S. B. Roll. No.....

ENGINEERING DRAWING-I

1st Exam/Civil/ECE/IT/CSE/Auto/MACHATRONICS/7152/Nov'19

(FOR 2018 BATCH ONWARDS)

Duration: 4Hrs. **M.Marks:100**

SECTION-A

Q1. Fill in the blanks. **10x1.5=15**

a. A hidden object is shown by _____ lines.
b. Length of arrow head is _____ times the thickness of the line.
c. In 7:4 ratio letterings the height is taken as _____ units.
d. Front view lies above H.P. in _____ Quadrant.
e. Section lines are drawn at an angle of _____.
f. One angle between any two adjacent axes of an isometric view is _____.
g. When the ratio of drawing and object is less than 1:1 the scale is _____ scale.
h. Abbreviation R.F. represents _____
i. Front view of an object is shown in _____ plane.
j. A plane which is at right angle to two principal planes is _____.

SECTION-B

Q2. Attempt any five questions. Assume missing dimensions. **5x7=35**

a. Draw symbols of first angle and third angle projection.
b. Draw a plane scale to read meters and long enough to measure 80 meters. R.F. = 1/500. Show on it distance of 78 meters and 23 meters.
c. Draw the plan elevation of a line 40mm long which is parallel to H.P. 25mm above it and inclined at 30° to the V.P. The left end is 15mm in front of it.
d. Write in free hand vertical lettering **"WORK IS WORSHIP"** sentence taking size 10mm.
e. Draw symbols representing Glass, Wood, Cast Iron, Liquid and Earth
f. Explain the difference between isometric projection and isometric view.
g. What is the difference between full section and half section view?

SECTION-C

Attempt any two questions. **2x25=50**

Q3. Figure 1 shows pictorial view of an object. Draw front, side and top views in full scale in first angle projections.

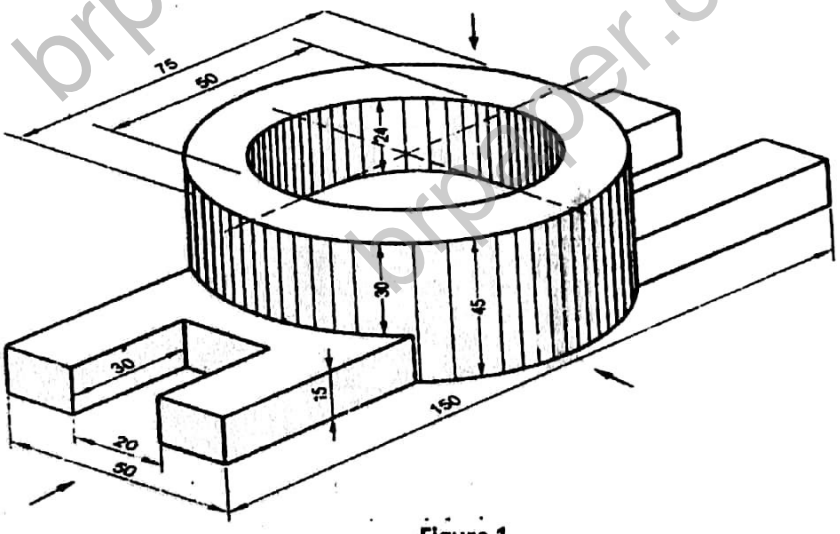
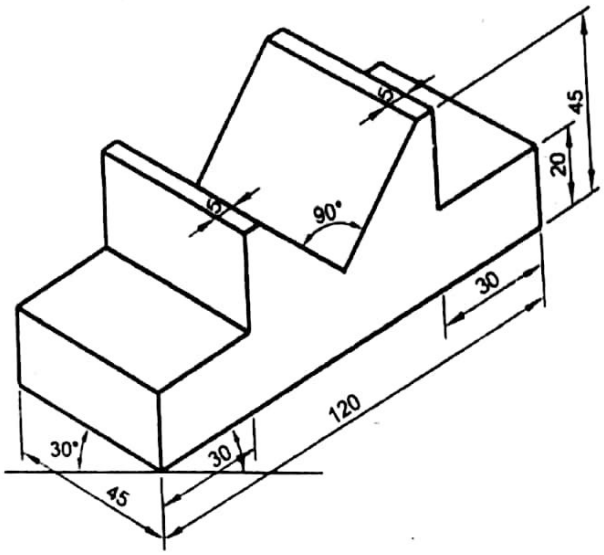


Figure 1

S. B. Roll. No.....

Q4. Draw top view, front view and side view of the following object in 1st angle projection.



Q5. Draw the isometric view of a cube 40mm side and on a square block 25mm thickness and 70 mm side. The cube and block are placed axially with their edges parallel to each other.

S.B. Roll No.....

ENGINEERING DRAWING-I

1st Exam/Common/2655/0551/5405/Nov'19

Duration: 3Hrs. **M.Marks:100**

SECTION-A

Q1. Fill in the blanks. **10x1.5=15**

a. The height of capital letters is denoted by_____.
b. Projection and dimension lines should not _____ other lines.
c. _____ scale represents three units.
d. The ratio of drawing to the object is called _____.
e. In fourth quadrant, front view and top view _____ each other.
f. Front view is projected on _____.
g. Section lines are drawn at an angle of _____.
h. Draw symbol of capacitance.
i. An object assumed to be situated in front V.P. and above H.P. is in _____ quadrant.
j. The radius of a circle is represented by _____.

