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G.R. No.	
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Paper code - U128-106 (BE-FS)

**MAY 2018 / BACKLOG**

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

**COURSE NAME: ENGINEERING GRAPHICS**

**COURSE CODE: ME11176**

**(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 an ellipse with 110 mm long major axis and 80 mm minor axis.

Use Rectangle method.

b) Draw the Archimedean spiral for 1 convolution with diameter of 120 mm

[10 marks]

**OR**

Q.2) Regular pentagon plate of 30 mm side is resting on its corner on HP. It is inclined to HP in such a way that plane makes an angle of  $50^\circ$  with HP. Draw the projections of plane if edge opposite to the resting corner makes an angle of  $40^\circ$  with VP.

[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 line of symmetry b) Right hand side view c) Top view d) Dimensions.





Q.5) A square prism having side of base 30 mm and height 50 mm is kept on the H.P on edge of its base. Its base surface is inclined to HP at  $30^{\circ}$ . Draw the projections of solid if top view of base edge makes an angle of  $60^{\circ}$  with XY line.  
[14 marks]

**OR**

Q.6) Cone having base diameter 40 mm and axial height 60 mm is resting on point of its circumference in such way that axis of cone is inclined to HP at  $40^{\circ}$ . Draw the projections of cone if top view of axis of cone is perpendicular to XY line and apex is towards observer.  
[14 marks]

Q.7) A pentagonal pyramid, side of base 25 mm and height 60 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  $35^{\circ}$  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) Hexagonal prism having side of base 20 mm and height 50 mm is resting on its base on HP in such a way that two base edges are perpendicular to VP. It is cut by a plane inclined at 50 degrees to HP and passing through midpoint of its axis. Develop the lateral surface of truncated prism.  
[12 marks]