Total No. of Questions – [08] Total No. of Printed Pages 03

G.R. No.	

Paper Code: U117106 (ESE)

DECEMBER 2017 / ENDSEM

F. Y. B. TECH. (COMMON) (SEMESTER - I)

COURSE NAME: ENGINEERING GRAPHICS

(2017 PATTERN)

Time: [**2 Hours**] [Max. Marks: **50**]

(*) Instructions to candidates:

1) **Answer Q.1 OR Q.2, Q.3 OR Q.4, Q.5 OR Q.6, Q.7 OR Q.8**
2) **Figures to the right indicate full marks.**
3) **Use of scientific calculator is allowed.**
4) **Use suitable data where ever required.**
5) **Use only half imperial size drawing sheet as answer book.**
6) **Retain all construction lines.**
7) **Marks are reserved for dimensioning and good presentation.**

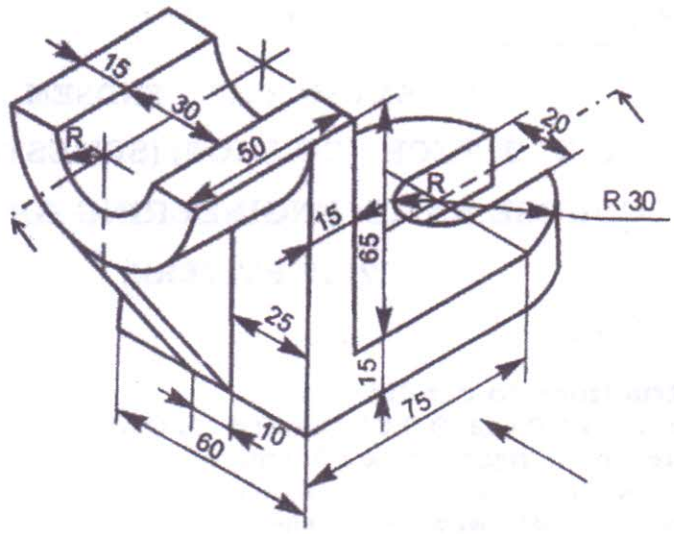
Q.1) a) Draw the helix for one turn upon a cylinder of diameter 60 mm and a height of 100 mm. The pitch of the helix is 80 mm.

b) Draw the Archimedean spiral for 1 convolution with diameter of 100 mm [10 marks]

OR

Q.2) An equilateral triangle with side 60 mm is having its base on H.P. Plane is inclined to H.P. in such a way that remaining vertex is at 35 mm from HP. Draw its projections if base makes an angle of 50^0 with XY line. Find angle made by plane with HP. [10 marks]

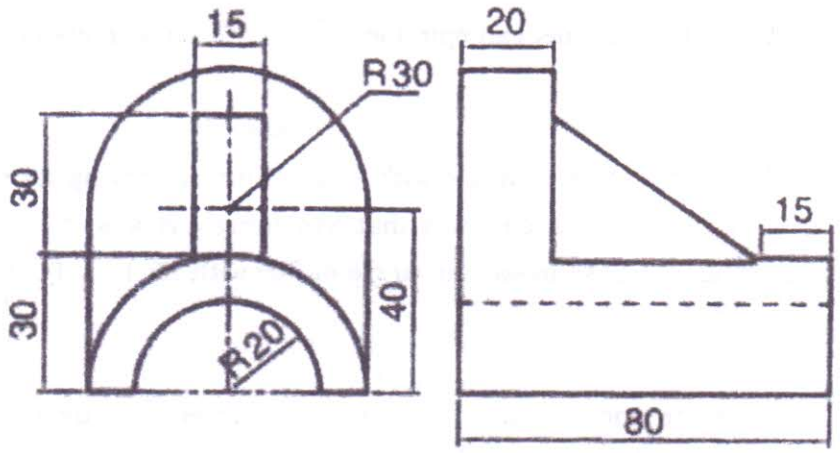
Q.3) Figure shows a pictorial view of an object. By using first angle method of projections, draw; a) Sectional front view, along given cutting plane (Cutting plane is plane of symmetry) b) Left hand side view c) Top view d) Dimensions.



[14 marks]

OR

Q.4) Following figure shows FV and LHSV of an object. Draw isometric view using natural scale.



FV LHSV

[14 marks]

Q.5) A square prism having side of base 25 mm and height 50 mm is kept on the H.P on corner of its base. Highest point of prism from HP is at 55 mm from HP. Draw the projections of the prisms if top view of axis of prism makes an angle of 35° with VP. Find angle made by square base and vertical rectangular face with HP.

[14 marks]

OR

Q.6) A square pyramid of base 35 mm and axis length 55 mm is kept on the H.P. on edge of its base. It is inclined to the H.P in such a way that top view of triangular face containing resting edge appears to be equilateral triangle. Draw the projections of Pyramid if edge on HP makes angle of 60° with VP and apex is nearer to observer. Find the angle made by base of pyramid with HP. [14 marks]

Q.7) A pentagonal pyramid, side of base 30 mm and height 70 mm, stands with its base on H.P and an edge of the base is perpendicular to V.P. It is cut by a plane perpendicular to V.P, inclined at 35° to H.P and passing through a point on the axis, 40 mm above the base. Develop the lateral surface of the truncated pyramid.

[12 marks]

OR

Q.8) A cone of base 40 mm diameter and height 60 mm rests on its base on H.P. A sectional plane perpendicular to V.P and inclined at 35° to H.P passes through the point on axis at 35 mm above HP. Draw the development of the lateral surface of the truncated cone. [12 marks]