SECTION-B

Q2. Attempt any five questions. **5x7=35**

i. Print **"WORK IS WORSHIP"** in single stroke vertical letters in the ration of 7:4 and height of 35mm.
ii. A 3.2 cm long line represents a length of 4 meters. Extend this line to measure lengths up to 25 meters and show on it units of meter and 5 meters. Show the length of 17 meters on this line.
iii. Differentiate between Aligned system and unidirectional system of dimensioning.
iv. P is 20 below HP & lies in III quadrant. Its shortest distance from xy is 40. Draw its projections.
v. Draw the symbols for the following
a) Circuit Breaker b) Bell c) Earth d) Glass e) Urinal Floor
vi. List the six different views in first angle projection.
vii. Explain by making sketches the dimensioning technique for (a) Chain dimensioning, (b) Parallel dimensioning, (c) dimensioning of angles, (d) equally spaced on P.C.D., (e) counter bore holes

SECTION-C

Attempt any two questions. **2x25=50**

Q3. **Figure 1** shows pictorial view of an object. Draw front, side and top views in full scale in first angle projections.

Q4. **Figure 2** shows pictorial view of an object. Draw the following
a. Sectional end view
b. Front view
c. Top view, in first angle projections.

Q5. On the top of the cube of 30 mm edge, rests a sphere of diameter 30 mm at the centre of cube. The axes of cube and sphere are in the same straight line. Draw isometric view of the solid.

S.B. Roll No.....

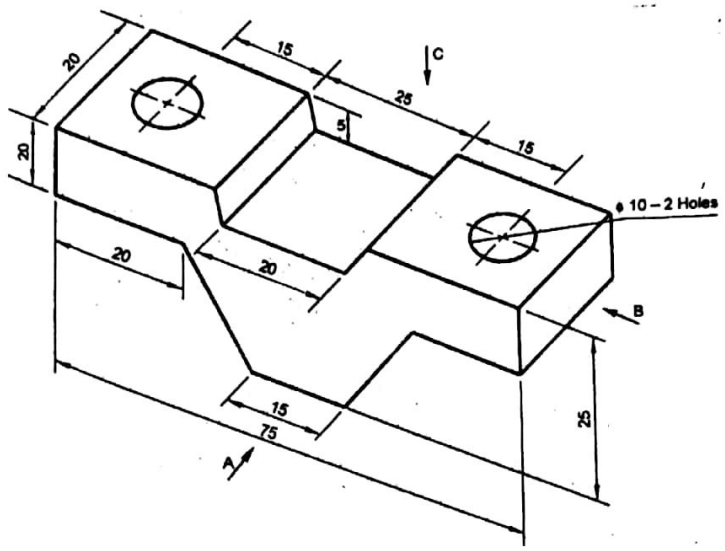


Figure 1

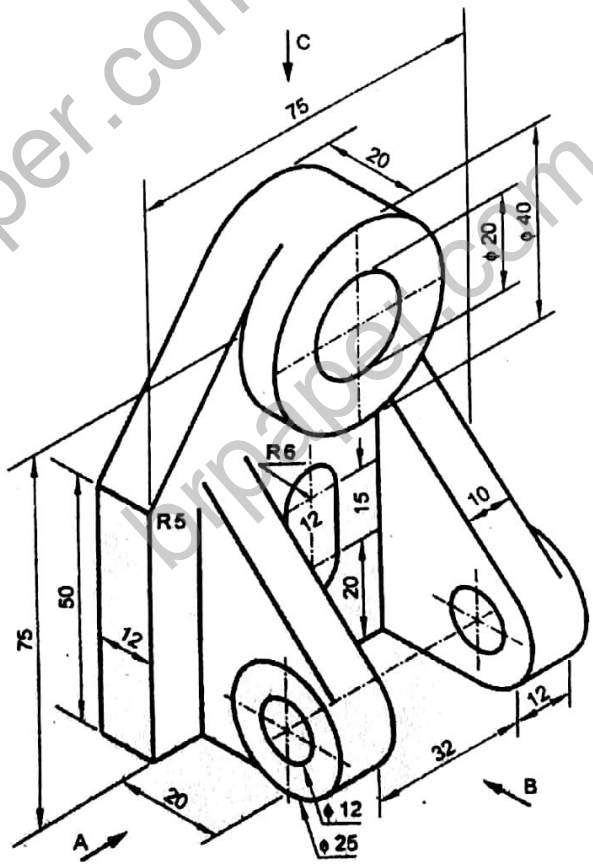


Figure 2

S.B. Roll No……

ENGINEERING DRAWING-II

2nd Exam/Common/2454/2551/5426/May'19

Duration: 3Hrs. **M.Marks:100**

SECTION-A

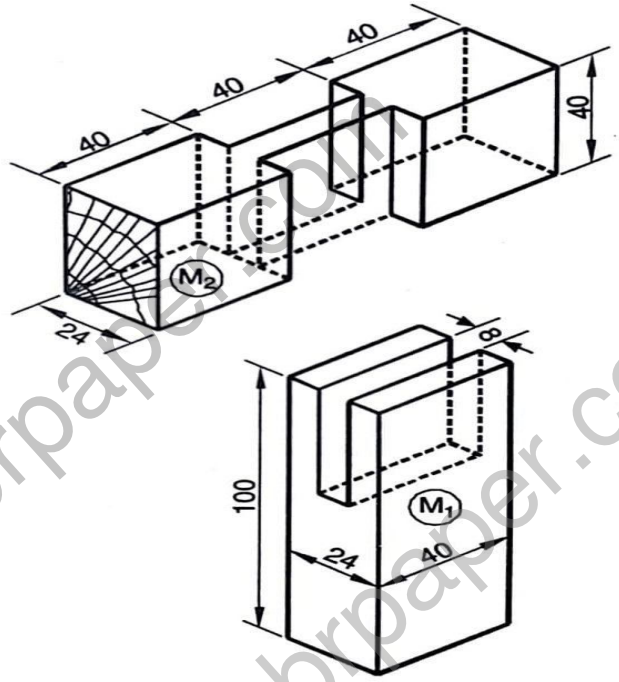
Q1. Do as directed. **10x1.5=15**

a. A detailed drawing is one which describes a single part or several parts individually. (T/F)
b. Caulking is the process to breakdown rivet joint.(T/F)
c. The angle of American thread is 45°. (T/F)
d. Knuckle joints are used in _____links.
e. _____and _____are done to make the riveted joint airtight.
f. For transmitting power in one direction _____thread is used.
g. The angle of an ACME thread is _____degrees.
h. _____bolt is used for lifting heavy machine.
i. CAD stands for_____
j. Rivets are made of _____materials.

