **Maximum Marks: 50**

General instruction(s):

- Answer All Questions (Close Book Test Examination)
- All dimensions of figures provided in the questions are in millimeters (mm)
- All drawings must be executed neatly, using appropriate grades of pencils for different line types.
- Lettering, Numbering and Dimensioning must be done as per the Bureau of Indian standards.
- Orthographic projections must be drawn in landscape orientation within the answer booklet.
- Plan the layout before drawing to ensure adequate space for all required views, including the side view where applicable.
- M - Max mark; CO - Course Outcome; BL - Blooms Taxonomy Level (1 - Remember, 2 - Understand, 3 - Apply, 4 - Analyse, 5 - Evaluate, 6 - Create)
- Course Outcomes Statements:
 CO. 3: Apply BIS standards to create basic 2D and 3D representations of engineering components.
 CO. 4: Explain the fundamental principles and applications of manufacturing processes, energy conversion systems, and mechanical automation technologies.

Q. No	Question	M	CO	BL
1.	As per BIS standard kindly ensure the dimensions and re-draw the figure.1 with proper dimensional values. Figure.1	10	3	3



VIT

Vellore Institute of Technology
(Deemed to be University under section 3 of UGC Act, 1956)

SLOT: A1 +TA1

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Draw the first angle projections/ orthographical projections of the given object as seen in figure.2

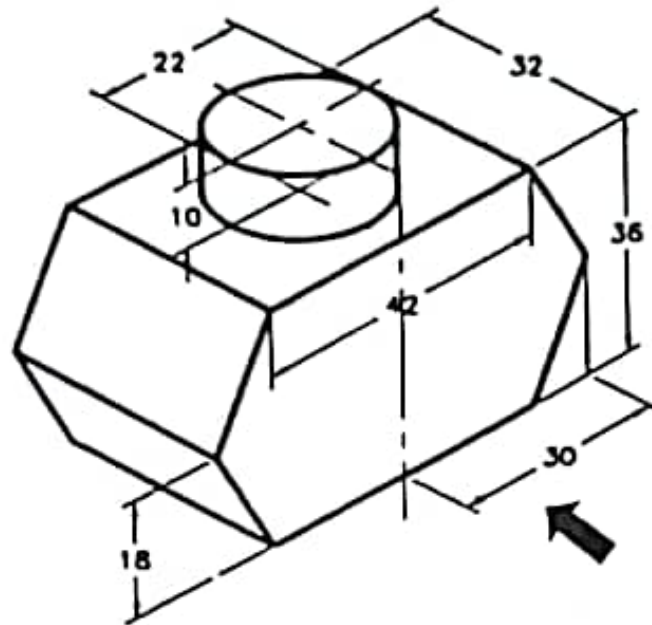


Figure.2

2.

10

3

5

3.

Draw the isometric view of a cylinder of base 40 mm and height 70mm, when it rest with its base on IIP.

10

3

4

4.

Draw the projections of a pentagonal pyramid of base side 35mm and height 70 mm, when resting with its base on IIP. One side of the pyramid base makes an angle of inclination at 45° with VP.

10

3

4

5.

Illustrate the sand casting process in detail with neat sketch. List the various types of allowances to be considered while designing the pattern.

10

4

3
