

Reg. No. 

--	--	--	--	--	--	--	--	--	--

Q.P. Code: 16ME302

**R16**

**SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR**  
**(AUTONOMOUS)**  
**B.Tech I Year II Semester (R16) Supplementary Examinations December 2017**  
**ENGINEERING GRAPHICS**  
**(Common to CE, EEE & ME)**

Time: 3 hours

Max. Marks:60

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

**UNIT-I**

- 1 Draw a parabolic arc with a span of 1000 mm and a rise of 800 mm. use rectangular method. Draw a tangent and normal at any point P on the curve. 12M

**OR**

- 2 Draw an epicycloid 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 a Draw the orthographic projections of the following points.  
(a.) Point S is 35 mm. below H.P and 42 mm in front of VP  
(b.) Point T is in H.P and 30 mm. is behind VP  
(c.) Point U is in V.P and 40 mm. below HP  
(d.) Point V is in V.P and 35 mm. above H.P  
(e.) Point W is in H.P and 48 mm. in front of VP 5M
- b Draw the projections of straight line AB 60 mm long parallel to HP and inclined at an angle of  $40^\circ$  to V.P. The end A is 30 mm above HP. and 20 mm in front of V.P. 7M

**OR**

- 4 FV of line AB makes  $45^\circ$  angle with XY line and measures 60 mm. Line's TV makes  $30^\circ$  with XY line. End A is 15 mm above HP and it's VT is 10 mm below HP. Draw projections of line AB, determine inclinations with HP & VP and locate HT, VT. 12M

**UNIT-III**

- 5 A regular pentagon of 30mm side is resting on HP on one of its surface  $45^\circ$  inclined to HP. Draw its projections when the side in HP makes  $30^\circ$  angle with VP. 12M

**OR**

- 6 A cone 40 mm diameter and 50 mm axis is resting on one generator on HP which makes  $30^\circ$  inclination with VP. Draw its projections. 12M

**UNIT-IV**

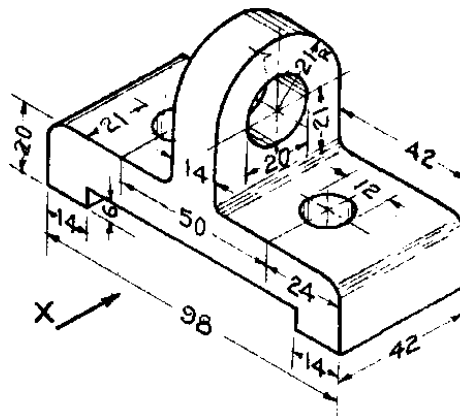
- 7 A pentagonal prism, 30 mm base side & 50 mm axis is standing on HP on its base whose one side is perpendicular to VP. It is cut by a section plane  $45^\circ$  inclined to HP, through midpoint of axis. Draw FV, sec.TV & sec. Side view. Also draw true shape of section. 12M

**OR**

- 8 A pentagonal pyramid, side of base 30 mm and height 60 mm, stands with its base on H.P and an edge of the base is parallel to V.P. It is cut by a plane perpendicular to V.P, inclined at  $40^\circ$  to H.P and passing through a point on the axis, 32 mm above the base. Draw the sectional top view and develop the lateral surface of the truncated pyramid. 12M

**UNIT-V**

- 9 Convert the given pictorial view into orthographic views of F.V., R.S.V & T.V.



**OR**

- 10 a Draw the isometric view of a pentagonal prism of base 60mm side, axis 100 mm long and resting on its base with a vertical face perpendicular to V.P. 8M
- b Draw the isometric view of square prism with a side of base 30mm and axis 50mm long when the axis is (a) Vertical and (b) Horizontal. 4M

**\*\*\* END \*\*\***