(18)

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY,

LONERE – RAIGAD -402 103

Winter End Semester Examination – Dec.– 2019

Branch: B. Tech Computer Engineering (Group B) **Sem.: - II**
Subject: -Engineering Graphics ME104/ME204 **Marks:60**
Date: -24/12/2019 **Time: -4 Hr.**

Instructions to the Students

1. Each question carries 12 marks.
2. Attempt any five questions of the following.
3. Illustrate your answers with neat sketches, diagram etc., wherever necessary.
4. If some part or parameter is noticed to be missing, you may appropriately assume it and should mention it clearly.
5. Retain all construction lines.

(Marks)

Q.1. **a.)**Inscribe a regular Heptagon in a circle of diameter 80mm. **(6)**

b.) Inscribe a Square in a circle of diameter of 70mm,Square is resting on one of its corner on ground **(6)**

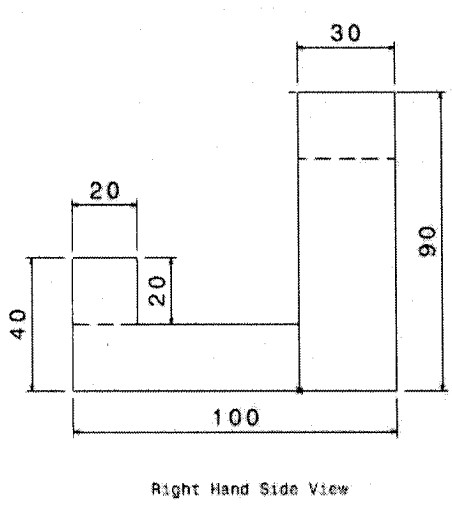
Q.2 Draw Front View in the Direction of X and Right-Hand Side view of the given objectin fig Orthographic Projections. **(12)**

Q.3. Draw the Front View & Top View of line "AB", if HT & VT of line is 20& 35 mm below XY and distance between them is 30mm. Point "A" is 20mm above HPand length of Front View of AB is 60mm. **(12)**

Q.4. Draw the projections of Pentagonal pyramidside of base 25mm& height of axis 70mm if it is resting on one of its base edge such that axis is inclined at 30degrees to HP & the edge on which it is resting is inclined at 45 degrees to VP (Apex is away from the observer)

(12)

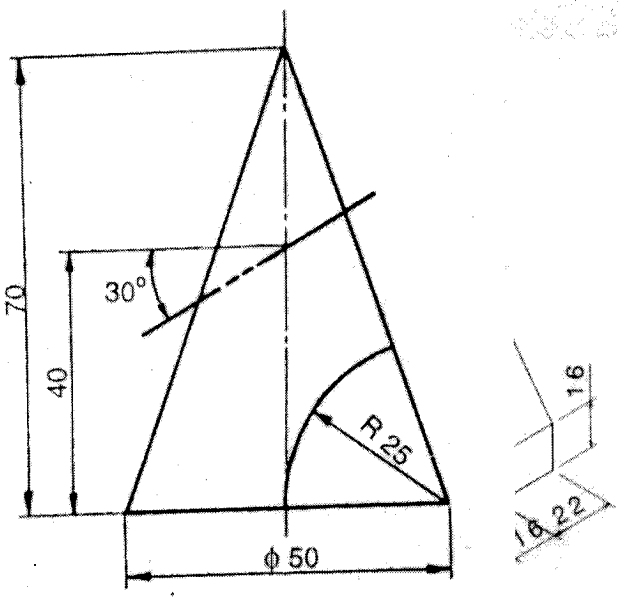
Q.5.A .Draw isometric drawing of given object in fig. Isometric Drawing **(12)**



OR

B) A right circular cone of diameter 60mm & height of Axis 70mm is resting on ground on its base. A Cutting Plane perpendicular to HP & inclined at 45 degrees to V. P. cuts the cone by passing through a point at a distance of 10 mm from axis, draw the projections and true shape of the section. **(12)**

Q.6. Draw the Development of cone given in the fig. Development of Cone **(12)**



Development of Cone

Fig. Orthographic Projection

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE

Bachelor of Technology (Automation and Robotics) SEMESTER - 2 Summer 2025 (Regular)

Course :Bachelor of Technology (Automation and Robotics) Branch : Engineering and Technology

Semester : SEMESTER - 2

Subject Code & Name: 24AFTEGES204 - ENGINEERING GRAPHICS

Time : 4 Hours] **[Total Marks : 60**

Instructions to the Students:

1.Each question carries 12 marks.

2.Question No. 1 will be compulsory and include objective-type questions.

3.Candidates are required to attempt any four questions from Question No. 2 to Question No.6

4.Use of non-programmable scientific calculators is allowed.

5.Assume suitable data wherever necessary and mention it clearly.

Q1. Objective type questions. (Compulsory Question) 12

1 A diagonal scale is mainly used for:

A) Measuring curved surfaces. B) Measuring straight lines only

C) Measuring smal subdivisions of a unit D) Enlarging drawings

2 What is the function of tolerances in design?

A) Increase part weight B) Alow part interchangeability

C) Reduce strength D) Eliminate manufacturing

3 In the aligned system of dimensioning, dimensions are placed:

A) Always horizontal B) Always vertical

C) Parallel to the dimension line D) On the border of the drawing

4 A point lies above the Horizontal Plane (HP) and in front of the Vertical Plane (VP). It is in which quadrant?

A) First B) Second

C) Third D) Fourth

5 If a line is perpendicular to HP and paralel to VP, its front view wil be:

A) Point B) True length

C) Inclined D) Shorter than true length

6 When a line is inclined to HP but paralel to VP, its top view shows:

A) True length B) Shortened length

C) Point D) Horizontal line

7 When a circular plate lies on HP and is inclined to VP, its front view wil appear as:

A) Circle B) Line

C) Elipse D) Rectangle

8 The shape seen when a cylinder is resting on HP with its axis perpendicular to HP is:

A) Circle in top view
B) Rectangle in top view
C) Ellipse in top view
D) Triangle in top view

9 A prism is a solid bounded by:

A) Only triangular faces
B) Two paralel bases and rectangular lateral faces
C) Curved surface only
D) One base and curved surface

10 When a solid is cut by a plane, the shape of the section depends on:

A) The position of the plane
B) The material of the solid
C) The color of the solid
D) The surface texture of the solid

11 In first-angle projection, the object is placed:

A) Between the observer and the plane
B) Behind the projection plane
C) In the third quadrant
D) Above the projection plane

12 In isometric projection, the angle between any two isometric axes is:

A) 60°
B) 90°
C) 120°
D) 30°

Q2. Solve the following.

A) Differentiate Aligned and Uni-directional system of placing the dimensions on a drawing with the help of diagrams. 6

B) Construct a forward vernier scale of RF = 1/50 to read centimetres and long enough to measure 5 metres. 6

Q3. Solve the following.

A) Draw the FV, TV and RHSV of the following points:(i) Point P lies in the HP and 22 mm behind the VP.(ii) Point Q lies in the VP and 32 mm below the HP.(iii) Point R lies 32 mm below the HP and 22 mm behind the VP. 6

B) A line AB, 50 mm long, lies in the HP and makes an angle of 45° to the VP. Its end A is nearer to the VP and 25 mm in front of it. Draw the projections. 6

Q4. Solve Any One of the following.

A) A regular pentagon ABCDE of side 30 mm has one of its edges parallel to the VP and inclined at 30° to the HP. The pentagon is inclined at 45° to the VP. Draw the projections. 12

B) A pentagonal pyramid of edge of base 30 mm and length of axis 65 mm is resting on a corner of the base on the HP. The triangular face opposite to the corner on the HP is inclined to the HP at 45° with its shorter edge inclined to the VP at 60°. Draw its projections. 12

Q5. Solve Any One of the following.

A) A triangular pyramid with a base side of 50 mm and a slant height of 70 mm, rests on the base on the HP with a side of base perpendicular to the VP. It is cut by an AIP inclined at 30° to the HP and bisecting the axis and a profile section plane intersecting the AIP at the edge of the pyramid parallel to the VP. Draw FV, sectional TV and sectional SV. 12

B) A hexagonal pyramid of side of base 60 mm and length of axis 140 mm is kept on the ground on its base. It is cut by an AIP inclined at 45° to the base and cutting the axis at 94 mm from the apex. Draw the development of lateral surfaces of the pyramid. 12

Q6. Solve Any One of the following.

A) Draw (a) FV in direction X, (b) TV and, (c) LHSV of the object as shown in Figure 1, using first angle method: 12

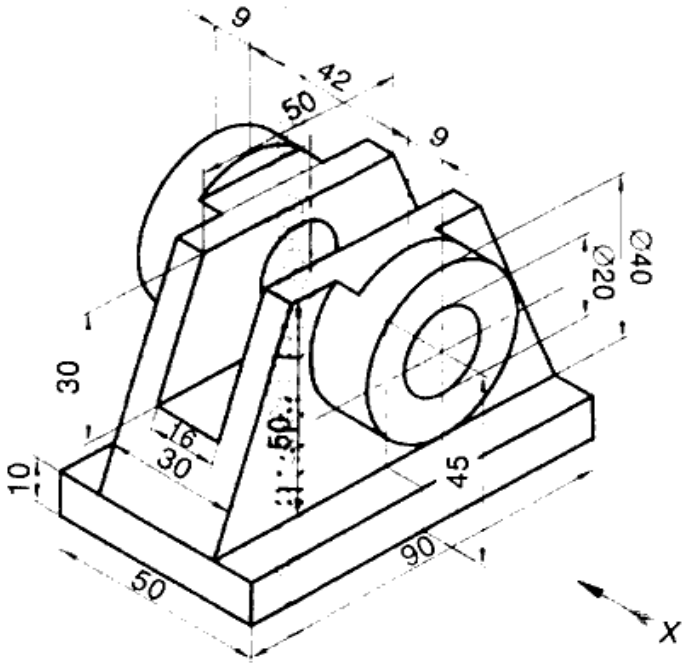


Figure 1

B) Draw the isometric view from the orthographic projections, as shown in Fig. 2 12

