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PRESIDENCY UNIVERSITY BENGALURU

 SCHOOL OF ENGINEERING

 MAKE-UP EXAMINATION - JULY 2024

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| Semester : 1  |  Date :02-07-2024 |
| Course Code : MEC 152 |  Time : 9:30 AM to 12:30 PM |
| Course Name :ENGINEERING GRAPHICS |  Max Marks : 100 |
| Program :B.tech |  Weightage :50% |

**Instructions:**

1. *Read all questions carefully and answer accordingly.*
2. *Question paper consists of 3 parts.*
3. *Scientific and non-programmable calculator are permitted.*
4. *Do not write any information on the question paper other than Roll Number.*

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| **PART A** |
|  **ANSWER ANY ONE QUESTION 1Q X 20M=20M** |
| 1a | 1a) Draw the projections of the following Points on the same XY line. Keeping convenient distance between each projector. Name the Quadrant in which they lie.**E** - 30mm below HP & 25mm behind VP.**F** - 35mm below HP & 30mm in front of VP.**G** - On HP & 30mm in front of VP.**H -** On HP & 35mm behind VP. [8M] | (CO 2) | [Application] |
| 1b | A line AB has its end A 20mm above the HP and 15mm in front of the VP. The other end B is 60mm above the HP and 40mm in front of VP. The distance between end projectors is 70mm. Draw its projections. Determine the apparent lengths and true inclinations [12M] | (CO 2) | [Application] |
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| 2a | A point P is on HP and 30mm in front of VP. Another point Q is on VP and40mm above HP. The distance between their projectors parallel to XY line is 40mm. Find the distance between their front and top views of the points P & Q.[8M]  | (CO 2) | [Application] |
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| 2b | A line PQ 80mm long has its ends P 10mm above the HP and 15mm in front of the VP. The top view and front view of line PQ are 75mm and 80mm respectively. Draw its projections. Also determine the true and apparent inclinations of the line [12M]  | (CO 2) | [Application] |
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| **PART B** **ANSWER ANY ONE QUESTION 1Q X 45M=45M** |
| 3a | A pentagonal lamina of edges 25mm is resting on HP with one of its corners such that the plane surface makes an angle of 60º with HP. Two of the edges containing the corner on which the lamina rests make equal inclinations with HP. When the edge opposite to this corner makes an angle of 45º with VP and nearer to the observer, draw the top and front views of the lamina in this position.[25M] | (CO 2) | [Application] |
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| 3b | Square prism base side 40mm and height 50mm is placed centrally on a rectangular slab sides (80 mm x 60 mm) and thickness is 30 mm. Draw the isometric projection combination. [20M] | (CO 4) | [Application] |
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| 4a | A regular hexagonal lamina of sides 30mm is lying in such a way that one of its sides is on HP while the side opposite to the side on which it rests is on 30° to VP. If the lamina makes 60º to HP. Draw the projections of the lamina.[25M] | (CO 2) | [Application] |
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| 4b | A Square Pyramid base side -35mm, height 60 mm is placed centrally on a rectangular slab sides (80 x 60) mm and thickness is 30 mm. Draw the isometric projection of the combination.[20M] | (CO 4) | [Application] |
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| **PART C** |
|  **ANSWER ANY ONE QUESTION 1Q X 35M=35M** |
| 5 | A hexagonal pyramid 25mm sides of base and 50mm axis length rests on HP on one of its edges of the base. Draw the projections of the pyramid when the axis is inclined to HP at 45°and VP at 30°.[35M] | (CO 3) | [Application] |
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| 6 | A regular square pyramid having 35mm base side and 65mm axis length rests on HP on one of its edges of the base which is inclined to VP at 30° and the axis is inclined to HP at 45°. Draw the projections.[35M] | (CO 3) | [Application] |