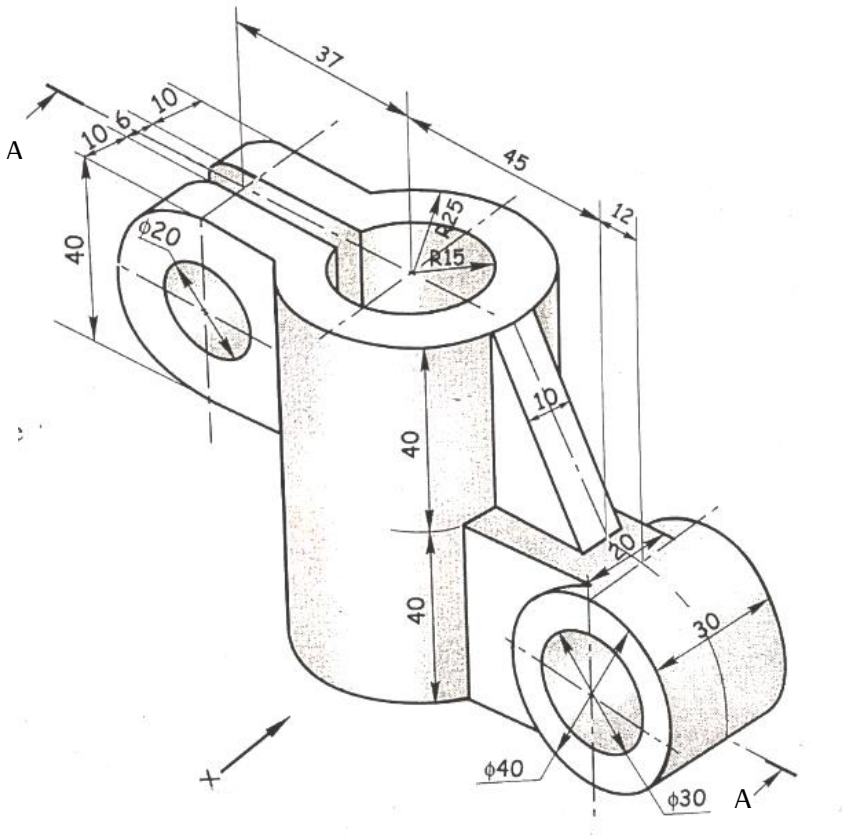
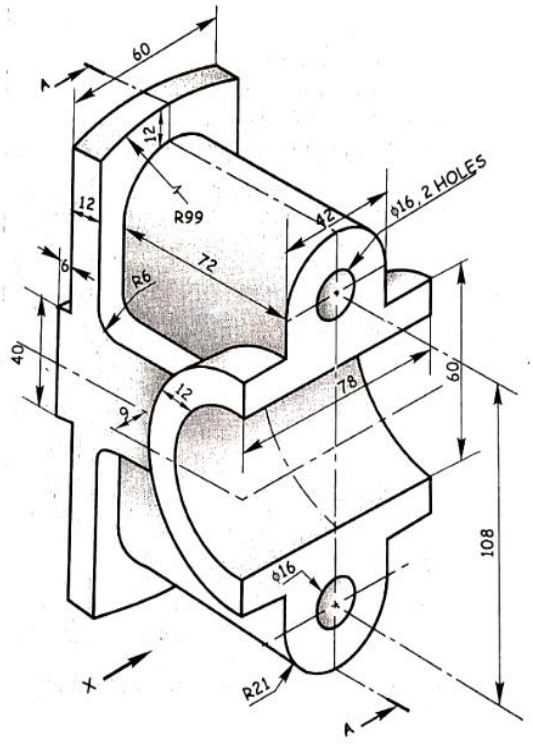
K. J. Somaiya College of Engineering, Mumbai-77
(Autonomous College Affiliated to University of Mumbai)
End Semester Exam
May - June 2019