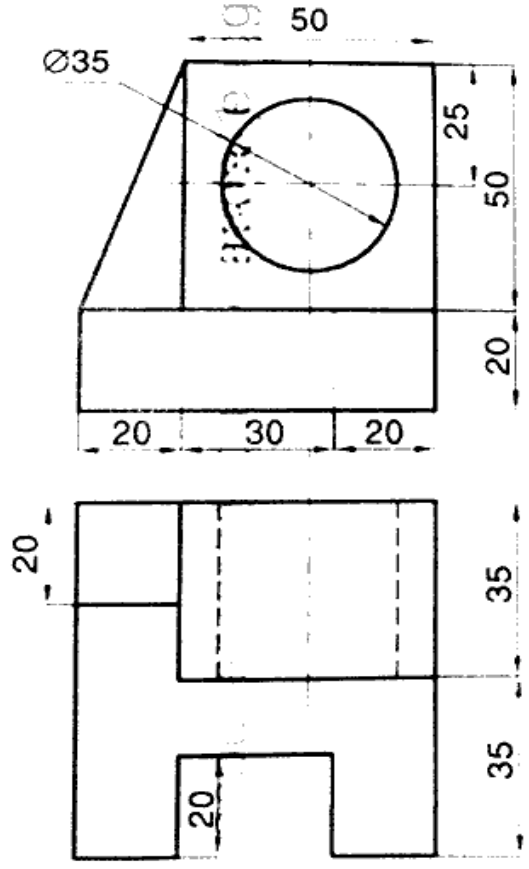


Figure 2

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE

Regular Winter Examination – 2024

Course: B.Tech. **Branch: Common To All Branches**

Semester: I

Subject Code & Name: 24AF2EGRES104; Engineering Graphics

Max Marks: 60 **Date:** 11/02/2025 **Duration: 4 Hr.**

Instructions to the Students:

1. *Each question carries 12 marks.*
2. *Question No. 1 will be compulsory and include objective-type questions.*
3. *Candidates are required to attempt any four questions from Question No. 2 to Question No. 6.*
4. *The level of question/expected answer as per OBE or the Course Outcome (CO) on which the question is based is mentioned in ( ) in front of the question.*
5. *Use of non-programmable scientific calculators is allowed.*
6. *Assume suitable data wherever necessary and mention it clearly.*

		(Level /CO)	Marks
Q. 1	**Objective type questions. (Compulsory Question)**		**12**
	Set squares are primarily used for drawing which angles? A) 30°, 45°, 60°, and 90° B) 15°, 35°, 75°, and 95° C) 10°, 20°, 50°, and 80° D) 25°, 50°, 70°, and 100°	(CO1)	1
	What is the purpose of a center line in a drawing? A) To show visible outlines B) To represent symmetry and centers of circles C) To indicate section lines D) To show cutting planes	(CO1)	1
3	Which of the following is true for first-angle projection? A) The object is placed between the observer and the projection plane B) The projection plane is placed between the observer and the object C) Views are placed as they appear in reality D) It is the standard method in the United States	(CO2)	1
4	If a point is located on the XY plane in orthographic projection, which of the following is true? A) Its Z-coordinate is zero B) Its X-coordinate is zero C) Its Y-coordinate is zero D) It is in the first quadrant	(CO2)	1
5	The true length of a line is seen in which of the following conditions? A) When the line is parallel to the plane B) When the line is perpendicular to the plane C) When the line is inclined to both HP and VP D) When viewed from the side	(CO3)	1
6	If a line is located in the first quadrant and is inclined to HP, where will its front view be located? A) Above the XY line B) Below the XY line C) On the XY line D) At the origin	(CO 3)	1

7	A pentagonal plane resting on HP with an edge inclined to VP will have its top view appearing as: A) A pentagon C) A distorted pentagon B) A horizontal line D) A vertical line	(CO 4)	1
8	If a plane is inclined to both HP and VP, its projections appear as: A) A true shape in both views C) Inclined lines in both views B) A point in both views D) A horizontal and vertical line	(CO 4)	1
9	When a prism is lying on HP with its axis inclined to HP, its front view will be: A) A rectangle C) A line B) A parallelogram D) An ellipse	(CO 4)	1
10	Which of the following is NOT a principal plane in orthographic projection? A) Horizontal plane (HP) C) Side plane (SP) B) Vertical plane (VP) D) Profile plane (PP)	(CO 5)	1
11	The angles between the projection of the x-axis, y-axis, and z-axis in an isometric view are: A) 90° C) 45° B) 120° D) 60°	(CO 5)	1
12	When a solid is cut by a plane, the shape of the section depends on: A) The position of the plane C) The color of the solid B) The material of the solid D) The surface texture of the solid	(CO 5)	1

Q.2 Solve the following. **12**

A)	Draw the following lines by stating their description and general applications: i. Continuous thick or Continuous wide ii. Dashed thin (narrow) iii. Chain thin Long-dashed dotted (narrow)	(CO 1)	6
B)	Differentiate Aligned and Uni-directional system of placing the dimensions on a drawing with the help of diagrams.	(CO 2)	6

Q.3 Solve the following. **12**

A)	A line AB, 50 mm long, is inclined to the HP at 30° and parallel to the VP. The end nearest to the HP is 40 mm above it and 25 mm in front of the VP. Draw the projections.	(CO 3)	6
B)	A point P is in the first quadrant. Its shortest distance from the intersection point of H.P., V.P. and Auxiliary vertical plane, perpendicular to the H.P. and V.P. is 70 mm and it is equidistant from principal planes (H.P. and V.P.). Draw the projections of the point and determine its distance from the H.P. and V.P.	(CO 2)	6

Q. 4 Solve Any Two of the following. **12**

A)	Draw the projections of a regular hexagon of 25 mm side, having one of its sides in the H.P. and inclined at 60° to the V.P., and its surface making an angle of 45° with the H.P.	(CO 4)	6

B) A square pyramid of side of base 40 mm and length of axis 60 mm is resting on its corner of base on ground with an edge of the base through that corner making an angle of 60° with the HP. The apex is away from the observer and the axis is parallel to the HP. Draw the projections if the axis is inclined to the VP at 20°. (CO 4) 6

C) A cone of diameter 60 mm and height 60 mm is resting on the HP on one of its generators. Draw its projections if its axis is parallel to the VP. (CO 4) 6

Q.5 Solve Any Two of the following. 12

A) A pentagonal pyramid having a base side of 45 mm and a slant length of 80 mm rests on its base on the HP with a base edge AB perpendicular to the VP. A section plane passing through corner D and perpendicular to the slant face ABO cuts the solid. Draw FV and sectional TV. (CO 5) 6

B) A cylinder of 40 mm diameter, 60 mm height and having its axis vertical, is cut by a section plane, perpendicular to the V.P., inclined at 45° to the H.P. and intersecting the axis 32 mm above the base. Draw its front view, sectional top view, sectional side view and true shape of the section (CO 5) 6

C) Draw the development of the lateral surface of the part P of the triangular pyramid as shown in Fig. 1. The line o'1' in the front view is the true length of the slant edge because it is parallel to xy in the lop view. The true length of the side of the base is seen in the top view. (CO 6) 6

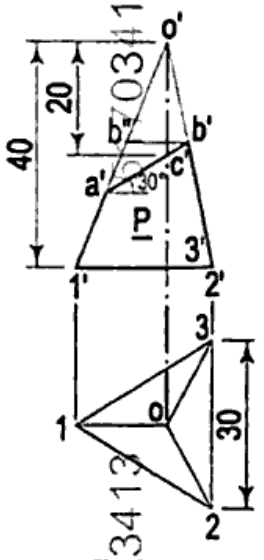


Fig. 1

Q.6 Solve Any Two of the following. 12

A) Draw the FV and TV of the object shown in Fig. 2 using the third-angle method. (CO 5) 6

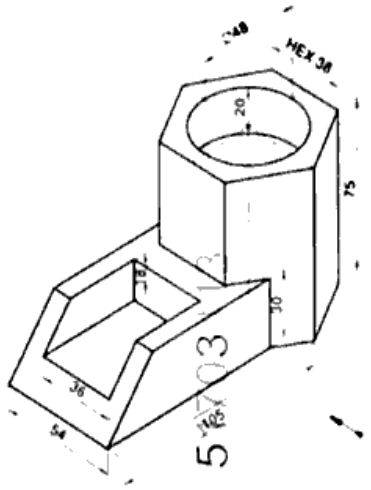


Fig. 2

B) Draw the half-sectional FV, and half-sectional RHSV of the object as shown in Fig.3 by using first angle method. (CO 5) 6

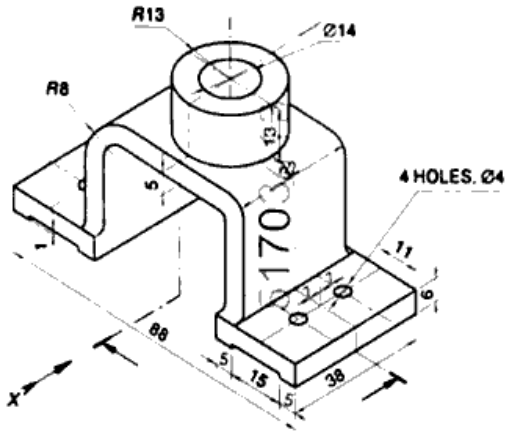


Fig. 3

C) Fig. 4 shows the FV and LHSV of an object. Draw its isometric view. (CO 5) 6

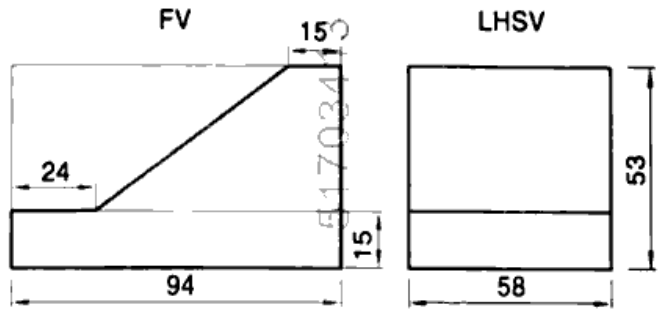


Fig. 4

*** End ***

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE

Regular End Semester Examination – Winter 2022

Course: B. Tech. **Branch :** All **Semester :I**

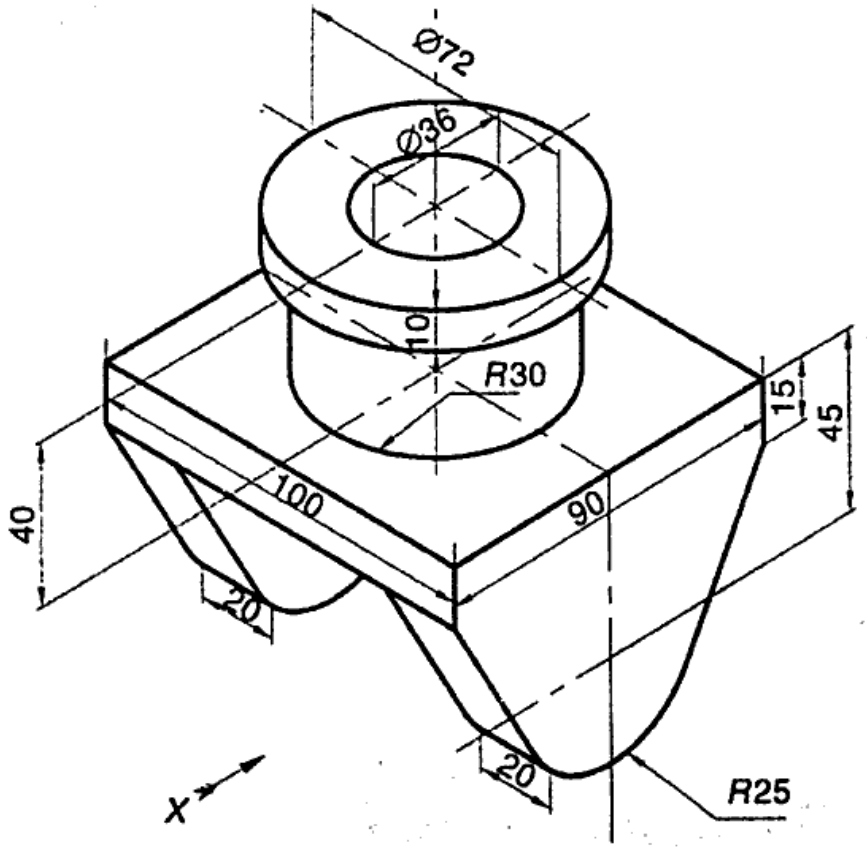
Subject Code & Name: BTES103G/ BTES203G Engineering Graphics