SECTION-B

Q2. Attempt any three questions. **3x15=45**

a. Following fig. shows the pictorial view of a Bridle joint. Draw the orthographic view of assembly.



b. Draw in detail the following types of thread forms:
i) Square threads ii) Acme threads iii) B.S.W. threads
c. Draw top, front and side view of hexagonal nut for a bolt of diameter equal to 24 mm.
d. Draw any five types of riveting heads having 20mm diameter.
e. Draw front view of castle nut taking diameter 20mm.

SECTION-C

Q3. Attempt any two questions. **2x20=40**

i. Draw orthographic view in 1st angle projection of hexagonal headed bolt with hexagonal nut and washer. Take diameter of bolt is 24mm.
ii. Draw sectional front view and top view of a triple riveted lap joint (chain type). Take diameter of rivet as 18mm.
iii. Draw front view of a protected type flange coupling used to connect two shafts of 25 mm. diameter.

S.B. Roll No.....

ENGINEERING DRAWING-I

1st Exam/Common/2655/0551/5405/May'19

Duration: 3Hrs. **M.Marks:100**

SECTION-A

Q1. Fill in the blanks. **10x1.5=15**

a. Size of trimmed drawing sheet of A_2 designation is _____.
b. _____ letters have alphabets and numerals of uniform thickness.
c. Ratio of length and thickness of an arrow head in dimensioning is _____.
d. Length of scale = _____ x maximum length to be measured.
e. Section lines are drawn at an angle of _____.
f. Thin sections are entirely shown _____.
g. An obtuse angle is _____ than the right angle.
h. A circle in isometric projection appears as _____.
i. In third angle projection top view is drawn _____ the front - view.
j. Isometric length is about _____ % of true length.

SECTION-B

Q2. Answer the following:

(A) Draw the conventional representation/symbol for **any five** of the following: **10**
Hidden Line, Dimension Line, Short Break Line, Lead, Steel, Wood

(B) Write the following sentence in free hand taking the height of letter as 8 mm. **15**
INDIA IS A SOVEREIGN SOCIALIST SECULAR DEMOCRATIC REPUBLIC

SECTION-C

Q3. Attempt any two Questions.

i. **Figure - 1** shows the pictorial view of an object in which various surfaces are marked by different alphabets. Identify and mark the surfaces in the direction of arrows A, B and C and name the views. **30**

ii. **a)** Explain the methods of Aligned and Unidirectional System of dimensioning with the help of suitable figures. **10**
b) Draw a scale to show meters and decimeters, when 1 mm is represented as 2.5 cm and the scale is long enough to measure to measure 5m. Find R.F. and indicate on scale – 3 m 4 d m **20**

iii. Pictorial View of an object is shown in **figure - 2.**
Draw its (i) Sectional Front View (ii) Side View (iii) Top View **30**

iv. A cylindrical slab 75 mm in diameter and 45 mm thick is surmounted by a cube of 40 mm edge. On the top of a cube, rests a square pyramid, altitude 40 mm and side 25 mm. The axes of the solids are in the same straight line. Draw isometric projections of the solids placed as mentioned above (use isometric scale). **30**

