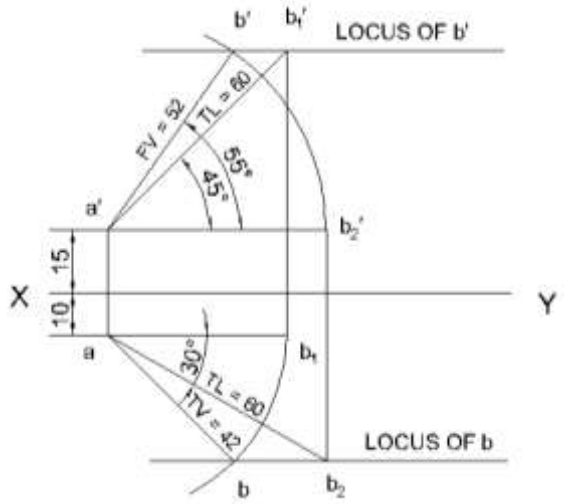
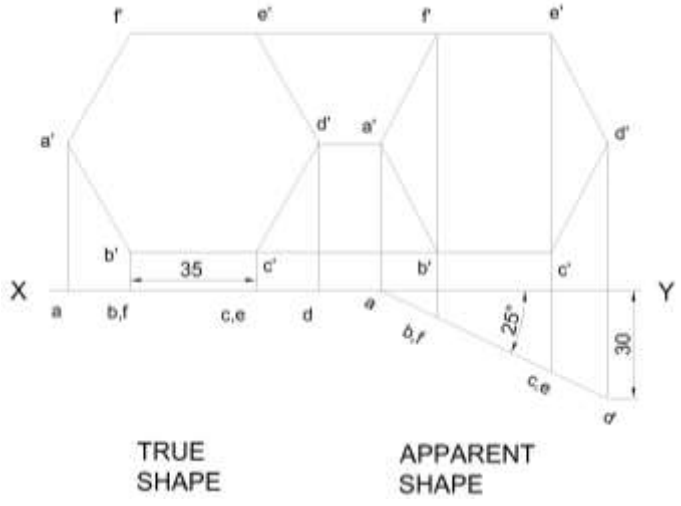
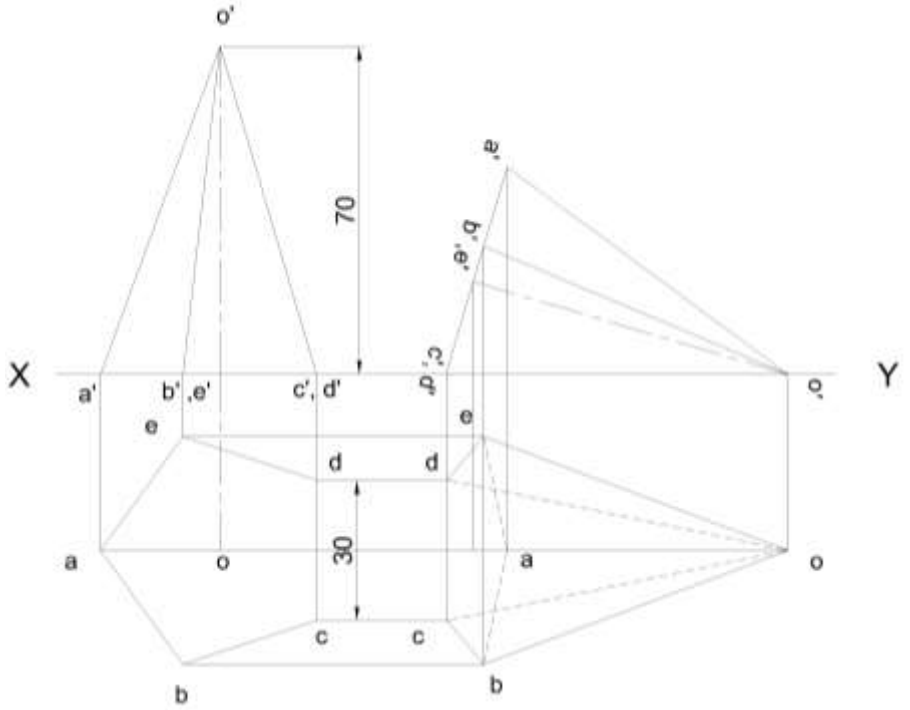
