Q. Code: 400655

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

B.E. / B.TECH. DEGREE EXAMINATIONS, MAY 2024

First Semester

GE18151 – ENGINEERING DRAWING

(Common to all branches)

(Regulation 2018/2018A)

TIME: 3 HOURS **MAX. MARKS: 100**

COURSE OUTCOMES	STATEMENT	RBT LEVEL
CO 1	Students will constr uct conic sections and curves and sketch the orthographic views of lines as per drawing standards.	**2**
CO 2	Obtain orthographic projections of plane surfaces and simple solids in various positions.	**3**
CO 3	Draw projections of sectioned solids and develop the lateral surfaces of simple solids.	**3**
CO 4	Draw isometric projections of simple solids and their combinations. Also perform free hand sketching of orthographic views of given objects.	**3**
CO 5	Draw perspective projections for the given objects in different positions.	**3**

PART- A (5 x 18 = 90 Marks)

(Answer all Questions)

		Marks	CO	RBT LEVEL
1. (a)	A man rides a motor bike on a circular path of 200 mm diameter. The motor bike has the wheel of 50 mm diameter. Draw the locus of the point on the circumference of the motor bike wheel for one complete revolution. Name the curve and also draw the tangent and normal at any point on the curve.	**(18)**	**1**	**3**
	(OR)			
(b)	A line PQ, 65 mm long has its end R, 15 mm above the HP and 15 mm in front of VP. The line is inclined at 55^0 to the HP and 35^0 to the VP. Draw its projections.	**(18)**	**1**	**3**
2. (a)	A Hexagonal plate of side 20 mm rests on VP on one of its sides. The surface of the plate makes an angle of 30^0 with VP and its sides inclined 45^0 to HP. Draw its front and top views.	**(18)**	**2**	**3**
	(OR)			
(b)	A Pentagonal pyramid of base side 30 mm and altitude 75 mm rests on the HP on one of its base edges such that the triangular face containing the	**(18)**	**2**	**3**

resting edge is perpendicular to both HP and the VP. Draw its projections.

3. (a)	A cylinder of diameter 50 mm and height 60 mm rests on its base on HP. It is cut by a plane perpendicular to VP and inclined at 45^0 to HP. The cutting plane meets the axis at a distance of 15 mm from the top face. Draw the sectional plan and true shape of the section.	**(18)**	**3**	**3**
	(OR)			
(b)	A Cylinder of diameter 45 mm and axis height 65 mm is cut by a plane perpendicular to VP and inclined at 55^0 to the HP and bisect the solid axis. Draw the development of the lateral surface of the truncated solid.	**(18)**	**3**	**3**
4. (a)	A Pentagonal prism of base side 30mm and axis length 65 mm is resting on HP on its base with a side of base perpendicular to VP. It is cut by a plane inclined at 45^0 to HP and 25 mm above the base. Draw the isometric view of the remaining portion of the prism.	**(18)**	**4**	**3**
	(OR)			
(b)	Draw the orthographic view of the given isometric drawing, shown in fig.1.	**(18)**	**4**	**3**

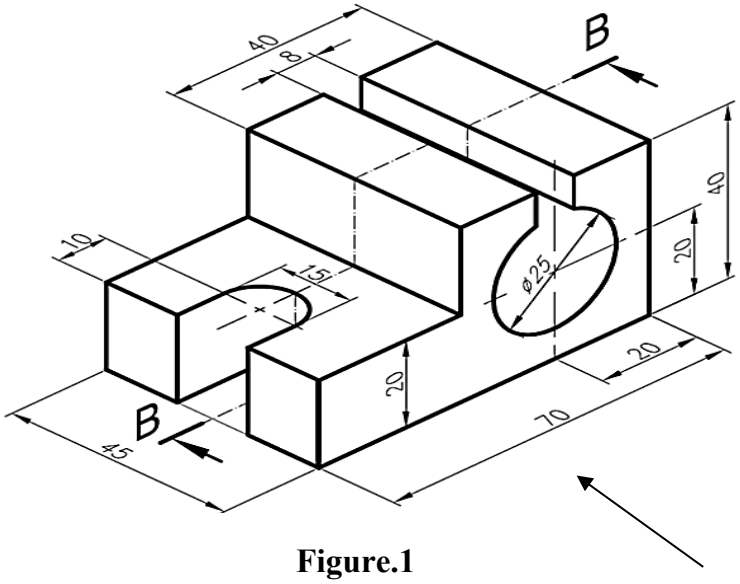

Figure.1

5. (a)	A Rectangular prism 40X30X15 mm rests on the ground on one of its ends with one of the longest edges touching the PP and the shortest edges receding to the left at an angle of 40^0 to the PP. The nearest vertical edge is 15 mm to the left of the station point, which is at a distance of 55 mm in front of the PP and 30 mm above the ground. Draw the perspective view of the solid.	**(18)**	**5**	**3**

(OR)

(b)	A Hexagonal prism of base side 25 mm and axis length 50 mm rests on the ground on one of its rectangular faces with its axis inclined at 30^0 to the picture plane. A corner of the base is touching the PP. The station point is 60 mm in front of the PP and lies in a central plane that bisects the axis. The station point is 40 mm above the ground plane. Draw the perspective view of the prism.	**(18)**	**5**	**3**

PART- B (1 x 10 = 10 Marks)

(Q.No.6 is compulsory)

		Marks	CO	RBT LEVEL
6.	A Funnel tapers from a circular opening of diameter 70 mm to a circular opening of diameter 20 mm over an axial length of 50 mm and extends axially to a further distance of 40 mm. There is a cylindrical portion of height 15 mm above the tapering portion. Develop the funnel.	**(10)**	**3**	**3**

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