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 **PRESIDENCY UNIVERSITY**

  **Bengaluru**

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| **End - Term Examinations – JANUARY-2025** |
| **Date:** 10-01- 2025 **Time:** 01:00 pm – 04:00 pm |

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| **School:** SOE/SOCSE | **Program:** B. Tech – Mechanical Engineering (Physics Cycle) |
| **Course Code:** MEC1006 | **Course Name:** Engineering Graphics |
| **Semester**: I | **Max Marks**: 100 | **Weightage**:50% |

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| **CO - Levels** | **CO1** | **CO2** | **CO3** | **CO4** |
| **Marks** | **-** | **45** | **35** | **20** |

**Instructions:**

1. *Read all questions carefully and answer accordingly.*
2. *Do not write anything on the question paper other than roll number.*

**Part A**

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| **Answer any one Question 20Mx1Q=20M** |
| **1a** | A point is 35 mm in front of VP 25 mm above HP & 30 mm from Right Profile Plane. Draw its projections and name the side view. | **8 Marks** | **L3** | **CO2** |
| **1b** | A line AB has its end A 30mm above the HP and 15mm in front of the VP. The other end B is 65mm above the HP and 35mm in front of VP. The distance between end projectors is 45 mm. Draw its projections. Determine the apparent lengths and true inclinations. | **12 Marks** | **L3** | **CO2** |
| **or** |
| **2a** | A point M is on HP and 20 mm in front of VP. Another point N is on VP and 30mm above HP. The distance between their projectors parallel to XY line is 60mm. Find the distance between their front and top views of the points M & N. | **8 Marks** | **L3** | **CO2** |
| **2b** | A line PQ 80mm long has its ends P 15mm above the HP and 20 mm in front of the VP. The line is inclined at 30o to HP and 50o to VP. Draw its projections. Also determine the apparent inclinations of the line.  | **12 Marks** | **L3** | **CO2** |
| **Part B****Answer any one question 45Mx1Q =45M** |
| **3a** | A pentagonal lamina of edges 25 mm is resting on HP with one of its corners such that the plane surface makes an angle of 55° with HP. Two of the edges containing the corner on which the lamina rests make equal inclinations with HP. Draw the top and front views of the lamina when the edge opposite to this corner makes an angle of 60° with VP. | **25Marks** | **L3** | **C02** |
| **3b** | A sphere of 50 mm diameter rests centrally on top of a cube of side 60 mm. Draw isometric projection of combination of solids. | **20Marks** | **L3** | **C04** |
| **or** |
| **4a** | A square lamina ABCD of 30mm side rests on corner C such that the diagonal AC appears to be inclined at 50° to VP. The two sides BC and CD containing the corner C make equal inclination with HP. The surface of the lamina makes 40° with HP. Draw its top and front views.  | **25Marks** | **L3** | **C02** |
| **4b** | A rectangular pyramid of base side -50mm x 40 mm and height 65 mm is placed centrally on a rectangular slab sides (100 x 80) mm and thickness is 25 mm. Draw the isometric projection of the combination. | **20Marks** | **L3** | **C04** |
| **Part C****Answer any one question 35Mx1Q= 35M** |
| **5** | A square prism base 30mm side and height 65mm has its axis inclined at 45° to HP. It has an edge of its base on the HP and inclined at 40° to VP. Draw its projections.  | **35Marks** | **L3** | **CO3** |
| **6** | A square pyramid 40mm sides of base and 70 mm axis length rests on HP on one of its corners of the base such that the two base edges containing the corner on which it rests make equal inclinations with HP. Draw the projections of the pyramid when the axis is inclined to HP at 45° and appears to be is inclined to VP at 50°. | **35Marks** | **L3** | **CO3** |

**\*\*\*\*\* BEST WISHES \*\*\*\*\***