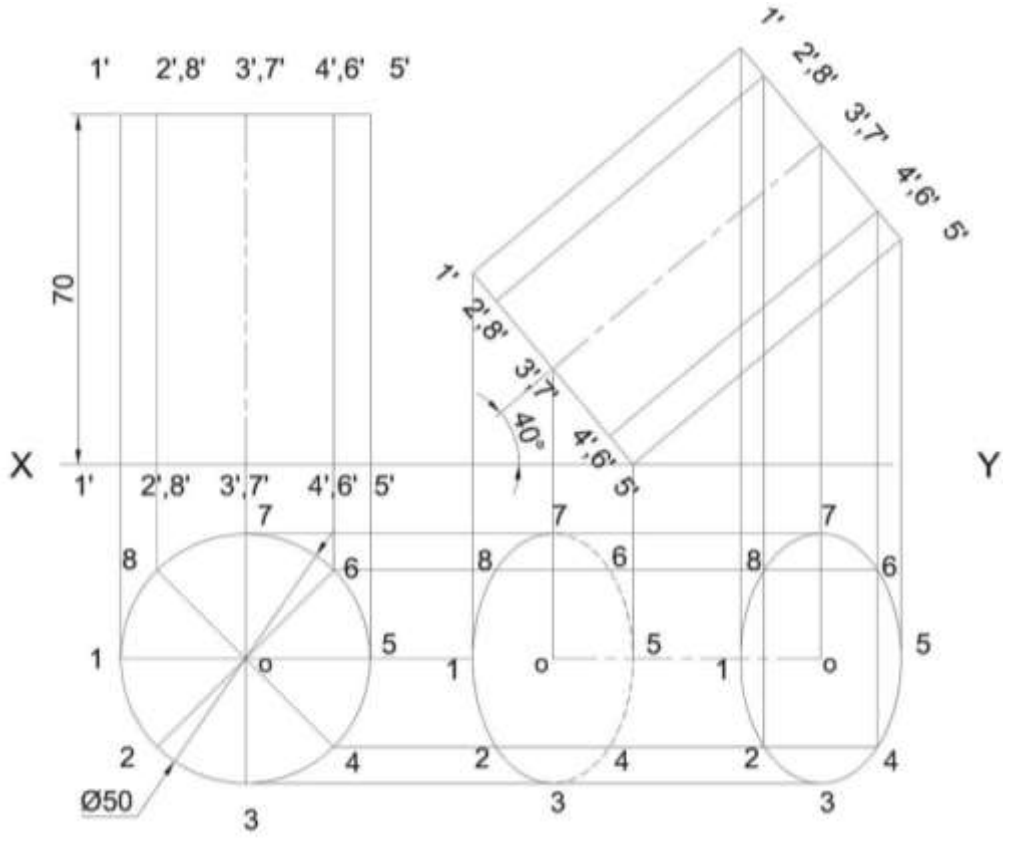
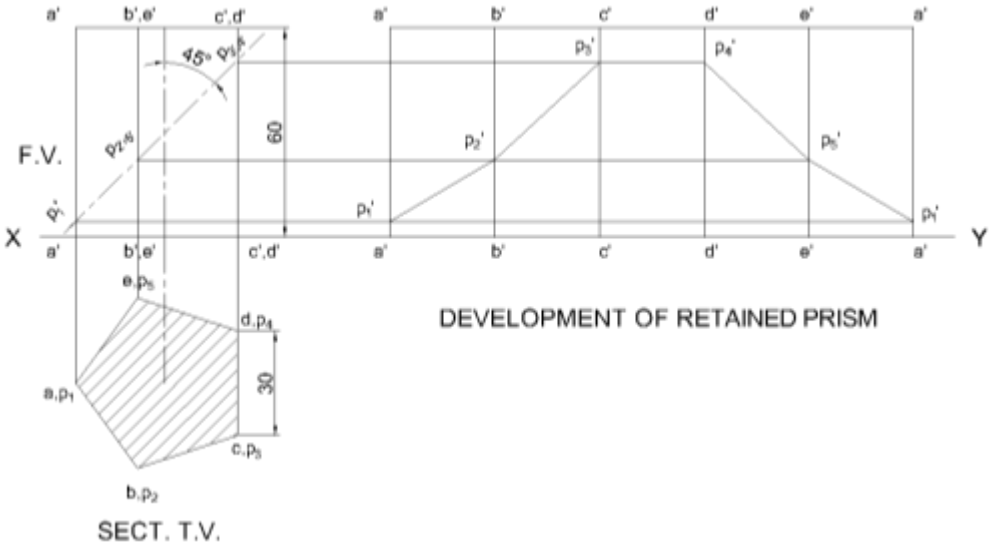
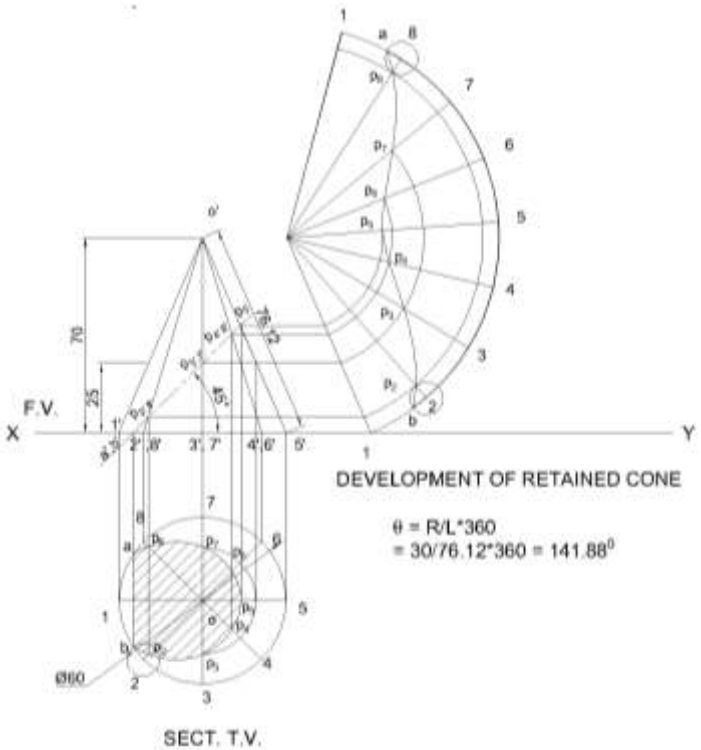
SOMAIYA VIDYAVIHAR UNIVERSITY