Max Marks: 60 **Date:** 25/03/2023 **Duration:**____ Hrs

Instructions to the Students:

1. *All the questions are compulsory.*
2. *The level of question/expected answer as per OBE or the Course Outcome (CO) on which the question is based is mentioned in ( ) in front of the question.*
3. *Assume suitable data/dimensions wherever necessary and mention it clearly.*

		(Level/ CO)	Marks
Q. 1	**Answer Any Two of the following.**		
A)	Draw a regular pentagon of 30 mm side by any method.	U	6
B)	Draw the following types of lines according to drawing standard SP 46. 1. Locus line 2. Centre line 3. Cutting plane line	U	6
C)	Draw the projections of the following points on the same reference line, keeping the projectors 30 mm apart. *P*, 30 mm above the H.P. and 25 mm behind the V.P. *Q*, 40 mm below the H.P. and 20 mm behind the V.P. C, in the V.P. and 50 mm above the H.P.	U/A	6
Q.2	**Answer Any Two of the following.**		
A)	Draw the following views of the object (in X – direction) shown below, by using first angle projection method. **a) Front View (6)** **b) Top View (6)**	R/A	12



B) A circular plate of negligible thickness and diameter 80 mm has a point A on its circumference in the VP. The surface of the plate is inclined to the VP in such a way that the FV is seen as an ellipse of 50 mm long minor axis. Draw the projections of the plate when FV of diameter AB makes 45° with the HP. Find inclination of the plate with the VP. R/A 12

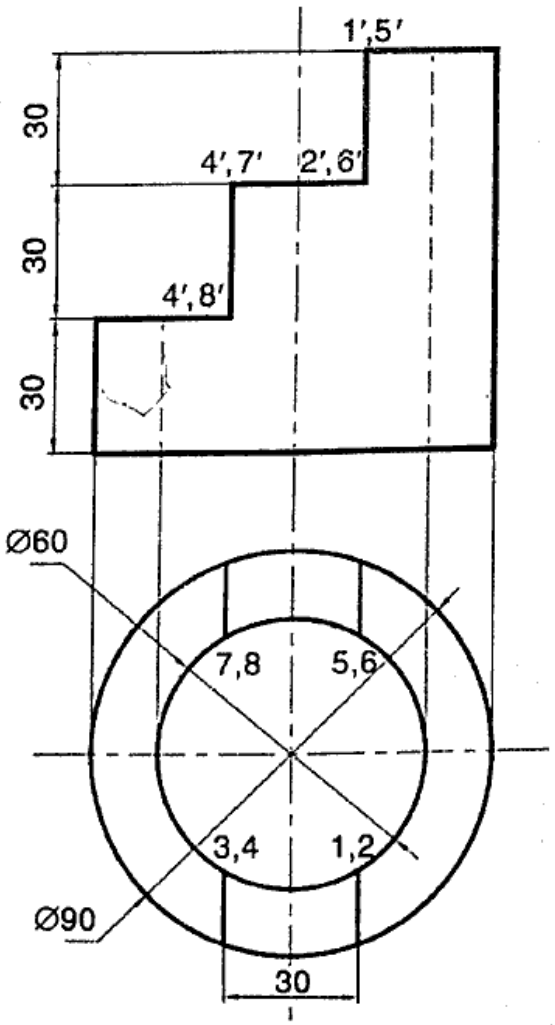
C) FV of a line measures 70 mm and makes an angle of 30° with XY. The end A is in the HP and the VT of the line is 10 mm below XY. The line is inclined at 45° to the VP. Draw the projections of the line and find its TL and true inclinations with the HP. Also locate the HT. R/A 12

Q. 3 Answer Any Two of the following.

A) A cone of diameter 60 mm and height 60 mm is resting on the HP on one of its generators. Draw its projections if its axis is parallel to the VP. R/A 12

B) A pentagonal pyramid having a base side of 45 mm and a slant length of 80 mm rests on its base on the HP with a base edge AB perpendicular to the VP. A section plane passing through corner D and perpendicular to the slant face ABO cuts the solid. Draw FV and sectional TV. (8)
The upper part of the solid is removed and kept on its cut surface on the HP without changing its orientation with respect to the VP. Draw the two views of the part of the pyramid. (4) R/A 12

C) Figure shows FV and TV of an object. Draw the isometric view that will show maximum details of the object. (Points in the figure are marked for your reference) R/A 12



*** End ***

U – Understanding; A – Applying; R – Remembering;

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE

Mid Semester Examination – ~~March~~ October 2019

Course: B. Tech in Mechanical / Civil Sem: II

Subject Name: Engineering Graphics Subject Code: BTES203

Max Marks: 20 Date:-07/10/2019 Duration:- 1.30 Hr.

Instructions to the Students:

1. Illustrate your answer with neat sketches, diagrams etc. wherever necessary
2. If some part or parameter is noticed to be missing, you may appropriately assume it and should mention it clearly.

		(Level/CO)	Marks
Q. 1	**Solve following objectives and rewrite correct answer**		**6**
	1 The top view of an object should typically be drawn (a) to the right of the front view (b) directly below the front view (c) anywhere on the same page (d) on a separate piece of paper	**CO1**	
	2.The size of the drawing drawn to scale 1:2 will be _____ ___ the actual size. (a) Same as (b) twice of (c) half of (d) none of a,b, and c	**CO1**	
	3. Which is cutting plane line from the following? a) — — — — — — — — — — — b) . . . . . . c) — - — - — - — - — - — - — d) ——— - ——— - ——— - ——— - ———	**CO1**	
	4. What is an arc? **a.** Arc is part of a square. **c.** Arc is part of a triangle. **b.** Arc is part of a circle. **d.** Arc is part of a hexagon.	**CO3**	
	5.If the object lies in the fourth quadrant, its position with respect to reference plane will be a) In front of V.P. and above H.P. b) Behind V.P. and below H.P. c) In front of V.P. and below H.P. d) Behind V.P. and above H.P.	**CO3**	
	6. If point C is below HP and behind VP then in which quadrant point C lies? a. First b. Second c. Third d. Fourth	**CO1**	

Q.2	**Solve the following.**	**CO2**	
(A)	Draw regular pentagon of 30 mm side with special method.		**4**
(B)	Inscribe a heptagon about a circle of 90 mm diameter.	**CO2**	**3**
Q. 3	**Solve the following.**		**7**
(A)	A line AB.90 mm long, is inclined at 45° to the H.P. and its top view makes an angle of 60° with V.P. The end A is in the H.P. and 12 mm in front of the V.P. Draw its front view and find its true inclination with V.P. Also determine its traces.	**CO4**	
	***** End *****		

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE

Regular End Semester Examination – Summer 2022

Course: B. Tech. (First Year All Branches Group B) **Semester.: II**

Subject Code & Name:BTES203G Engineering Graphics

Max Marks: 60 **Date: 23/08/2022** **Duration: 5 Hrs.**

Instructions to the Students:

1. *All the questions are compulsory.*
2. *The level of question/expected answer as per OBE or the Course Outcome (CO) on which the question is based is mentioned in ( ) in front of the question.*
3. *Use of non-programmable scientific calculators is allowed.*
4. *Assume suitable data wherever necessary and mention it clearly.*

		(Level/CO)	Marks
Q. 1	**Solve the following.**		
A)	Construct a regular pentagon of 30 mm side by general method.	Remember	06
B)	Explain the different methods of dimensioning.	Understand	06
Q.2	**Solve Any one of the following.**		
A)	Draw the elevation, top view and side view of the object shown in figure 1. Alldimensions are in mm.	Apply	12

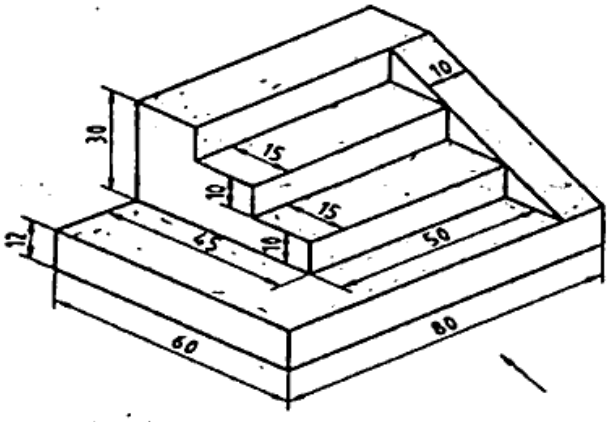


Figure:1

B)	Draw the elevation, top view and side view of the object shown in figure 2. All dimensions are in mm.	Apply	12

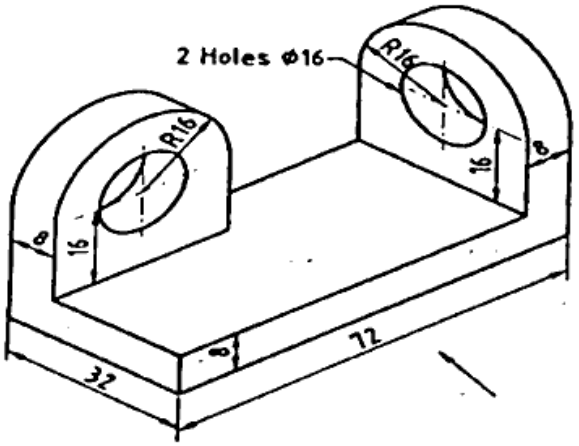


Figure: 2

Q. 3	**Solve Any Two of the following.**		
A)	Line AB is 75 mm long. It's F.V. and T.V. measure 50 mm & 60 mm long respectively. End A is 10 mm above H.P. and 15 mm in front of V.P. Draw projections of line AB if end B is in first quadrant. Find angle with HP and VP.	Evaluate	06
B)	End A of a line AB is 25 mm below HP and 35 mm behind VP. Line is 30^0 inclined to HP.There is a point P on AB contained by both HP & VP. Draw projections; find inclination with VP and traces.	Evaluate	06

C) A hexagonal plane has its one side in HP and its apposite parallel side is 25 mm above HP and in VP. Draw its projections. Take side of hexagon 30 mm long. Evaluate 06

Q.4 Solve Any Two of the following.

