ABV- Indian Institute of Information Technology & Management, Gwalior

SummerSemester2023

Minor Exam

Course Title: Engineering Design Principles (EE-102)

MM: 25 **Duration: 2 hours**

Note:

1. Please follow all the *Instructions* given on the cover page of the answer book.
2. All parts of a question should be answered consecutively. Each answer should start from a fresh page.
3. The question paper has **FIVE** questions, and all the questions are compulsory.
4. Freehand drawing and incorrect dimensions will lead to deduction of marks.

Q.1 **[10]**

1. Briefly discuss types of lettering.
2. Visible outline Continuous thick.
   (a) Hidden Outlines and Hidden edges .....
   (b) Centre lines.....
3. Write the dimensions of A3 and A4 sheet.
4. What are the two systems of placing dimensions on a drawing? Illustrate your answer with sketches.
5. What is the difference between plain and diagonal scale.
6. Define conic sections in term of eccentricity.
7. Describe cycloid with a mathematical equation.
8. Where is the position of bottom view in 1st angle projection?
9. A plot of 35,000 sq m is drawn on the map as plot of 14 cm x 5 cm. Find the R.F.
10. In 1st angle projection the _____ lies between _____ and _____

Q.2 Construct a scale of 1.5 inches = 1 foot to show inches and long enough to measure upto 4 feet. Mark 2 feet 10 inches on scale. **[2]**

Q.3 The area of a field is 50,000 sq m. The length and the breadth of the field, on the map is 25 cm and 20 cm respectively. Construct a diagonal scale which can read upto one metre. Mark the length of 235 metre on the scale. What is the R.F. of the scale? **[3]**

Q.4 Draw the front view, top view and side view using first angle projection and third angle projection method for the object shown in Figure 1. Write the difference between first angle and third angle projection methods. **[5]**

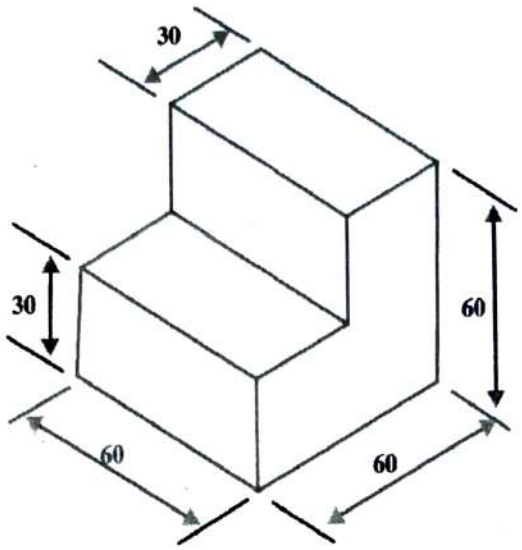

Figure 1

Q.5 Draw the front view, top view and side view using first angle projection of the object (all dimensions are in mm) shown in the Figure 2. **[5]**

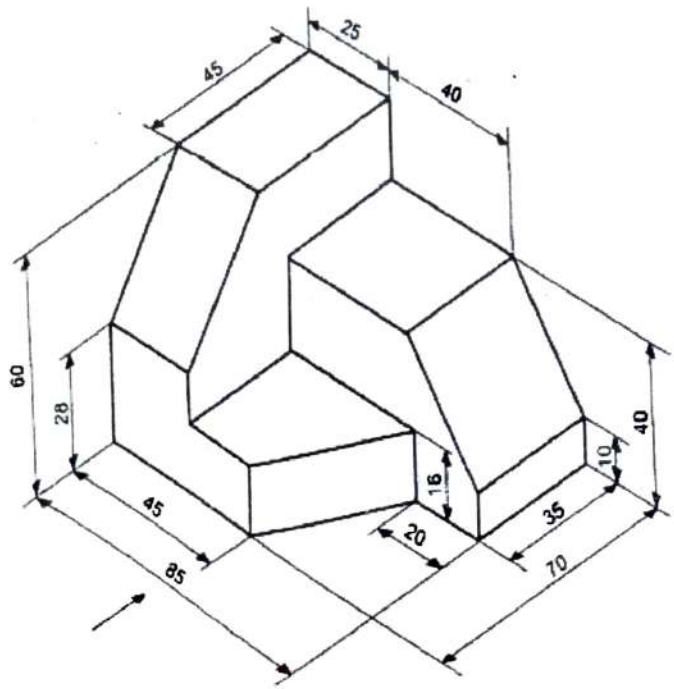

Figure 2