Semester: January 2024 – April 2024 **Maximum Marks: 50** **Examination: End-Semester Examination** **Duration: 2 Hrs.**		
Programme code: 01 **Programme: BTech**	**Class: FY**	**Semester: II (SVU 2023)** **SET C**
Name of the College: **K. J. Somaiya College of Engineering**	**Name of the department: All**	
Course Code: 216U06C105	**Name of the Course: Engineering Drawing Solution**	

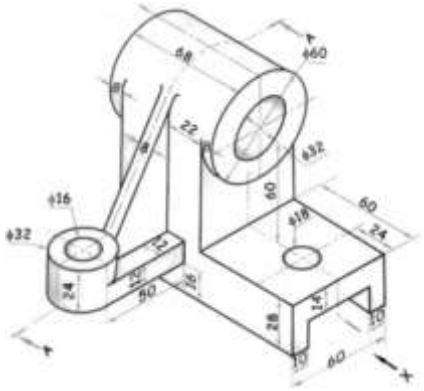
Que. No.	Question Statement	Max. Marks
Q.1	Attempt any **ONE**	**10**
i)	A line AB 60 mm long has its end A 15 mm above HP and 10 mm in front of VP. It is inclined at 45^0 to HP and 30^0 to VP. Draw its projections when end B lies in first quadrant **Solution:**  **Given: 3 Marks, Solution 5 Marks, Dimensions: 2 Marks**	
ii)	A hexagonal plate of 35 mm side has one of its corners in VP. The corner opposite to this corner is 30 mm in front of VP. Draw the projections and find the inclination of surface with VP. **Solution:**  **Stage I: 4 Marks, Stage: 4 Marks**	