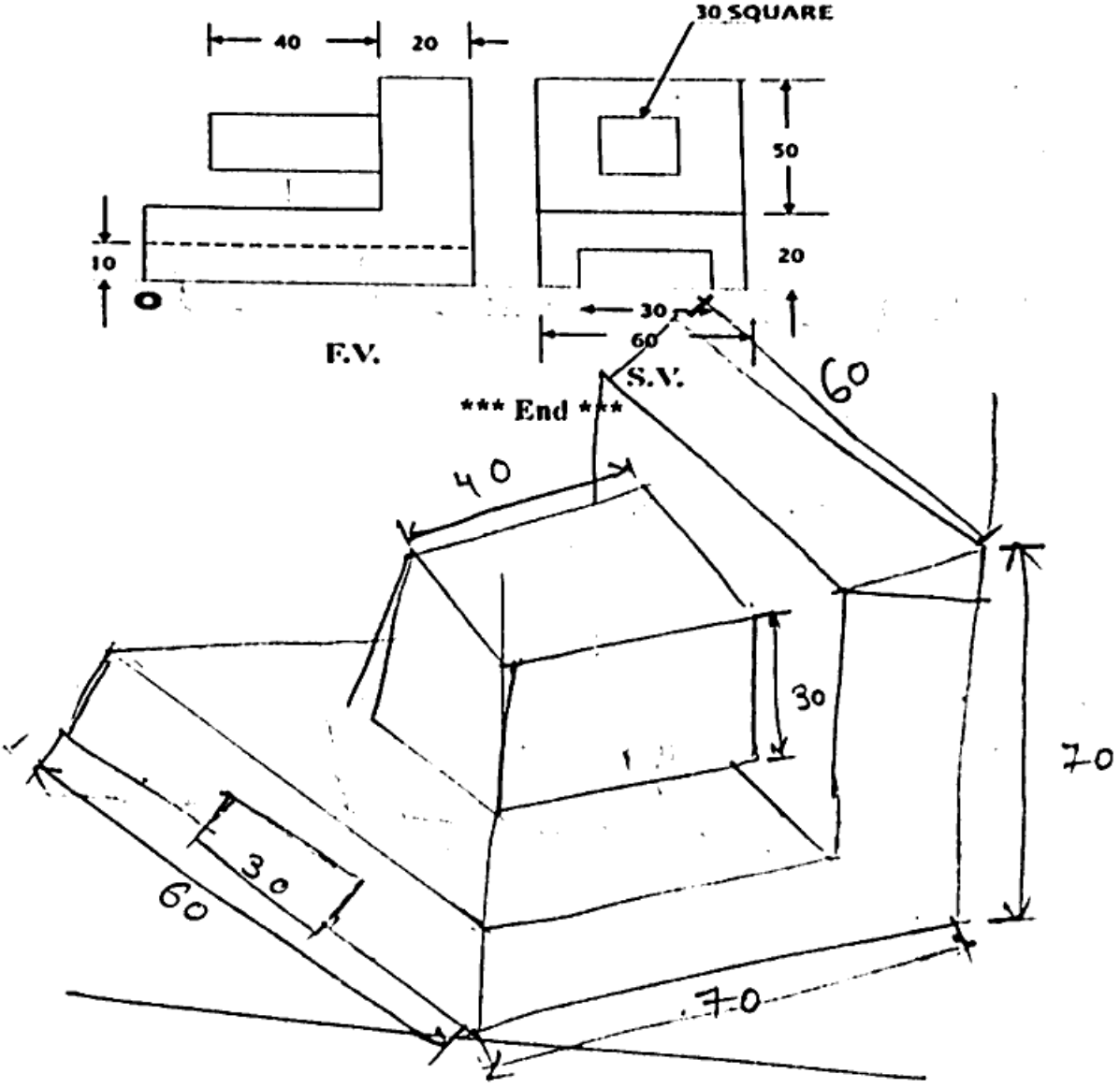
A) A right circular cone, 40 mm base diameter and 60 mm long axis is resting on Hp on one point of base circle such that itsaxis makes 45^0inclination with HP and 40^0 inclination with VP. Draw it's projections. Evaluate 06

B) A frustum of regular hexagonal pyramid is standing on its larger base. On HP with one base side perpendicular to VP. Draw it's FV & TV. Project it's auxiliary TV on an AIP parallel to one of the slant edges showing TL.Base side is 50 mm long, top side is 30 mm long and 50 mm is height of frustum. Evaluate 06

C) A cylinder 40 mm diameter and 50 mm axis is resting on one point of a base circle on VP while it's axis makes 45^0 with VP and FV of the axis $35^0$with HP. Draw projections.. Evaluate 06

Q. 5 Solve the following.

F.V. and S.V.of an object are given. Draw its isometric view. Synthesize 12



*** End ***

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE

SupplementaryWinter Examination – 2023

Course: B. Tech. **Branch : All Branches** **Semester :II**

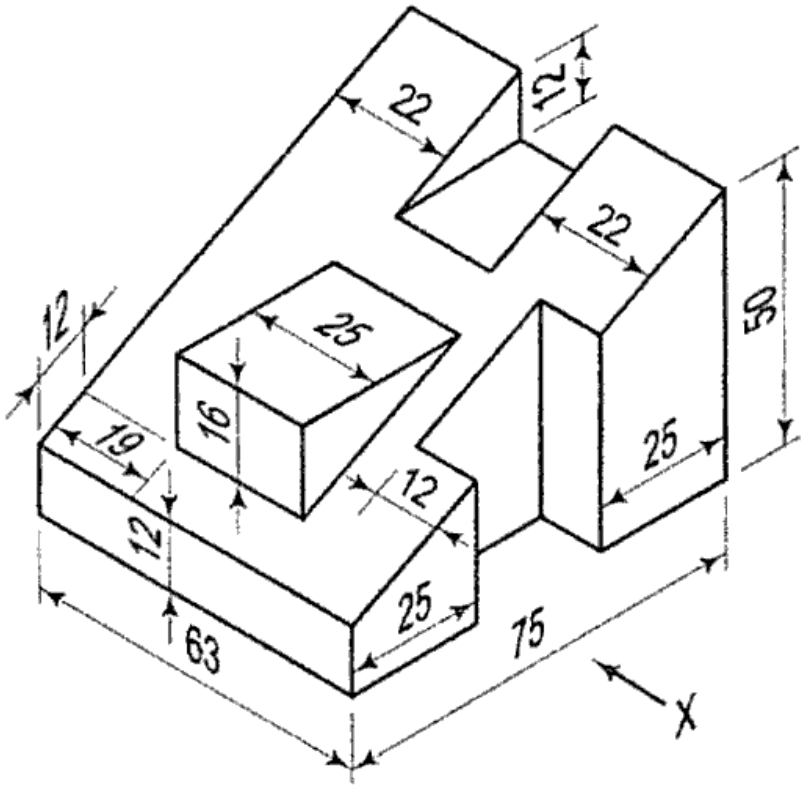
Subject Code & Name: BTES203G & Engineering Graphics

Max Marks: 60 **Date:19-01-24** **Duration: 4 Hr.**

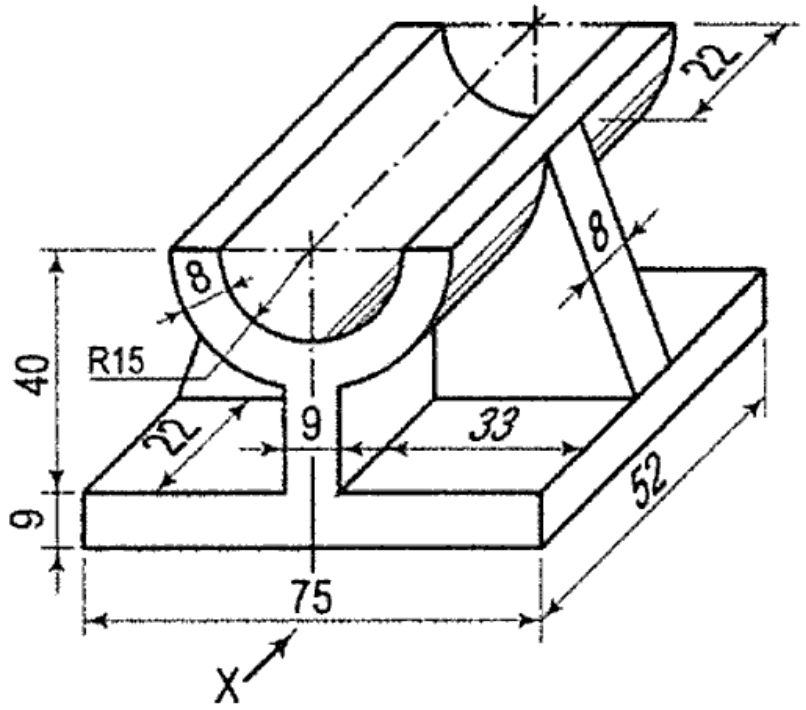
Instructions to the Students:

1. All the questions are compulsory.
2. The level of question/expected answer as per OBE or the Course Outcome (CO) on which the question is based is mentioned in ( ) in front of the question.
3. Use of non-programmable scientific calculators is allowed.
4. Assume suitable data wherever necessary and mention it clearly.

