

SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR
(AUTONOMOUS)

B.Tech I Year I Semester Regular Examinations February-2024

ENGINEERING GRAPHICS

(Electronics and Communication Engineering)

Time: 3 Hours

Max. Marks: 70

(Answer all Five Units 5 x 14 = 70 Marks)

UNIT-I

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|---|---|--------------------------------------------------------------------|----|-----|----|
| 1 | a | Divide a line AB=157mm into 8 equal parts by line division method. | L4 | CO1 | 4M |
| | b | Construct a regular Pentagon of base side 30mm by general method. | L6 | CO1 | 5M |
| | c | Construct a regular Hexagon of base side 30mm by general method. | L6 | CO1 | 5M |

OR

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|---|---|----------------------------------------------------------------------------------------------------------------------------------------------------------------|----|-----|----|
| 2 | a | Draw the involute of a regular pentagon of side 20 mm. | L3 | CO1 | 7M |
| | b | Construct a diagonal scale of S.F=1/(2.5 x 10 ⁶) to read upto a single kilometer and long enough to measure 400 km. Mark a length of 254 km on it. | L6 | CO1 | 7M |

UNIT-II

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|---|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|-----|-----|
| 3 | | A line AB of 100mm length is inclined at an angle of 30 ⁰ to HP and 45 ⁰ to VP. The point A is 15mm above HP and 20mm in front of VP. Draw the projections of the line. | L1 | CO2 | 14M |
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OR

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|---|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|-----|-----|
| 4 | | A regular hexagonal plane of 30 mm side has a corner on HP, and its surface is inclined at 45 ⁰ to HP. Draw the projections, when the diagonal through the corner, which is on HP makes 30 ⁰ with VP. | L6 | CO3 | 14M |
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UNIT-III

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|---|---|-----------------------------------------------------------------------------------------------------------------------------|----|-----|----|
| 5 | a | Draw the projections of a cylinder of base 30mm diameter and axis 50mm long, when it is resting on H.P on one of its bases. | L6 | CO3 | 7M |
| | b | Draw the projections of a cone of base 30mm diameter and axis 50mm long, when it is resting on H.P on one of its bases. | L6 | CO3 | 7M |

OR

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|---|--|-------------------------------------------------------------------------------------------------------------------------------|----|-----|-----|
| 6 | | A cone of diameter 50 mm and axis 60 mm has its generator in the VP and the axis is parallel to the HP. Draw its projections. | L6 | CO3 | 14M |
|---|--|-------------------------------------------------------------------------------------------------------------------------------|----|-----|-----|

UNIT-IV

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| 7 | | A cube of side 40 mm is resting on HP on one of its faces, with a vertical face inclined at 30 ⁰ to VP. It is cut by a section plane inclined at 45 ⁰ to HP and passing through the axis at 8 mm from the top surface. Draw the projections of the solid and also show the true shape of the section. | L6 | CO4 | 14M |
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OR

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|---|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|-----|-----|
| 8 | | A cone of base 50 mm diameter and height 65 mm rests with its base on HP. A section plane perpendicular to VP and inclined at 30 ⁰ to HP bisects the axis of the cone. Draw the development of the lateral surface of the truncated cone. | L1 | CO4 | 14M |
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UNIT-V

- 9 a Draw the isometric view of a cylinder of base diameter 50mm and axis 60 mm the axis of the cylinder is perpendicular to the HP. L1 CO5 8M
b Draw the isometric view of a circular lamina of diameter 50mm on all the three principal planes using four centre methods. L1 CO5 6M

OR

- 10 Draw three views of the blocks shown pictorially in figure according to first angle projection. L6 CO6 14M

