Set-M

SOMAIYA VIDYAVIHAR UNIVERSITY

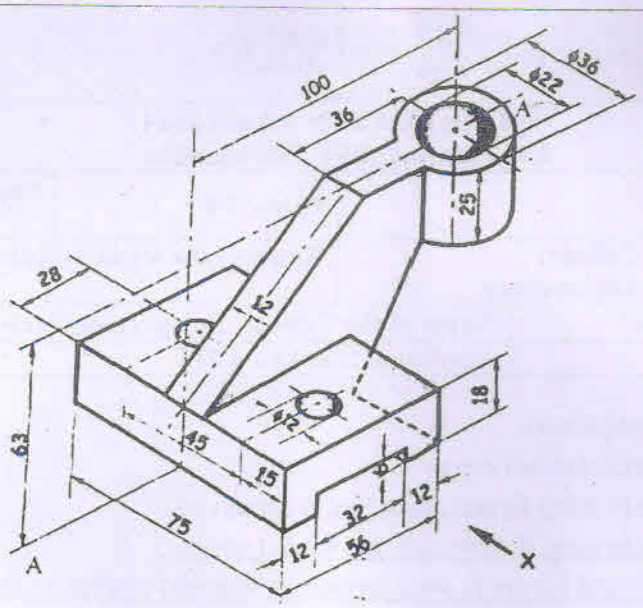
14.05.2024 (M)

Semester: Jan 2024 – April 2024 **Examination: ESE Examination**		
Programme code: 06 **Programme: B.TECH**	**Class: FY**	**Sem I/II (SVU 2020)**
Name of the Constituent College: **K. J. Somaiya College of Engineering**	**Name of the Department: All**	
Course Code:116U06C105	**Name of the Course: Engineering Drawing**	
Duration : 3 Hour	**Maximum Marks : 100**	

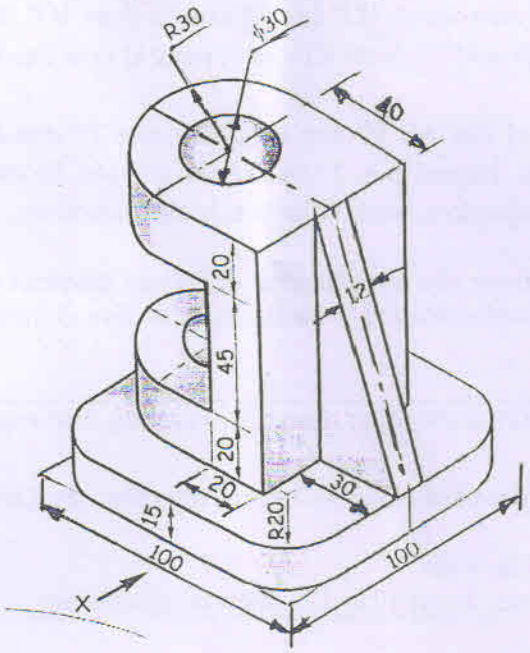
Instructions:

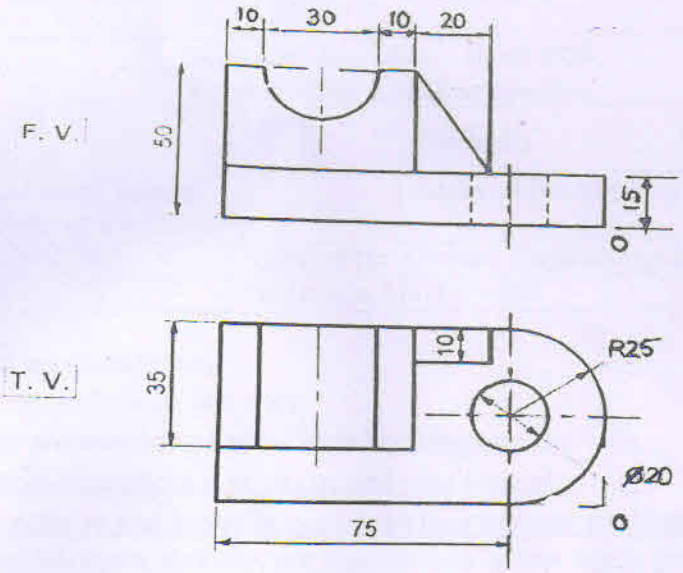
- All Questions are Compulsory.
- Figures to the right indicate full marks.
- Illustrate your answers using figures, sketches, diagrams etc.
- Assume suitable dimensions if necessary and state it clearly.
- **Avoid using colours and layers in your drawings to avoid problems during printing.**
- Line type, line thickness, text size, text font, content of title block, proper dimensions etc. at appropriate place carries weightage during assessment.
- Arrange your drawings properly and on minimum number of pages.
- All the students are requested to save the drawings regularly. In case of any hardware or software problems, extra time will not be allotted to any student for unsaved work.
  Any kind of electronic gadgets capable of memory storage such as pen drive, mobile etc. are not permitted.