		(Level/CO)	Marks
Q. 1	**Solve Any Two of the following.**		**12**
A)	Draw the following sentence according to drawing standard SP 46. (or any other standard convention) GOOD job, INSTAGRAM, Work is Worship.	Remember	**6**
B)	Draw a regular pentagon of 30 mm side.	Remember	**6**
C)	Explain different methods of dimensioning by drawing suitable diagrams.	Understand	**6**
Q.2	**Solve Any one of the following.**		**12**
A)	Fig, shows the pictorial view of an object, draw its front view looking from direction of X, TV and left hand side view by using First angle Projection method.	Apply	**12**



B) Fig, shows the pictorial view of an object, draw its front view looking from direction of X, TV and right hand side view by using Third angle Projection method. **12** Apply



Q. 3 Solve Any Two of the following. **12**

A) A line AB of 70 mm long has its end 'A'15 mm from both H.P. and V.P. The other end B is 40 mm above H.P. and 60 mm in front of V.P. Draw the projections of the line and determines the inclination of the line with H.P. and V.P. Line is in first quadrant. **6** Evaluate

B) A square ABCD of 50 mm side has its corner A in the HP , its diagonal AC inclined at 30^0 to the H.P. and the diagonal BD inclined at 45^0 to the V.P. and parallel to the H.P. Draw its projection **6** Evaluate

C) A rectangle length of side 50 mm and 80 mm has its shortest side AB in H.P. and incline 30^0 to V.P. Complete the projection of plane if surface of the plane is inclined 45^0 to H.P. **6** Evaluate

Q.4 Solve Any One of the following. **12**

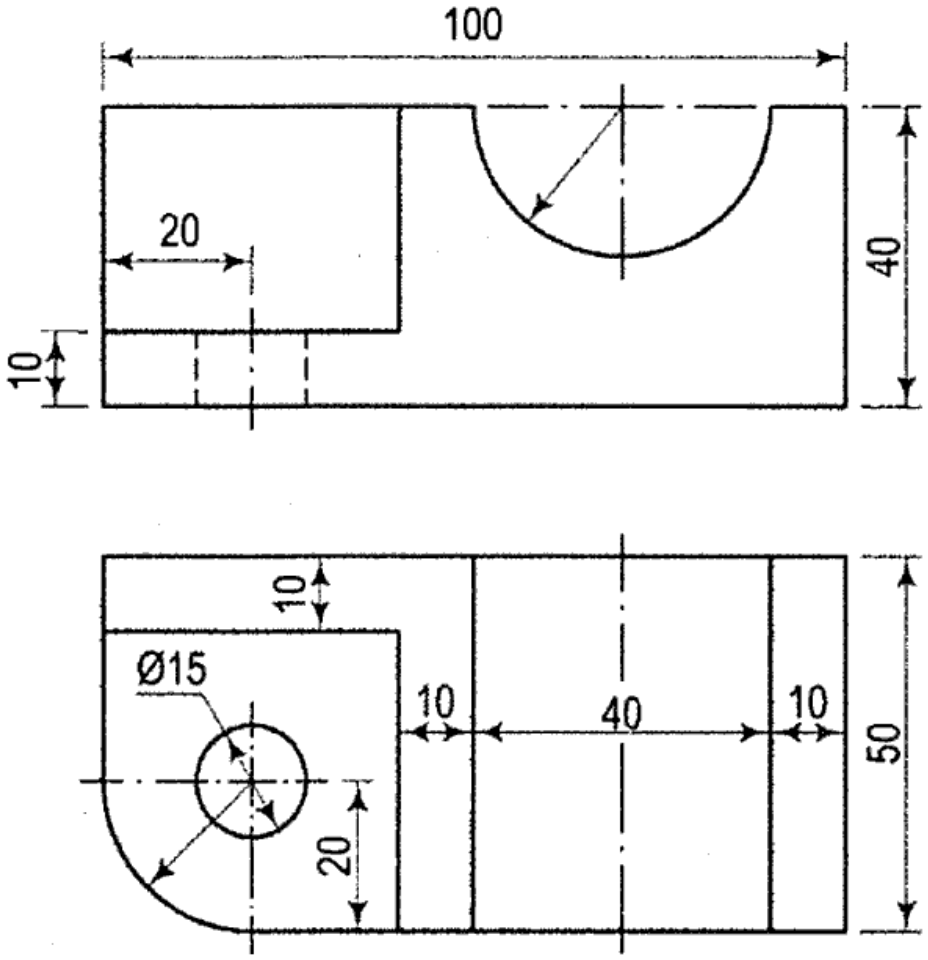
A) A cone of diameter of base 50 mm and height 75 mm is resting on H.P. on the point of its periphery of the base, The axis of the cone is inclined to H.P. by 30^0 and top view of the axis inclined at 45^0 with V.P. Draw the projection when apex is nearer to the observer. **12** Evaluate

B) A pentagonal pyramid base 25 mm side and axis 50 mm long has one of its triangular faces in the V.P. and edge of the base contained by that face makes an angle of 30^0 with the H.P. Draw its projections. **12** Evaluate

Q. 5 Solve Any one of the following. **12**

A) A hexagonal pyramid, base 30 mm side and axis 70 mm long is resting on its slant of the face on the horizontal plane. A section plane, perpendicular to the V.P. inclined to the H.P. passes through the highest corner of the base and intersecting the axis at 25 mm from the base. Draw the projections of the solid and determine the inclination of the section plane with the H.P. **12** Evaluate

B) Draw the isometric view of the following object having FV and TV drawn by first angle projection method. **12** Synthesize



***** End *****

DRBABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY,LONERE,RAIGAD
Regular & Supplementary Summer Examination- 2024

Branch Name: Common to All Branches Subject Code BTES2036

Subject Name: Engineering Graphics Semester II

Max Marks: 60 Duration 04Hrs Date 18/06/2024

Instructions.-

1. *Attempt **any FIVE** questions out of the following*
2. *Assume the suitable data wherever necessary.*
3. *Mention the Question numbers correctly on the drawing sheets.*

		Marks
Q.1 Attempt the following questions		
a. Draw the Regular Pentagon of 50mm side by any method	CO-1	03
b. Redraw the following sketch and show dimensions with any one of the correct method (Fig-1)	CO-1	04

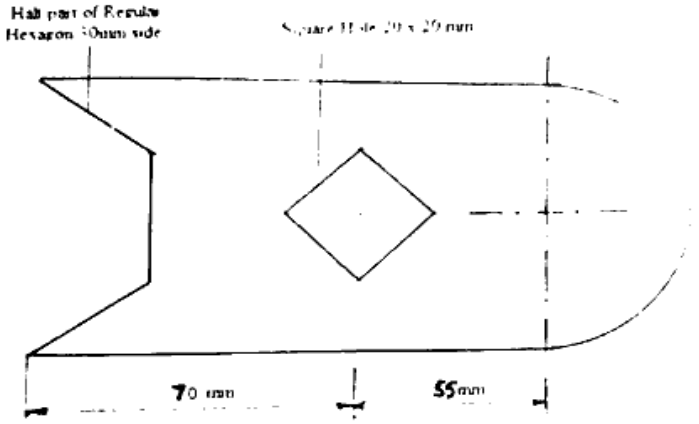


Fig-1

c. Draw the Front view & Top view of following points i) Point A 15mm below HP and 20mm behind VP ii) Point B in VP and 20mm above HP iii) Point C in HP and 25mm in front of VP	CO-2	03
Q.2 Draw the Front view in X- direction , Top view and Side view of the following sketch by First angle Method of Projection (Fig.2)	CO-4	12

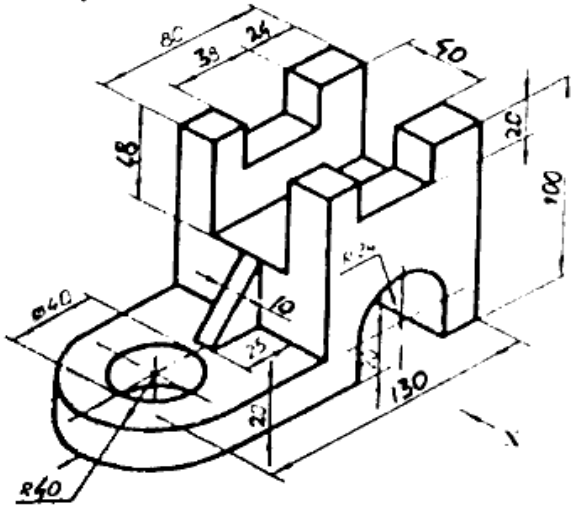


Fig.2

Q.3 Attempt the following questions

a.	Horizontal Line AB 75mm long is inclined to VP by 40^0 . Point A is 20mm above HP and 15mm in front of VP. Complete the projections and find its Plan Length and Elevation Length	CO-2	04
b.	A regular Pentagon of 40mm side is resting in VP on one of its edges with surface inclined to VP by 45^0. Complete the projections.	CO-2	08
	OR		
c.	A Rectangular Plate of 70 x 40 mm sides resting on edge ,is inclined in such a way that it is observed as a Square of 40x 40 mm in the TOP VIEW Complete the projections and find inclination of plate with HP.	CO-2	08

Q.4 Attempt the following question (Any One)

a.	A triangular pyramid of base edges 50 mm and slant edges 70 mm is resting on one of its base edges in HP in such a way that triangular face contained by that base edge is Vertical and resting base edge is inclined to VP by 45^0	CO-3	12
b.	A cone of base diameter 50 mm and height of Axis 75 mm is lying down on one of its generators in HP with top view of the axis inclined to VP by 40^0. Complete the projections if apex is towards the observer	CO-3	12

Q.5 Attempt the following question (Any One)

a.	A cylinder of base diameter 50mm and its axis 80 mm is inclined to HP by 50^0. An auxiliary inclined plane, passing through the highest point of the top circumference & axis at point 20mm from the top , cuts the cylinder. Draw the FV, TV view and true shape of the section.	CO-3	12
b.	A true shape of the cut section of Cube 50mm side is Rhombus with largest possible major diagonal. Complete the projections and show FV, TV and true shape of the section.	CO-3	12