S.B. Roll No……

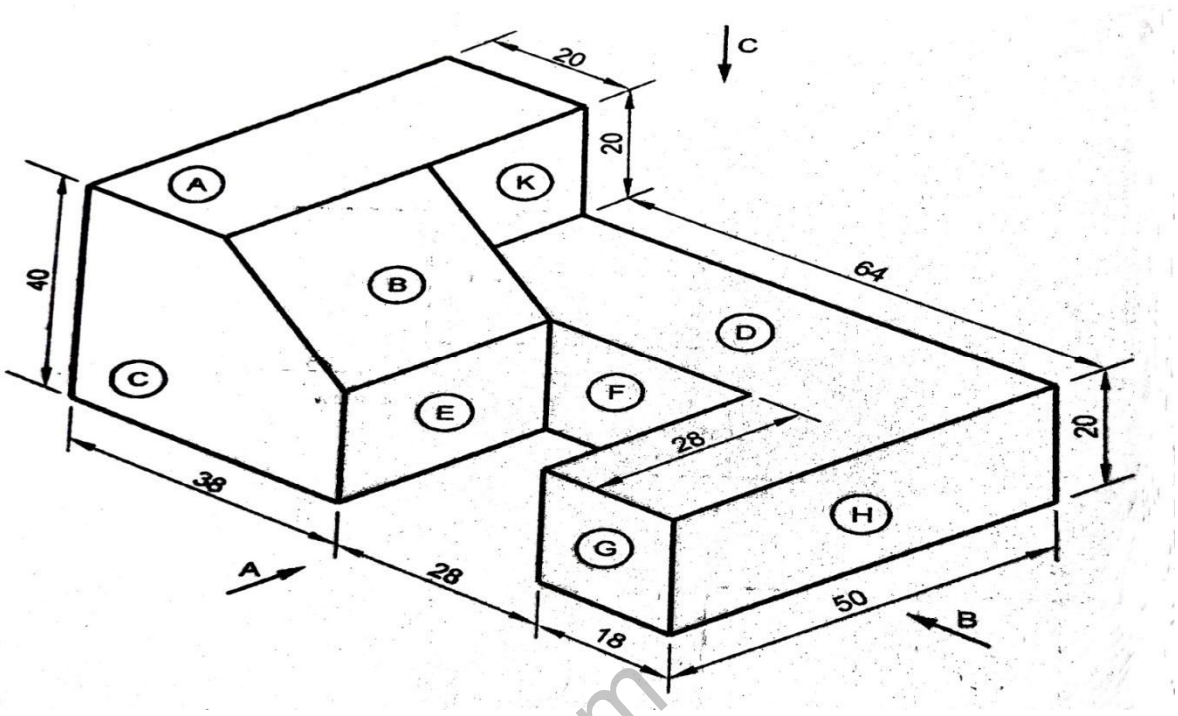


FIGURE-1

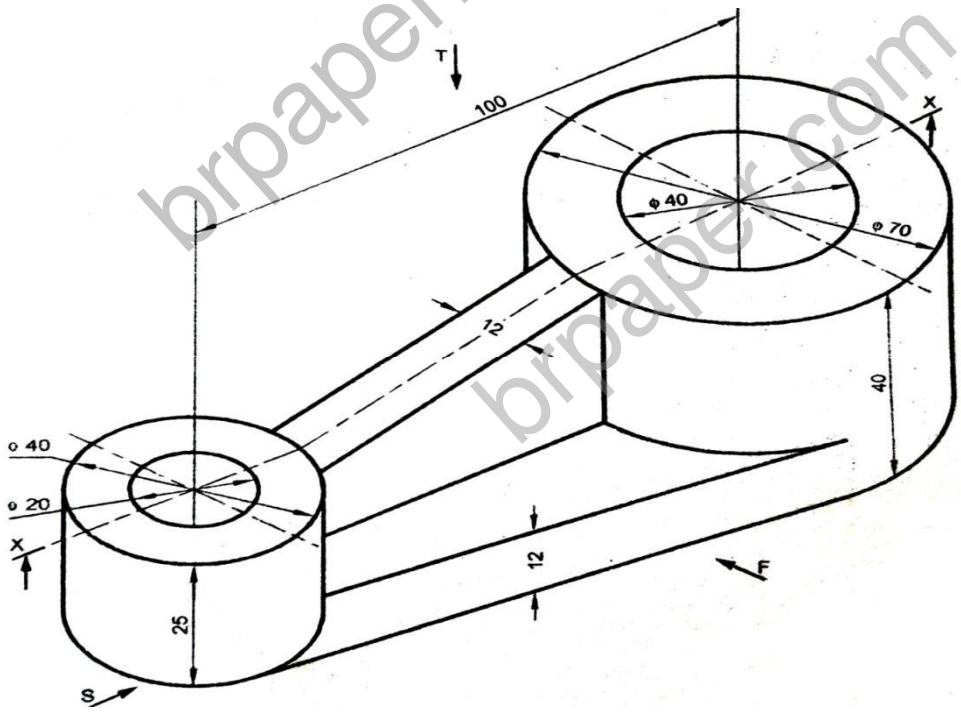


FIGURE-2

S.B. Roll No……

ENGINEERING DRAWING-I

1st Exam/Civil/Mech./Electrical/ECE/IT/CSE/Auto/Machatronics/7152/May'19

(FOR 2018 BATCH)

Duration: 4 hrs **M. Marks. 100**

SECTION-A

Q1. Fill in the blanks. **10x1.5=15**

a. The section lines are drawn at _____ to the horizontal line.
b. Half scale is indicated as _____
c. Plain scale represents _____ units.
d. In lettering size of letters is described by their_____
e. The purpose of sectioning is to show the _____ details of an object.
f. Length of scale = _____ X _____
g. Isometric view of a circle is an_____
h. A hidden object is shown by _____ line.
i. Length of an arrowhead is _____ times the thickness of the arrowhead.
j. A diameter is denoted by _____

SECTION-B

Q2. Attempt any five questions. **5x7=35**

i. What is difference between third angle and first angle projection?
ii. Write in freehand vertical lettering "**TIME IS GREAT HEALER**" sentence taking size 10mm.
iii. Construct a plane scale of RF 1/40 to show metres and decimetres and long enough to measure 8 metres. Show a distance of 6 metres and 4 decimetres on this scale.
iv. A line 50mm long is inclined at 45° to the V.P. It is parallel to H.P. and 20 mm above it. Draw its elevation.
v. Draw the symbols representing the following: -
a) Glass b) Wood c) Cast Iron d) Liquid e) Earth
vi. What is importance of dimensioning? Explain chain and parallel dimensioning.
vii. Explain true scale and isometric scale.

SECTION-C

Q3. Attempt any two questions. **2x25=50**

a. A cube of 40 mm edge is placed on a cylindrical slab 75 mm in diameter and 45 mm thick. On the top of the cube, rests a square pyramid, altitude 40 mm and side of base 25 mm. The axes of solids are in the same straight line. Draw isometric view of the solid.
b. **Figure 1** shows pictorial view of an object. Draw front, side and top views in full scale in first angle projections.
c. **Figure 2** shows isometric view of an object. Draw full sectional front view and half sectional side view.