Question No.		Max Marks
Q1 (A)	Solve any **TWO** of the following a) A line PQ 80 mm long inclined at an angle of 45° to HP and 30° with VP. The end P is 12 mm above H.P and 30 mm in front V.P, determine the inclinations of FV and TV with XY line if point Q is in the first quadrant. b) The front view of line AB 90 mm long measures 75 mm and top view measures 65 mm. Its end B is 25 mm above HP and 10 mm in front of VP. Draw the projections when point B is in first quadrant. c) Draw the projections of a circular plate of 60 mm diameter resting on its point on its circumference in HP such that its surface is inclined at 30° to the HP.	20
Q2	Figure shows pictorial view of an object. Draw using first angle method of projections, i) Sectional Front view along A-A in the direction of an arrow X; ii) Top View; iii) Left Hand Side View Note: Insert 10 to 12 important dimensions	20



Q3	Solve any **TWO** of the following a) A pentagonal plate with 30 mm side is resting on VP on one of its corner and surface is inclined at an angle 40° with VP Draw projections of a plate. b) Figure shows pictorial view of an object. Draw using first angle method of projections i) Front view in the direction of arrow X. ii) Top View Note: Insert 6 to 8 important dimensions	20



	c) Figure shows F.V. and T.V. of an object. Draw isometric view about an origin 'O'. 	
Q4	A right circular cylinder of base circle 50 mm axis height 70 mm is resting on one of its generator in HP and the TV of the axis is inclined at 45° to VP. Draw the projections of cylinder. **OR** A hexagonal pyramid of 25 mm edge of base and 65 mm length of an axis is resting on one of its edges of the base. The axis makes an angle of 45° with HP and 30° to the VP. Draw the projection of pyramid.	20
Q5	A square pyramid of side of base 30 mm and axis 60 mm has its base on HP such that two of its sides of base perpendicular to VP It is cut by a section plane perpendicular to the VP and inclined at 30° to the HP, passing through the mid-point of axis. Draw the FV, sectional TV and true shape of section. Draw the development of lateral surface of retained pyramid. **OR** A cone of base 60 mm diameter and axis 70 mm long is resting on its base on HP. It is cut by a section plane inclined to HP at 30° and perpendicular to VP which passing through the mid-point of the axis. Draw the sectional top view, front view and true shape of the section. Also draw the development of the lateral surface.	20

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SOMAIYA VIDYAVIHAR UNIVERSITY

14.05.2024(M)

Semester: January 2024 – May 2024 Examination: ESE Examination		
Programme code: 01 **Programme: B.TECH**	**Class: FY**	**Sem I/II (SVU 2020)**
Name of the Constituent College: **K. J. Somaiya College of Engineering**	**Name of the Department: All**	
Course Code: 116U06C105	**Name of the Course: Engineering Drawing**	
Duration : 3 Hour	**Maximum Marks : 100**	

Instructions:

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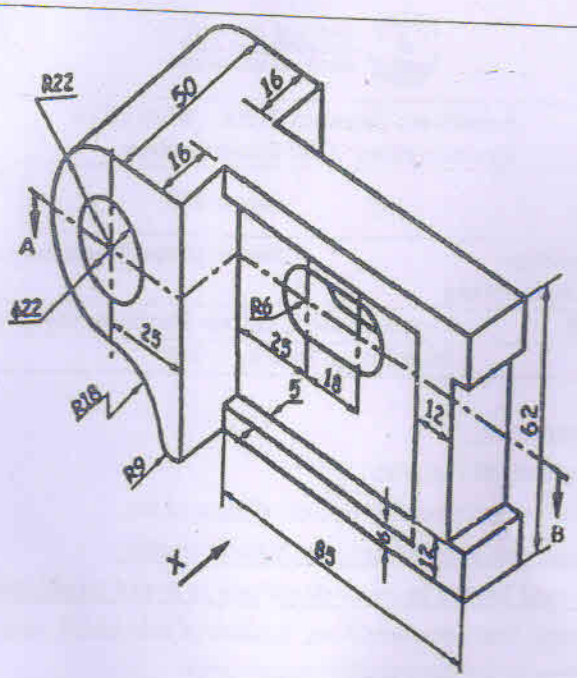
Any kind of electronic gadgets capable of memory storage such as pen drive, mobile etc. are not permitted.