Q.6 Draw the Isometric View of the following object (Fig-3). CO-4 12

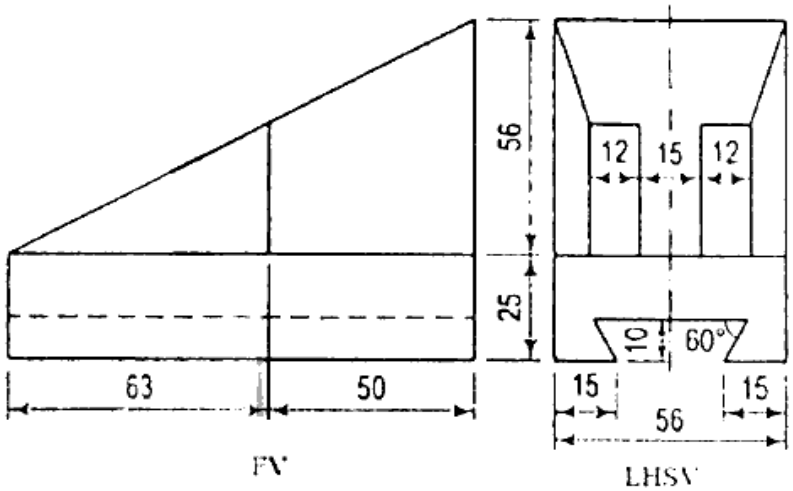


Fig-3

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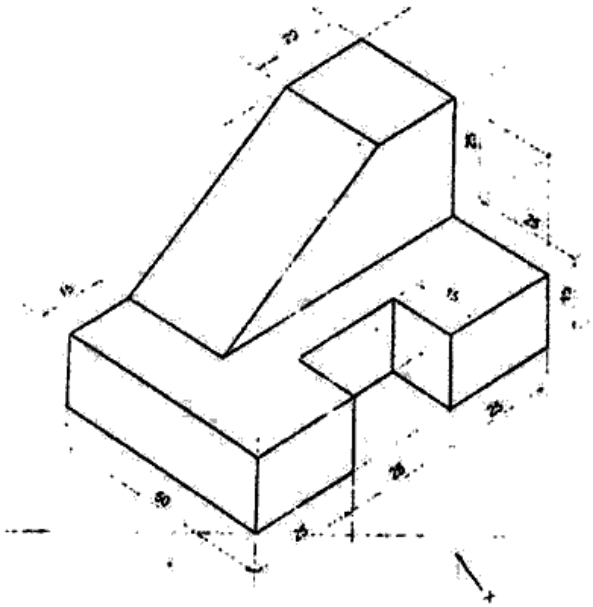
DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE

Practical Examination - Semester: I (A.Y. 2022-23)

Course: Engineering Graphics (BTS108L) **Program:-FY -Civil Engineering**

Max Marks: 20 **Date:- 30.03.2023 BATCH-MORNING** **Duration:- 1 Hr.**

Solve any two of the following.

Q.No	Question	Level- CO	Marks
Q1	Draw HEPTAGON of 60 mm side by using any method of drawing Polygon.	R/U-CO-1	10
Q2	Draw Projections of following Points on the same reference line by keeping 20 mm distance between the projectors a) Point A is in V.P. and 35 mm above H.P. b) Point B is 25 mm from H.P. and V.P. and is in the fourt quadrant. c) Point C is 25 mm behind V.P. and 50 mm below H.P. d) Point D is 20 mm above H.P., 20 mm behind V.P. e) Point M both on HP and VP.	R/U-CO-1	10
Q3	Draw F.V and T.V. by using First angle method of Projection 	R/U-CO-1	10
Q4	A line AB 70 mm is inclined at an angle of 30 degree to HP & 45 degree to VP. Its end A is 10 mm above HP & 20 mm in front of VP. Draw the projections of line AB. Assume the line to be in the first quadrant.	R/U-CO-1	10

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE – RAIGAD -402 103

Winter Semester Examination – Dec. 2019

Course: B. Tech (All) **Semester: I**
Subject: Engineering Graphics (EG1203)
Date: 24/12/2019 **Marks:** 60 **Time:** 4 Hrs.

==========

Instructions to the Students

1. Each question carries 12 marks.
2. Attempt **any five** questions out of the following six questions.
3. Illustrate your answers with neat sketches, diagram etc., wherever necessary.
4. If some part or parameter or dimension is noticed to be missing, you may appropriately assume it and should mention it clearly

---

(Marks)

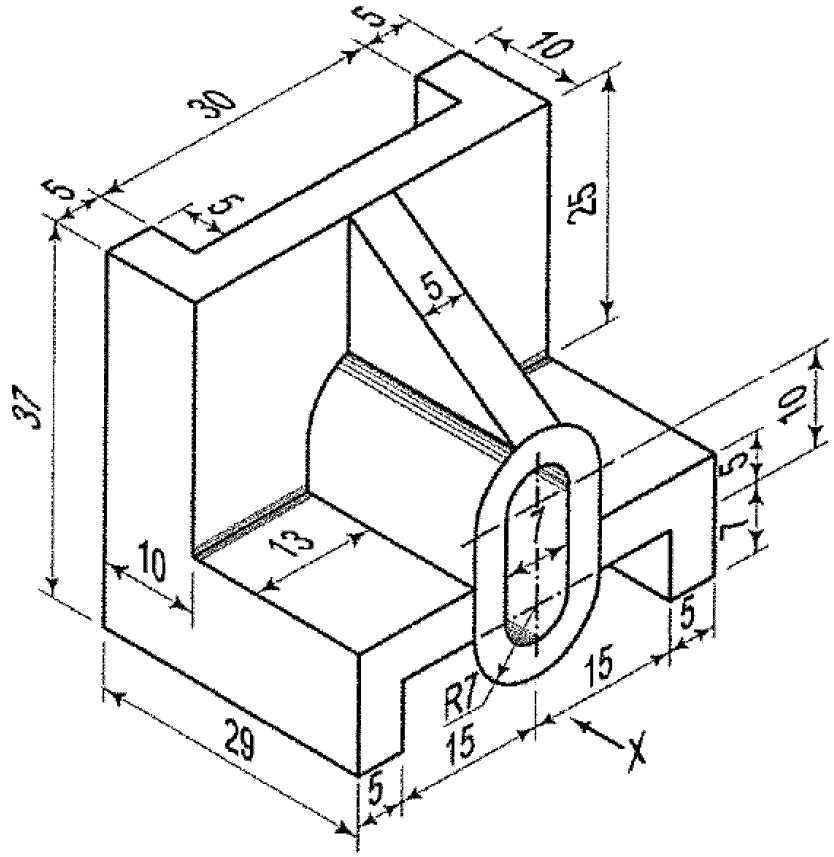
Q.1 a) Draw the following sentence according to drawing standard SP 46 (or any other standard convention). **(6)**

INDIA, that is BHARAT, shall be a Union of States.

b) Draw a regular pentagon of 30 mm side by any method and draw also a circle touching each corner of the pentagon. **(6)**

Q.2 Draw the following views of the object (in X – direction) shown below, by using first angle projection method.

a) Front View (6) **b) Top View (6)**



Q.3. Draw the projections of a regular hexagon of 30 mm side, which is resting on a corner in the H.P., with its surface making an angle of 30° with the H.P. The TV of the diagonal passing through that corner is inclined at 60° to the V.P**. (12)**

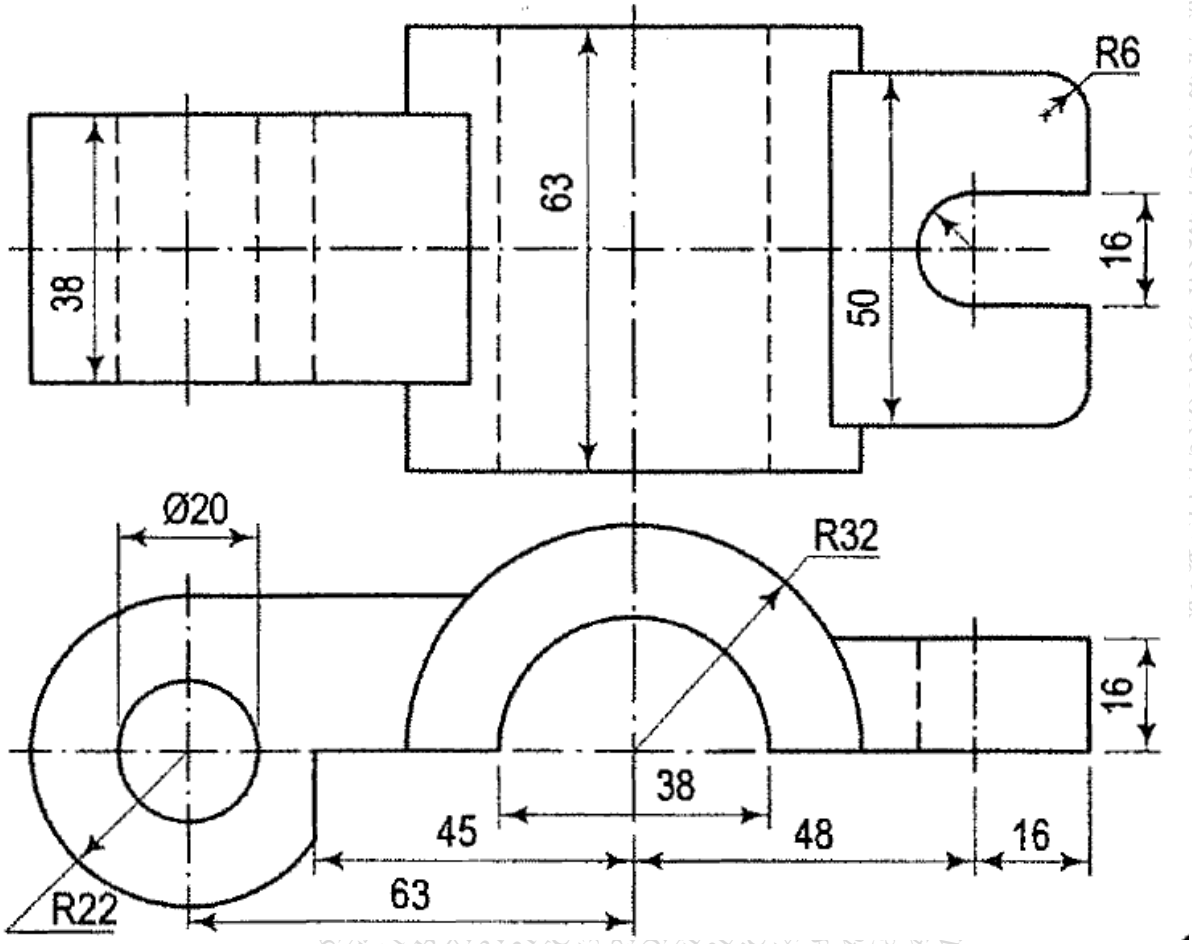
OR

A line CD, 90 mm long, measures 72 mm in FV and 65 mm in TV. Draw the two views of the line if it fully lies in the first quadrant. Find the true inclinations of the line. Assume point C at suitable distances from the RPs. **(12)**

Q.4 A triangular prism with side of base 40 mm and length of axis 70 mm has its edge of base in the V. P. and inclined at 60^0 to the H. P. The rectangular face containing that edge makes 30^0 with the V.P. Draw the projections of the prism. **(12)**

Q.5. A horizontal cylinder (axis parallel to the VP) with a 60 mm diameter and 100 mm length is cut by an auxiliary incline plane (AIP) such that the true shape of the section is an ellipse of major axis 90 mm. Draw its front view, side view and locate the cutting plane. Also, draw the true shapes of the section. **(12)**

Q.6. Draw the isometric view of the following object having FV and TV drawn by **third angle projection** method. **(12)**



DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE – RAIGAD -402 103

Winter Semester Examination – Dec. 2019

Course: B. Tech (All) **Semester: I**
Subject: Engineering Graphics (EG1203)
Date: 24/12/2019 **Marks:** 60 **Time:** 4 Hrs.