S.B. Roll No……

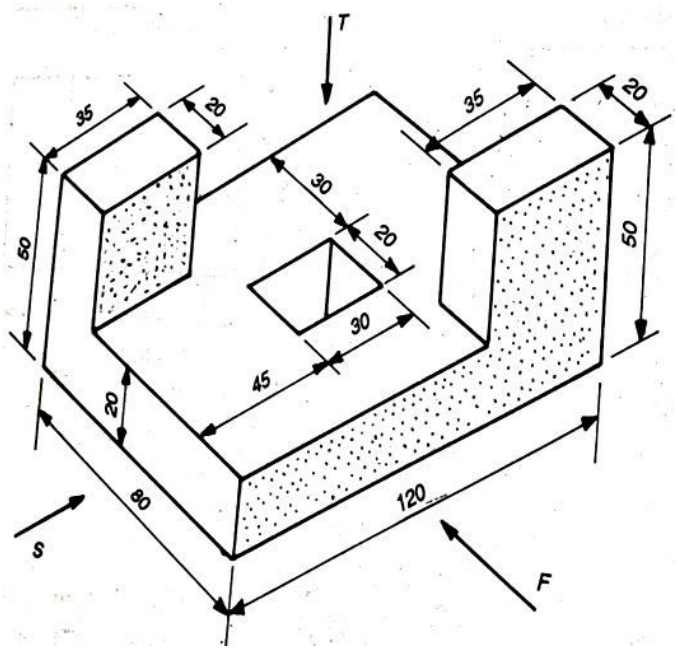


Figure-1

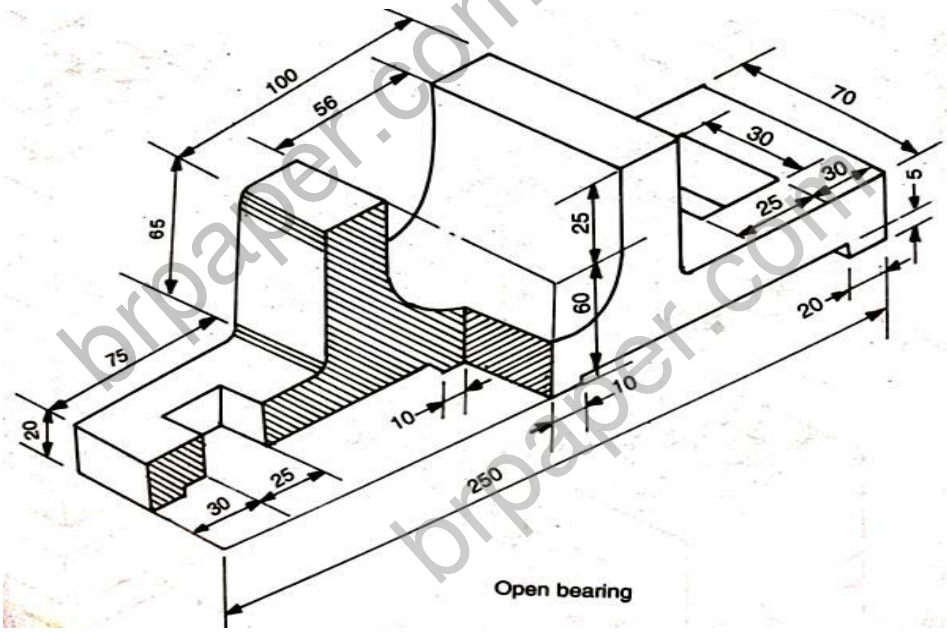


Figure-2

S.B. Roll No……..

ENGINEERING DRAWING-II

2nd Exam/Common/2454/2551/5426/Sep'2020

Duration: 1.15 Hrs. **M.Marks:25**

SECTION-A

Q1. Attempt any one question. **10x1=10**

a. Draw the front view and side view of a hexagonal nut taking diameter as 24 mm.
b. Draw free hand but proportionate sketches of the following taking pitch as 'P'.
   a) Metric threads b) Acme threads
c. Draw proportionate front view and side view of a spigot and socket joint.
d. Make freehand pictorial sketch of a gib head key.

SECTION-B

Q2. Attempt any one question. **1x15=15**

i. Draw top and sectional view and sectional front view of a single riveted double cover or strap butt joint. Take dia. of rivet as 24 mm. Draw third angle projection.
ii. Draw three views of hexagonal headed bolt with hexagonal nut and washer assembly diameter of bolt, d=24 mm.
iii. Draw the front view of knuckle joint assembly. Take all the dimensions proportionately (free hand).

S.B. Roll No……..

ENGINEERING DRAWING-I

1st Exam/Common/2655/0551/5405/Sep'2020

Duration: 1.15 Hrs. **M.Marks:25**

SECTION-A

Q1. Attempt any two questions. **2x5=10**

a. What is difference between third angle and first angle projection?
b. Draw various conventions for various lines used in engineering practice.
c. Write in freehand vertical lettering "BASANT" sentence taking size 30mm in 7:4.
d. Draw the symbols representing the following:-
   a) Earth b) Cement Concrete c) Wood d) Brickwork e) Cast iron
e. Draw the isometric projection of a square prism 50mm side and 70mm height.
f. What is the difference between true scale and isometric scale?
g. What do you understand by cutting plane line? Where it is used?
h. Define plain scale and diagonal scale.

SECTION-B

Q2. Attempt any one question. **1x15=15**

i. A right circular cylinder of diameter 40mm and height 60mm is centrally placed vertically on a 50mm square prism of thickness 15mm. Draw isometric projection of the cylinder placed vertically on a prism.
ii. **Figure 1** shows pictorial view of an object. Draw front, side and top views in full scale in first angle projections.
iii. **Figure 2** shows isometric view of an object. Draw full sectional front view, full sectional side view.