Q.2	Attempt any **ONE**	**10**
i)	A pentagonal pyramid of 30 mm base edges and axis 70mm long is lying on one of its triangular faces on HP. Draw its projections. **Solution:**  **Stage I: 4 Marks, Stage II: 6 Marks**	
ii)	A cylinder of 50 mm diameter and axis length 70 mm is resting on its base in HP. Draw the projections of cylinder if its axis is inclined at 40^{o} to HP. **Solution:**  **Stage I: 4 Marks, Stage II: 6 Marks**	

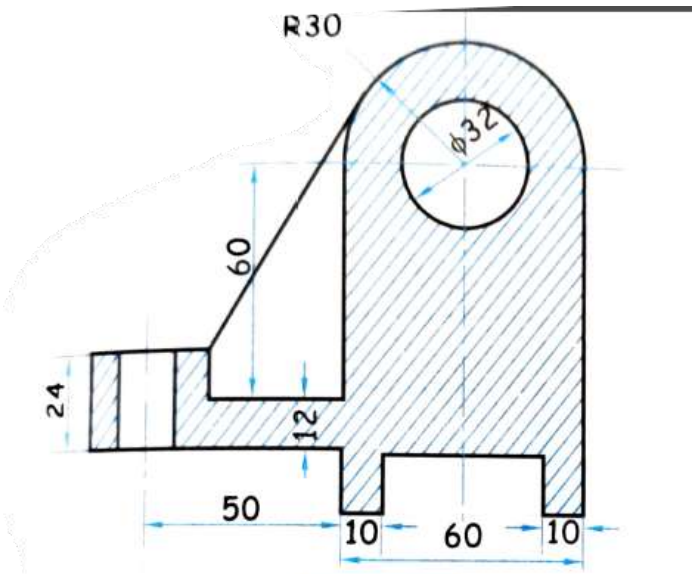
Q.3	Attempt any **ONE**	**10**
i)	A pentagonal prism of 30 mm edges of base and 60 mm height is resting on its base with one of the edges of base perpendicular to the VP. It is cut by an AIP in such a way that it bisects the axis and is inclined at 45º to the HP. Draw FV and sectional TV. Also develop lateral surface of retained prism. **Solution:**  **Cut Solid & cutting plane: 4 Marks, Sectional T.V.: 3 Marks** **Development: 3 Marks**	
ii)	A cone of 60 mm diameter and axis 70 mm long stands with its circular base on HP. A section plane perpendicular to VP and inclined at 45º to HP cuts the axis at a point 25 mm from its base. Draw FV and sectional TV. Also draw the development of lateral surface of retained cone. **Solution:**  **Cut Solid & cutting plane: 4 Marks, Sectional T.V.: 3 Marks** **Development: 3 Marks**	

