Q.P. Code: 18ME0302 **R18**

Reg. No: | | | | | | | | | | |

SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR

(AUTONOMOUS)

B.Tech I Year II Semester Supplementary Examinations February-2022

ENGINEERING GRAPHICS & DESIGN

(Common to CE, AGE, ME & EEE)

Time: 3 hours Max. Marks: 60

(Answer all Five Units 5 x 12 = 60 Marks)

UNIT-I

1 Construct a parabola with base 60 and length of the axis 40. Draw a tangent to the curve at point 20 from the base. Also locate the focus and directrix to the parabola. **12M**

OR

2 Draw an epi-cycloid of rolling circle of diameter 40 mm which rolls outside another circle (base circle) of 150 mm diameter for one revolution. Draw a tangent and normal at any point on the curve. **12M**

UNIT-II

3 Draw the projections of the following points, keeping the distance between the projectors as 25mm on the same reference lines. **12M**

A – 20mm above HP and 30mm in front of VP

B – 20mm above HP and 30mm behind VP

C – 20mm below HP and 30mm behind VP

D – 20mm below HP and 30mm in front of VP

E – On HP and 30mm in front of VP

F – On VP and 20mm above HP

G – Lying on both HP and VP

OR

4 A line AB, 50mm long, has its end A away from the HP and VP than end B. The line is inclined to the HP at 30 degree and to the VP at 45degree. Draw the projections if end A is 35mm above the HP and 50mm in front of the VP. **12M**

UNIT-III

5 A regular hexagonal plane of 45 mm side has a corner on HP, and its surface is inclined at 450 to HP. Draw the projections, when the diagonal through the corner, which is on HP makes 300 with VP **12M**

OR

6 A square plane ABCD of side 30mm, is parallel to HP and 20mm away from it. Draw the projections of the plane, when (i) two of its sides are parallel to VP (ii) and one of its side is inclined at 300 to VP. **12M**

UNIT-IV

7 A cube of side 40 mm, is resting on HP on one of its faces, with a vertical face inclined at 30 degree to VP. It is cut by a section plane inclined at 45 degree to HP and passing through the axis at 8 mm from the top surface. Draw the projections of the solid and show the true shape of the section. **12M**

OR

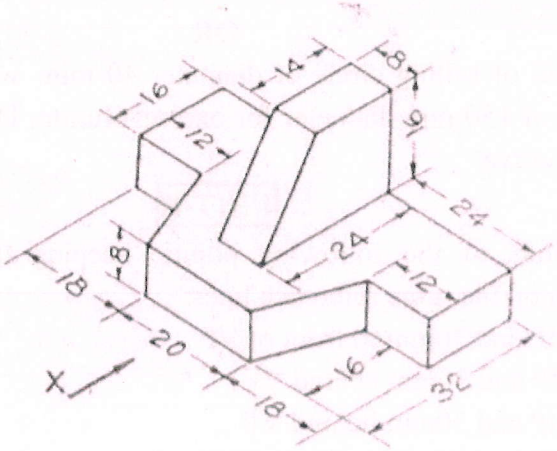
8 A square pyramid, with side of base 30 mm and axis 50 mm long, is resting on its base on HP with an edge of the base parallel to VP. It is cut by a section plane, perpendicular to VP and inclined at 45 degree to HP. The section plane is passing through the mid-point of the axis. Draw the development of the surface of the cut pyramid. **12M**

UNIT-V

9 Draw the isometric projection of a pentagonal prism of base side 35 mm and axis 60mm. The prism rests on its base on the HP with an edge of the base parallel to the VP. **12M**

OR

10 Draw three views of the blocks shown pictorially in figure according to first angle projection. **12M**



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