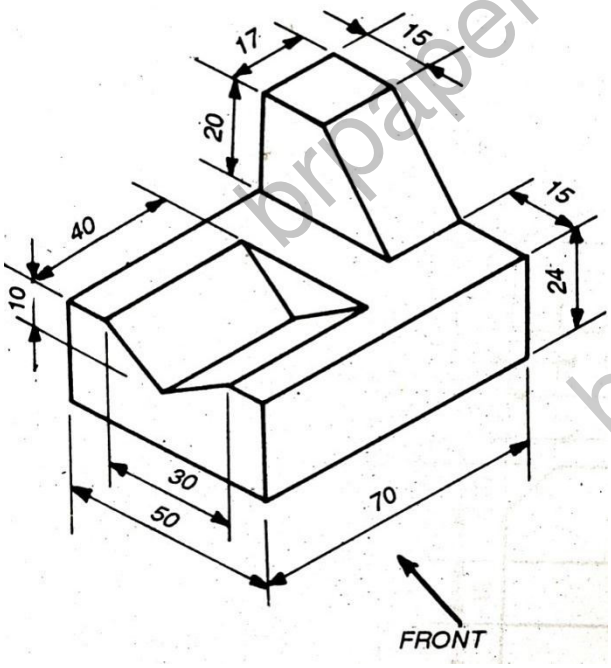


Figure-1

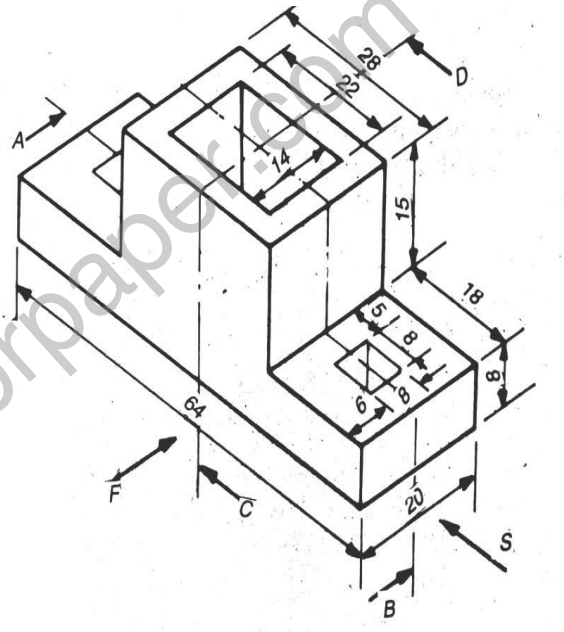


Figure-2

S. B. Roll. No.....

ENGINEERING DRAWING II

2nd Exam/ Civil/Elect/Mech./Auto/Mechatronic/2953/Jun'2021

(For 2018 Batch Onwards)

Duration: 1.15Hrs. **M.Marks:25**

SECTION-A

Q1. Attempt any one question. Assume missing dimensions. **1x10=10**

i. Draw the basic thread forms of the following threads.
   a) Knuckle Thread b) Buttress Thread c) American Thread
ii. Draw proportionate drawing of following Rivet Heads.
   a) Flat Counter Sunk b) Snap Head c) Conical Head
iii. Draw front and top view of a hexagonal nut for a bolt of diameter 24mm.

SECTION-B

Q2. Attempt any one question. **1x15=15**

a. Draw top view and sectional front view of a double riveted lap joint (Zig-Zag riveting). Take Diameter of rivet = 24mm.
b. **Fig.** shows the component drawings of a knuckle joint. Draw the top view and front sectional view of the assembly.
c. Draw front view and side view of a hexagonal headed bolt with double chamfered nut, lock nut and washer assembly. Take Diameter of bolt = 24mm

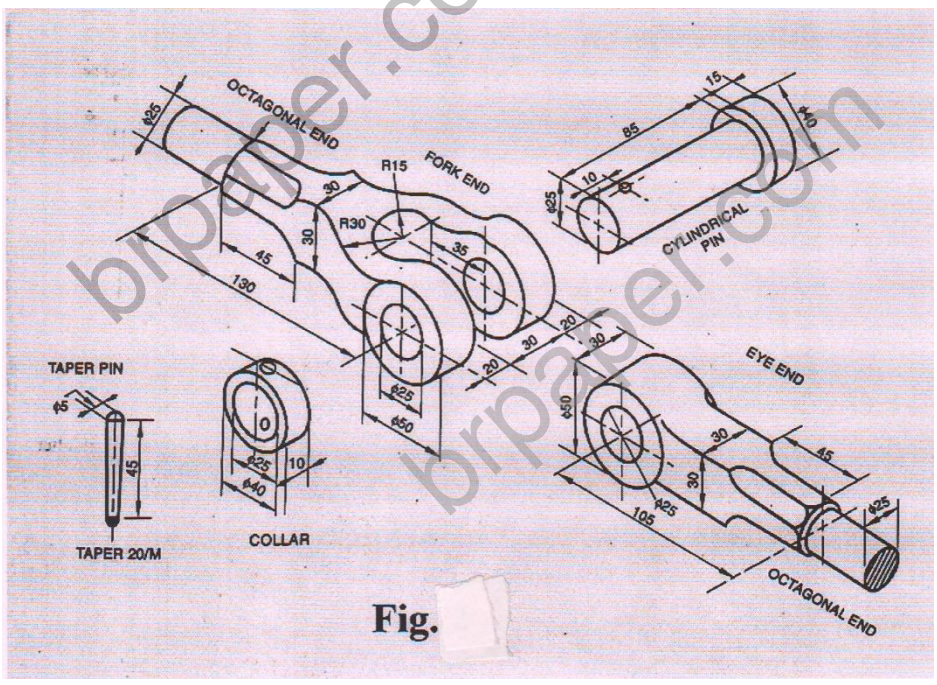


Fig.