Q.4	Attempt the following	**10**

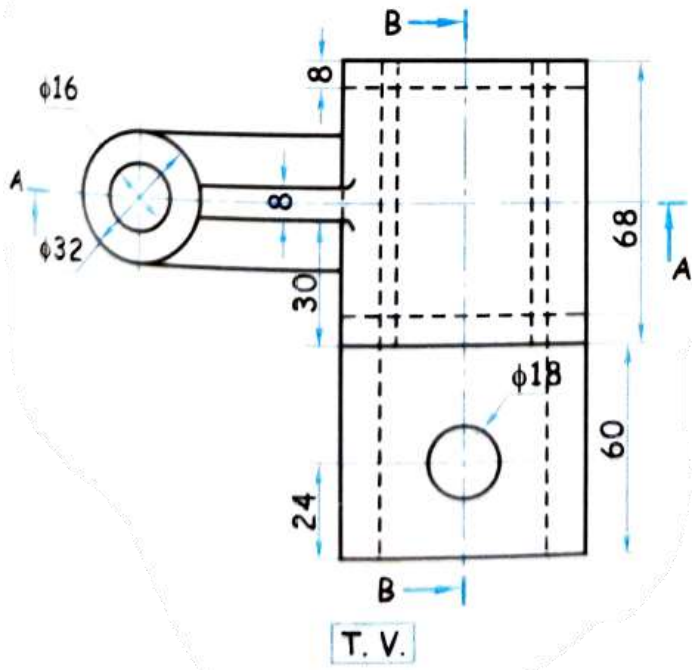
Draw sectional FV along A-A and TV
Insert important dimensions



Solution:



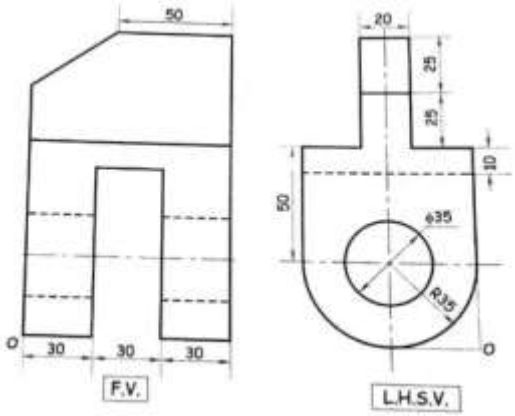
SEC. F. V.



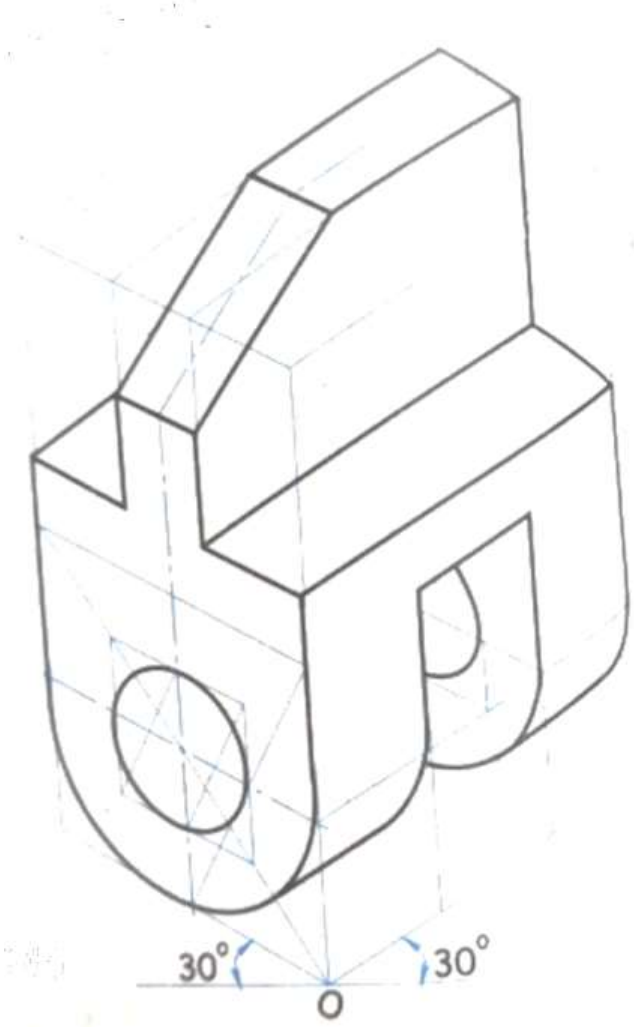
T. V.

Sectional FV: 6 Marks, Top View: 4 Marks

Q.5	Attempt the following	**10**
	Draw an isometric view of given object with respect to origin 'O'	



Solution:



Outer Construction: 5 Marks, Inner construction: 5 Marks