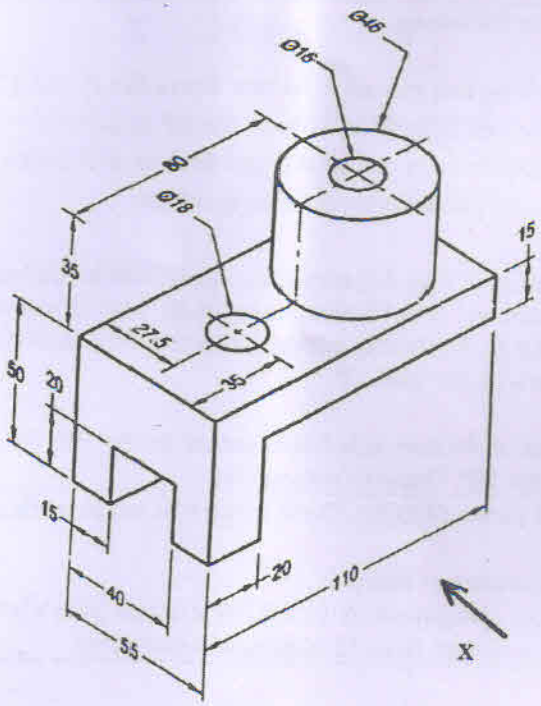
Question No.		Max Marks
Q1 (A)	Solve any **TWO** of the following a) A line AB, 70mm long has its end A 10 mm above the HP and 20 mm in front of the VP. The end B is 45 mm above the HP and 70 mm in front of the VP. Draw the projections of line AB and find its inclination with HP and VP. Assume a complete line in the first quadrant. b) The TV of 100 mm long line AB measures 70 mm while the length of its FV is 85 mm. Its one end A is 15 mm above the HP and 25 mm in front of VP. The other end is in the third quadrant. Draw projections of the line and find its inclination with HP and VP. c) A regular hexagon of 40 mm side has a corner in the HP. Its surface is inclined at 45° to the HP. Draw its projections.	20
Q2	Figure shows pictorial view of Object. Draw using first angle method of projections, i) Front view in the direction of arrow X; ii) Sectional Top View along plane A-B; iii) Right-Hand Side View. Note: Insert 10 to 12 important dimensions	20

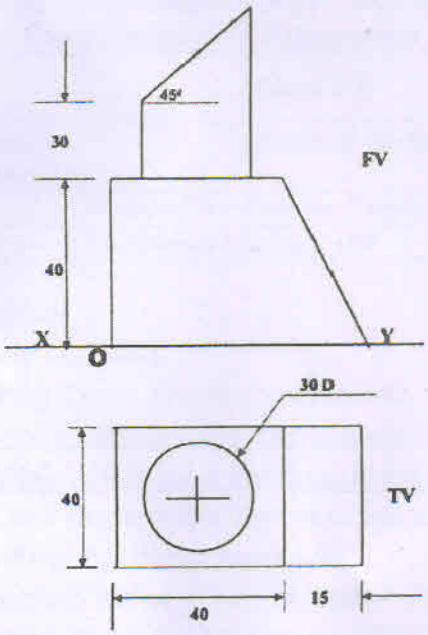


Q3	Solve any **TWO** of the following	20

a) A square plate of 30 mm sides rests on HP such that one of the diagonals is inclined at 30 deg. to HP. Draw its projections.

b) Figure shows pictorial view of an object. Draw the front view in the direction of arrow x and top view. Insert the important dimensions.
Note: Insert 6 to 8 important dimensions



	c) Figure shows F.V. and T.V. of an object. Draw isometric view about an origin 'O'.  	
Q4	A right circular cone, diameter of base 40 mm and height of axis 60 mm is resting on a point of its base circle rim on HP with the apex 40 mm above the HP. The top view of axis of the cone makes an angle of 60° with the VP. Draw the projections of the cone. **OR** A square prism with side of base 30mm and axis 50mm long has its axis inclined at 60° to HP, resting on one of the edges of the base which is inclined at 45° to VP. Draw the projections	20
Q5	A right circular cone of base circle diameter 50 mm and axis 60 mm long is resting on its base on HP. It is cut by a section plane which is perpendicular to VP and inclined to HP such that the plane is parallel to the end generator and 10 mm away from it. Draw the front view, the sectional top view and the true shape of section. Also draw the development of the cone after removing the portion containing the apex. **OR** A pentagonal pyramid, side of base 30 mm and height 58 mm, stands with its base on H.P and an edge of the base is parallel and near to V.P. It is cut by a plane perpendicular to V.P, inclined at 40° to H.P and passing through a point on the outer slant edge, 30 mm above the base. Draw the sectional top view, front view, true shape of the section and also develop the lateral surface of the truncated pyramid.	20