==========

Instructions to the Students

1. Each question carries 12 marks.
2. Attempt **any five** questions out of the following six questions.
3. Illustrate your answers with neat sketches, diagram etc., wherever necessary.
4. If some part or parameter or dimension is noticed to be missing, you may appropriately assume it and should mention it clearly

---

(Marks)

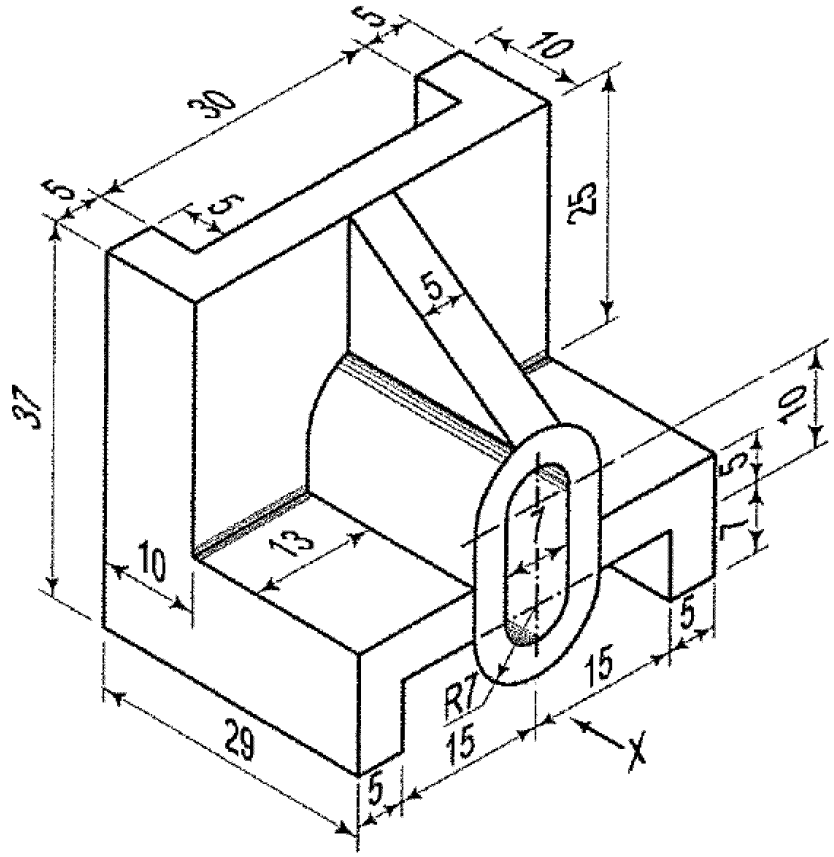
Q.1 a) Draw the following sentence according to drawing standard SP 46 (or any other standard convention). **(6)**

INDIA, that is BHARAT, shall be a Union of States.

b) Draw a regular pentagon of 30 mm side by any method and draw also a circle touching each corner of the pentagon. **(6)**

Q.2 Draw the following views of the object (in X – direction) shown below, by using first angle projection method.

a) Front View (6) **b) Top View (6)**



Q.3. Draw the projections of a regular hexagon of 30 mm side, which is resting on a corner in the H.P., with its surface making an angle of 30° with the H.P. The TV of the diagonal passing through that corner is inclined at 60° to the V.P**. (12)**

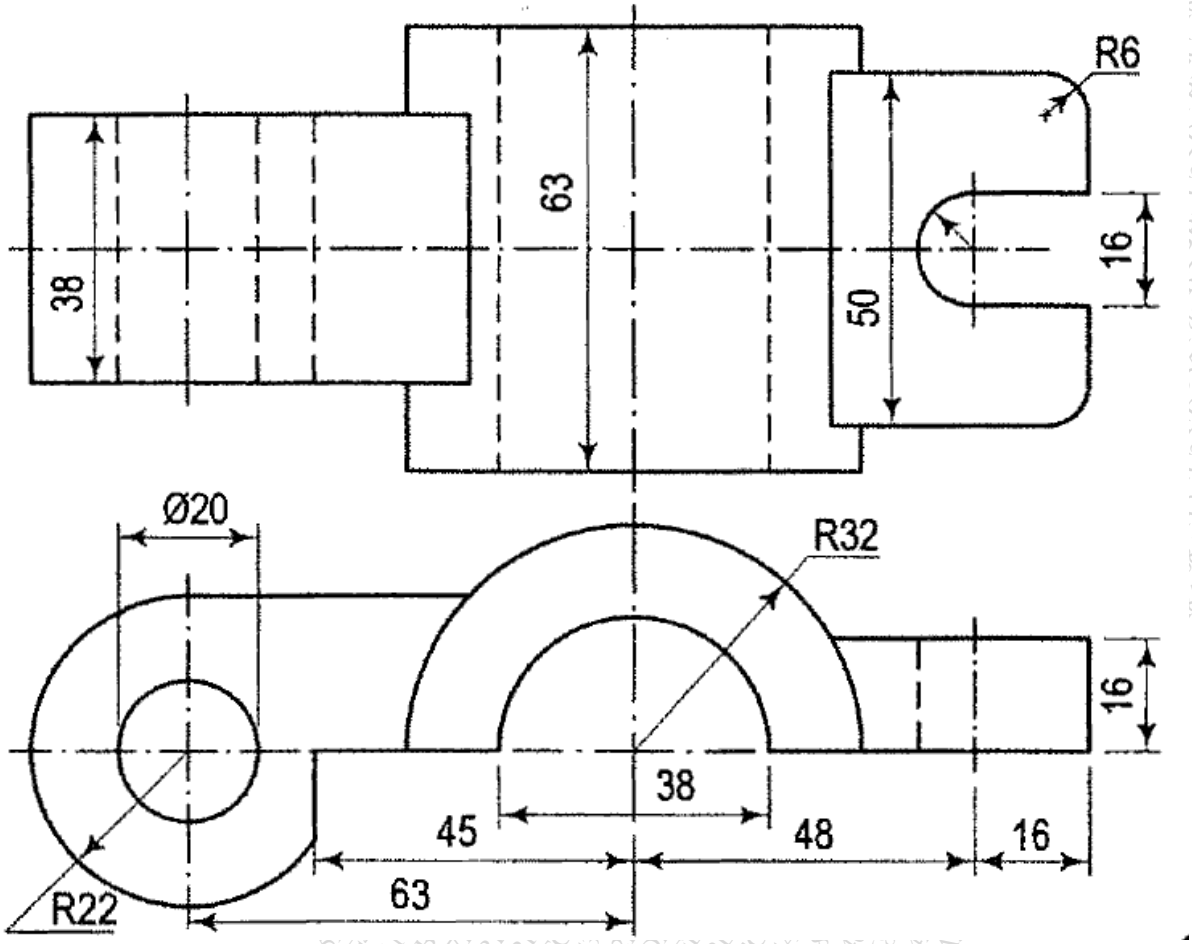
OR

A line CD, 90 mm long, measures 72 mm in FV and 65 mm in TV. Draw the two views of the line if it fully lies in the first quadrant. Find the true inclinations of the line. Assume point C at suitable distances from the RPs. **(12)**

Q.4 A triangular prism with side of base 40 mm and length of axis 70 mm has its edge of base in the V. P. and inclined at 60^0 to the H. P. The rectangular face containing that edge makes 30^0 with the V.P. Draw the projections of the prism. **(12)**

Q.5. A horizontal cylinder (axis parallel to the VP) with a 60 mm diameter and 100 mm length is cut by an auxiliary incline plane (AIP) such that the true shape of the section is an ellipse of major axis 90 mm. Draw its front view, side view and locate the cutting plane. Also, draw the true shapes of the section. **(12)**

Q.6. Draw the isometric view of the following object having FV and TV drawn by **third angle projection** method. **(12)**



DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE – RAIGAD -402 103

End Semester Examination – May 2019

Course: B. Tech (All) **Semester: I/II**

Subject: Engineering Graphics (EG1203)

Date: 23/05/2019 **Marks:** 60 **Time:** 4 Hrs.

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Instructions to the Students

1. Each question carries 12 marks.
2. Attempt **any five** questions out of the following six questions.
3. Illustrate your answers with neat sketches, diagram etc., wherever necessary.
4. If some part or parameter or dimension is noticed to be missing, you may appropriately assume it and should mention it clearly

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(Marks)

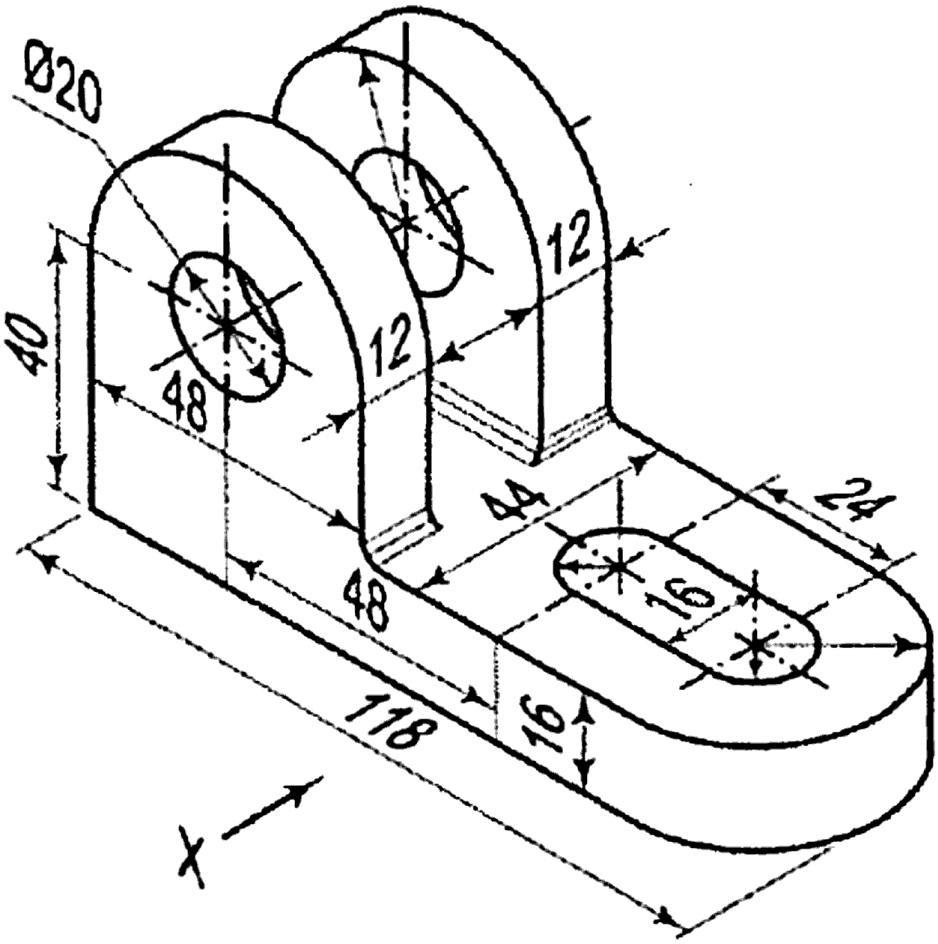
Q.1 a) Draw the following types of lines according to drawing standard SP 46. **(6)**