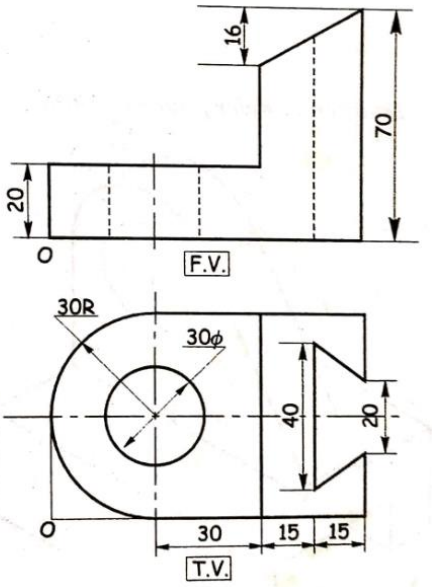
Max. Marks: 100 **Duration:** 3 Hrs.
Class: F. Y. B. Tech Semester: II
Name of the Course: Engineering Drawing Branch: ETRX/EXTC/MECH
Course Code: 2UHC105

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, no any extra time will be allotted to you for unsaved work.
- Any kind of electronic gadgets capable of memory storage such as pen drive, mobile etc. are not permitted.

Q. No.		Max Marks
1.	a) The end A of a straight line AB is in the second quadrant and is 40 mm and 15 mm from both HP and VP respectively. The end B is in the third quadrant. The line is inclined at 40° to both the HP and VP. Draw the projections when end B is in the third quadrant and 45 mm from HP. Find its true length and distance of end B from VP.	12
	b) A front view of line AB measures 50 mm and makes an angle 45° with XY line. The point A 10 mm above the HP and 20 mm in front of the VP. Draw the projections of line AB if it is inclined with the VP at 45°. The line is in the first quadrant.	08
	OR	
	A square lamina ABCD of side 50 mm is resting on the corner A in the HP such that plane is seen as a rhombus in the top view with diagonal contained by corner A measuring 25 mm. Draw the projection and determine the surface inclination of the plane with HP.	08

2.	Figure shows pictorial view of an Object. (Use First angle Projection method) Draw : i) **Sectional Front View along A-A** ii) **Top View** iii) **Right Hand Side View**. Note- Show approx. 10 to 12 important dimension in 3 views.  	08 06 06
3 (a)	Figure shows pictorial view of an Object. (Use First angle Projection method) Draw : i) **Front view** looking from direction -X ii) **Side View**; Note- Show approx. 6 to 8 important dimension in 2 views.  	10

3 (b)		Figure shows Front View and Top View of an object. **Draw the isometric view** using natural scale.	10
Q4	A hexagonal pyramid, side of a base 30 mm length of axis 60 mm is tilted towards the observer on one of its edges of base in such a way that the triangular face containing the edge on which pyramid rests, appears in front view as an isosceles triangle of 30 mm base and 45 mm altitude. Draw its projections and find the inclination of the base of the pyramid with the HP. **OR** A square pyramid, side of a base 40 mm length of axis 60 mm has one of its sides of base in the HP. The axis of solid is inclined at an angle 30º to the HP and 45º to the VP. Draw its projections.		20 20
Q5	A cone of base diameter 70 mm, axis height 90 mm is resting in the HP. It is cut by an section plane which is perpendicular to VP and parallel to and 15 mm away from one of its end generators. Draw **Front View**, **Sectional Top View** and **True Shape of the section**. Also draw **development of the lateral surface** of the cone removing the apex. **OR** A square pyramid of 30 mm edges of base and 50 mm height is resting on HP and two of its side of base perpendicular to the VP. It is cut by an auxiliary inclined plane which inclined at 60º to the HP and perpendicular to VP and passes through the point 15 mm above the base of a pyramid. Draw - **Front View**, **Sectional Top View** and **True Shape of the section**. Also draw **development of the lateral surface** of solid.		20 20