S. B. Roll. No.....

ENGINEERING DRAWING-I

1st Exam/Common/2655/0551/5405/Jun'2021

Duration: 1.15Hrs. **M.Marks:25**

SECTION-A

Q1. Attempt any one questions. **1x10=10**

i. Print "ENGINEERING" using single stroke inclined lettering in the ratio of 7:4 and height of 28mm.
ii. Construct a diagonal scale of RF 1:250 to show decimetre & long enough to measure up to 30m. Indicate a distance of 28.9m on it.
iii. Draw the Conventional symbols for the following
a) Pipe or tubing b) Channel section c) Round Section

SECTION-B

Attempt any one question. **1x15=15**

Q2. **Figure 1** shows pictorial view of an object. Draw front, side and top views in full scale in first angle projections.

Q3. Figure 2 shows pictorial view of an object. Draw the following.

a. Sectional front view along XX
b. Side view
c. Top view, in first angle projections.

Q4. On the top of the cube of 60 mm edge, rests a cylinder of diameter 30 mm and height 50 mm. The axes of cube and cylinder are in the same straight line. Draw isometric view of the solid.

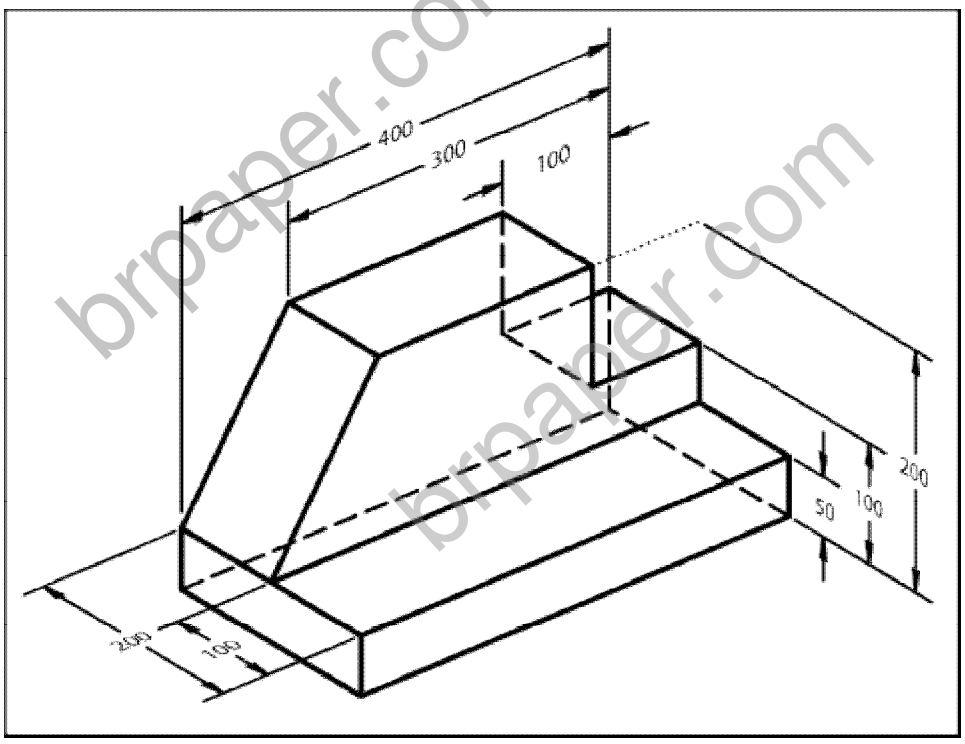


Figure 1

S. B. Roll. No.....

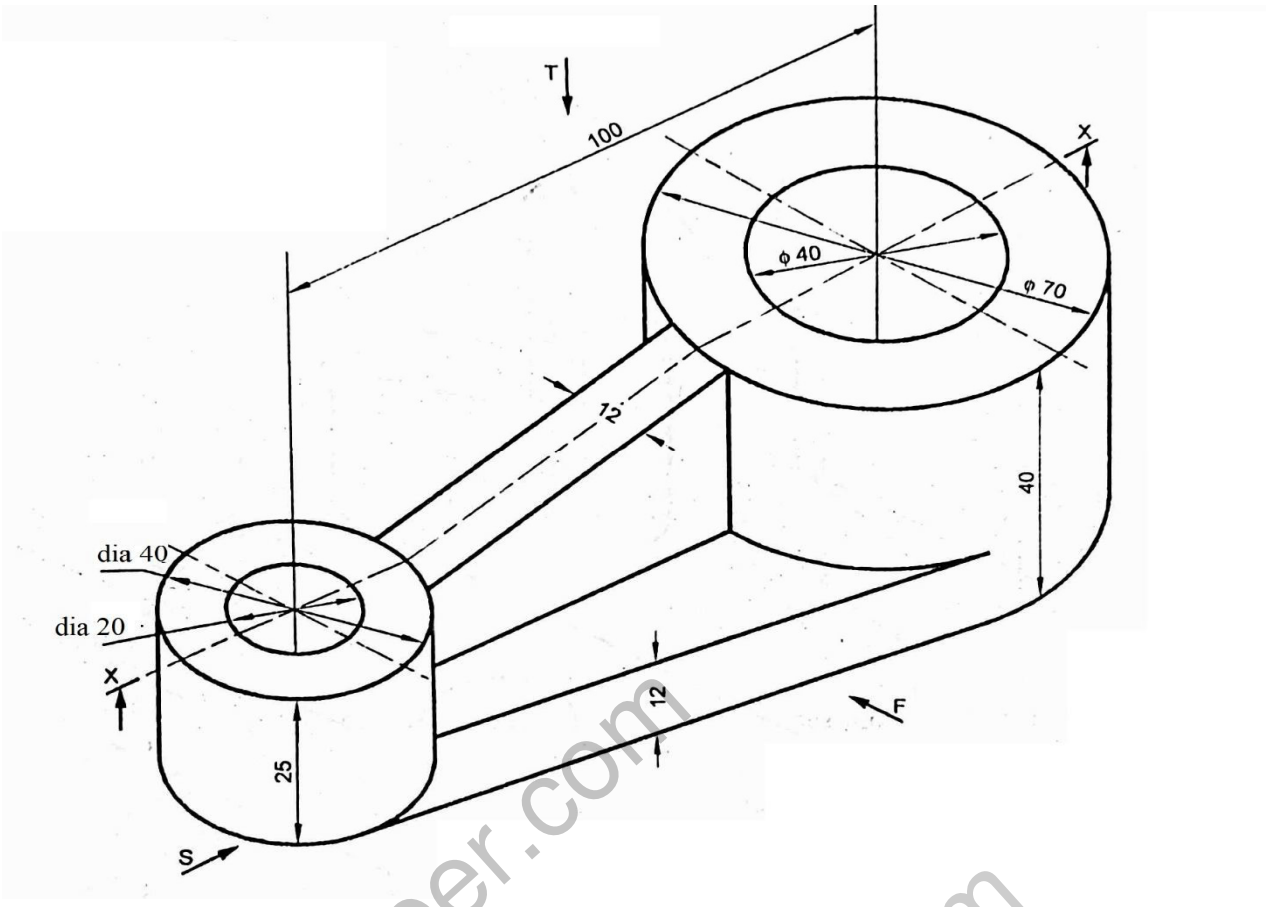


Figure-2

S. B. Roll. No.....

ENGINEERING DRAWING-I
1st Exam/Common/7152/Jun'2021
(For 2018 batch onwards)

Duration: 1.15Hrs. **M.Marks:25**

SECTION-A