1. Cutting plane line
2. Centre line
3. Hidden line
4. Dimension line
5. Extension line
6. Outline

b) Draw a regular hexagon of 30 mm side by any method and draw also a circle touching each corner of the hexagon. **(6)**

Q.2 Draw the following views of the object (in X – direction) shown below, by using first angle projection method.

a) Front View (4)
b) Top View (4)
c) Right Hand Side View (4)



Q.3. Draw the projections of a regular hexagon of 25 mm side, having one of its sides in the H.P. and inclined at 60° to the V.P., and its surface making an angle of 45° with the H.P**. (12)**

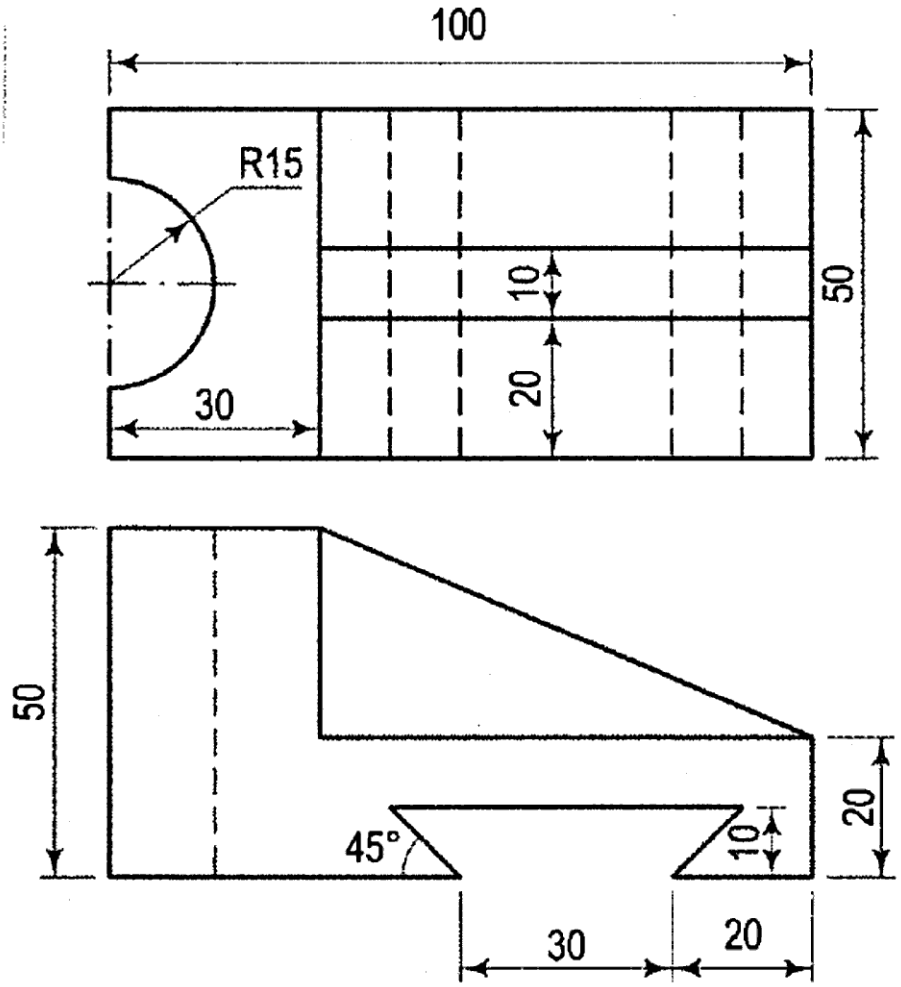
OR

A line PQ 100 mm long is inclined at 30° to the H.P. and at 45° to the V.P. Its mid-point is in the V.P. and 20 mm above the H.P. Draw its projections, if its end P is in the third quadrant and Q in the first quadrant. **(12)**

Q.4 Draw the projections of a pentagonal prism, base 25 mm side and axis 50 mm long, resting on one of its rectangular faces on the H.P. with the axis inclined at 45^0 to the V.P. **(12)**

Q.5. A cone, base 75 mm diameter and axis 80 mm long is resting on its base on the H.P. It is cut by a section plane perpendicular to the V.P., inclined at 45° to the H.P. and cutting the axis at a point 35 mm from the apex. Draw its front view, sectional top view, and sectional side view. **(12)**

Q.6. Draw the isometric view of the following object having FV and TV drawn by **third angle projection** method. **(12)**



DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE – RAIGAD -402 103

Summer Semester Supplementary Examination – 2019

Branch: All **Sem.: I/II**

Subject: Engineering Graphics (ME104/ME204)

Marks: 60 **Date: 12/06/2019** **Time: 4 Hr.**

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Instructions to the Students

1. Each question carries 12 marks.
2. Attempt **any five** questions out of the following six questions.
3. Illustrate your answers with neat sketches, diagram etc., wherever necessary.
4. If some part or parameter is noticed to be missing, you may appropriately assume it and should mention it clearly

---

(Marks)

Q. 1 Attempt the following **(2*6 = 12)**

a. Draw a regular octagon of side 30 mm

b. Draw centre line, outline and locus line.

Q. 2 Draw the following views of the object shown in fig 1 (first angle projection) **(12)**

a. Front view **(6)** **b.** Top view **(6)**

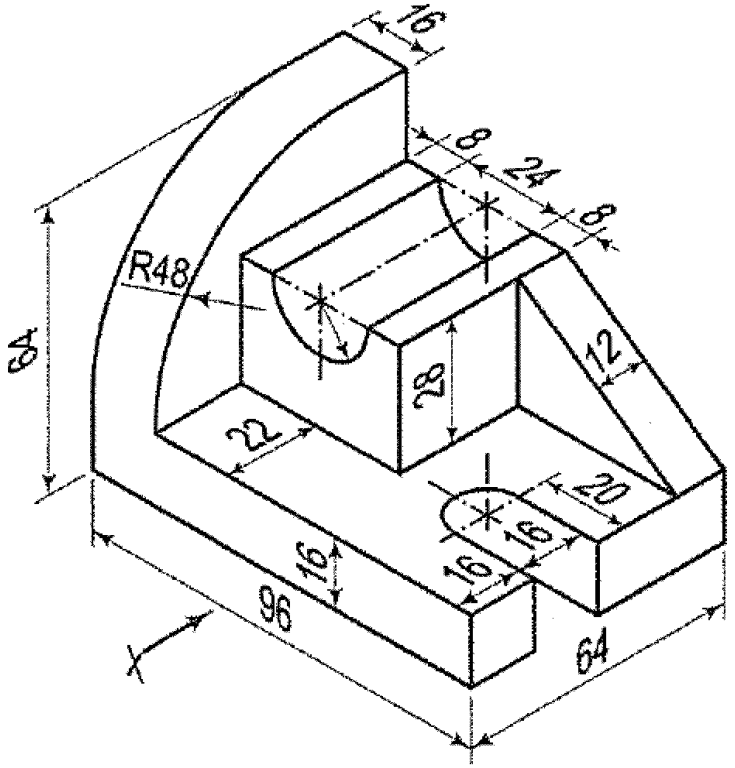


Fig. 1

Q. 3 Attempt **any one** of the following **(12)**

A line AB, 90 mm long, is inclined at 30^0 to the HP. Its end A is 12 mm above the HP and 20 mm in front of VP. Its front view measures 65 mm. Draw the TV of line AB and find its true inclination with the VP.

OR

Draw the projections of a circle of 50 mm diameter resting in the HP on a point A on the circumference, its plane inclined at 45^0 to the HP and the top view of the diameter AB making 30^0 angle with the VP.

Q.4 A pentagonal prism is resting on one of the corners of its base on the HP. The longer edge containing that corner is inclined at 45^0 to the HP. The axis of the prism makes an angle of 30^0 to the VP. Draw the projections of the solid. **(12)**

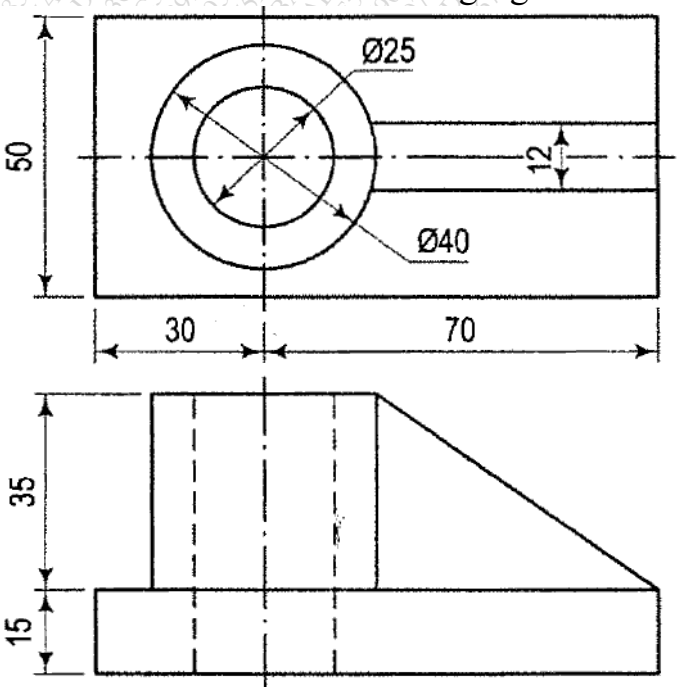
Q.5 Attempt **any one** of the following **(12)**

A square prism, base 40 mm side, axis 80 mm long, has its base on the H.P. and its faces equally inclined to the V.P. It is cut by a plane, perpendicular to the V.P., inclined at 60° to the H.P. and passing through a point on the axis, 55 mm above the H.P. Draw its front view and sectional top view.

OR

Draw the development of hexagonal pyramid of edge 30 mm and length of axis 70 mm, resting on H. P.

Q.6 Draw the isometric view of the object whose orthographic views are shown as per **third angle projections** method in the following figure. **(12)**



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