Q.P. Code: 16ME302 **R16**

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

SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR

(AUTONOMOUS)

B.Tech I Year I Semester (R16) Regular Examinations December 2016

ENGINEERING GRAPHICS

(Computer Science and Engineering)

(For Students admitted in 2016 only)

Time: **3 hours** Max. Marks: **60**

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

UNIT-I

Q.1 A ball thrown up in the air reaches a maximum height of 45 meters and travels a horizontal distance of 75 meters. Trace the complete path of the ball, assuming it to be parabolic. Find the direction of travel of the ball at a height of 15 meters from the ground. 12M

OR

Q.2 An inelastic string of 120 long is wound around the circumference of the circular disc of 50 dia. Draw the curve traced out by one end of the string, when it is unwound completely keeping the string always tight. 12M

UNIT-II

Q.3 a. What is the true length of a line whose front view measures 160 and whose inclination to V.P is 40^0. 5M

b. A line AB is 75 mm long. A is 50 mm in front of V.P and 15 mm above H.P. B is 15 mm in front of V.P. and is above H.P. Top view of AB is 50 mm long. Draw and measure the front view. Find the true inclinations. Also locate traces. 7M

OR

Q.4 A line AB 75 long makes an angle of 30^0 with V.P and lies in a plane perpendicular to both H.P and V.P. Its end A is in H.P and end B is in V.P. Draw the projections of the line AB and show its traces 12M

UNIT-III

Q.5 A regular hexagon of 50 side has a corner in the V.P. Its surface is included at 30^0 to V.P. Draw the projection of the hexagon when, (i) the front view of the diagonal through the corner which is in the V.P. makes 45^0 with xy, (ii) the above diagonal itself makes 45^0 with the H.P. 12M

OR

Q.6 Draw the projection of a cone, base 30 mm diameter and axis 50 mm long, when (a) resting on H.P, on a point of its base circle with the axis makes an angle of 45^0 with H.P and parallel to V.P.

(b) resting with one of its generators on H.P and axis parallel to V.P. 12M

UNIT-IV

Q.7 a. A cylinder of diameter of base 40 mm and axis 55 mm long, is resting on its base on HP. It is cut by a section plane, perpendicular to VP and inclined at 45 degree to HP. The section plane is passing through the top end of an extreme generator of the cylinder. Draw the development of the lateral surface of the cut cylinder. 5M

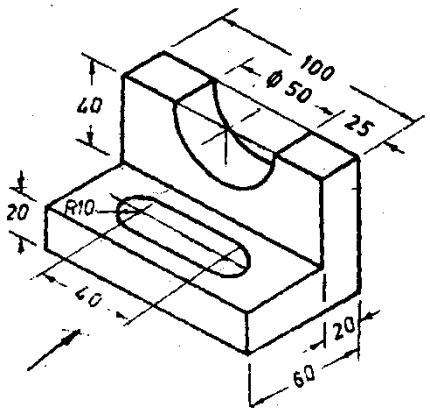
b. A square pyramid of side of base 30 and axis 50 long is resting on its base on H.P with an edge of the base parallel to V.P. A section plane, perpendicular to V.P and inclined at 45^0 to H.P bisects the axis. Draw the development of the lateral surface of the cut pyramid 7M

OR

Q.8 A cube of 50 edge, rests on one face on H.P, with its vertical faces equally inclined to V.P. it is cut by a section plane perpendicular to V.P, producing a large rhombus. Draw the projections, true shape of the section and determine the inclination of the section plane with H.P. 12M

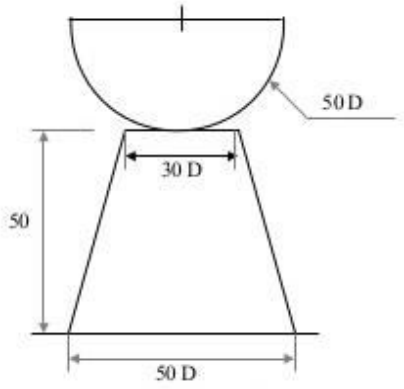
UNIT-V

Q.9 Draw three views(F.V, T.V, R.S.V) of the following figure according to first angle projection. 12M



OR

Q.10 A hemi-sphere is centrally placed on the top of a frustum of a cone. Draw isometric projections of the assembly. 12M



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