Q1. Attempt any one questions. **1x10=10**

i. Write in single stroke capital letters in the ratio 6:5 in the height of 35mm, the following statement: WORK IS WORSHIP
ii. Draw the conventional breaks of the following materials.
a) Pipe b) Wooden rectangular section c) Rolled Section d) Channel section.
iii. Draw various conventions for various lines according to B.I.S. as used in engineering practice.
iv. To draw a simple scale or plain to show meters and decimeters when one meter is represented by 2.5 centimeters on the scale. The scale should be long enough to measure upto 6 metres. Mark on the scale 4 metres 7 decimetres and 5 metre one decimeter.

SECTION-B

Attempt any one question. **1x15=15**

Q2. Isometric view of a block as shown in fig (a) is given showing complete dimensions. Draw to a suitable scale the views a) Front view b) Side view c) Top view in first angle projection.

Q3. An isometric view of a cast iron block is given in Fig (b). Draw a) Front view b) Sectional side view.

Q4. A right circular cylinder of diameter 40mm and height 60mm is centrally placed vertically on a 50mm square prism of thickness 15mm. Draw front view of the cylinder and block. Draw isometric projection of the cylinder placed vertically on a prism.

S. B. Roll. No.....

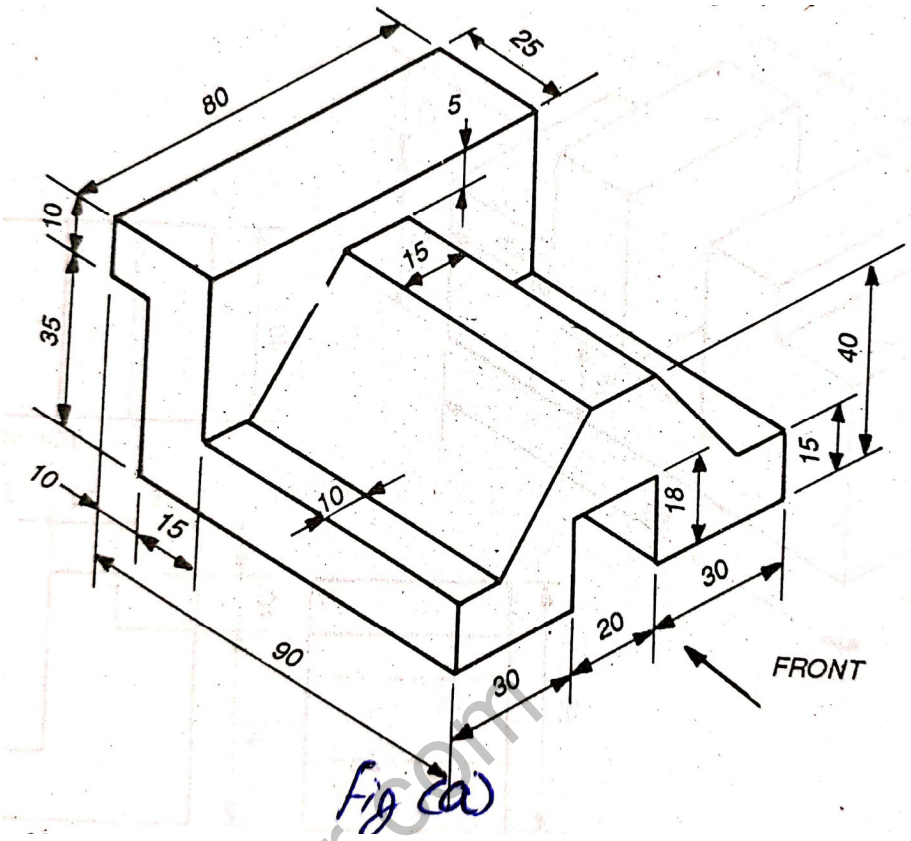


Fig (a)

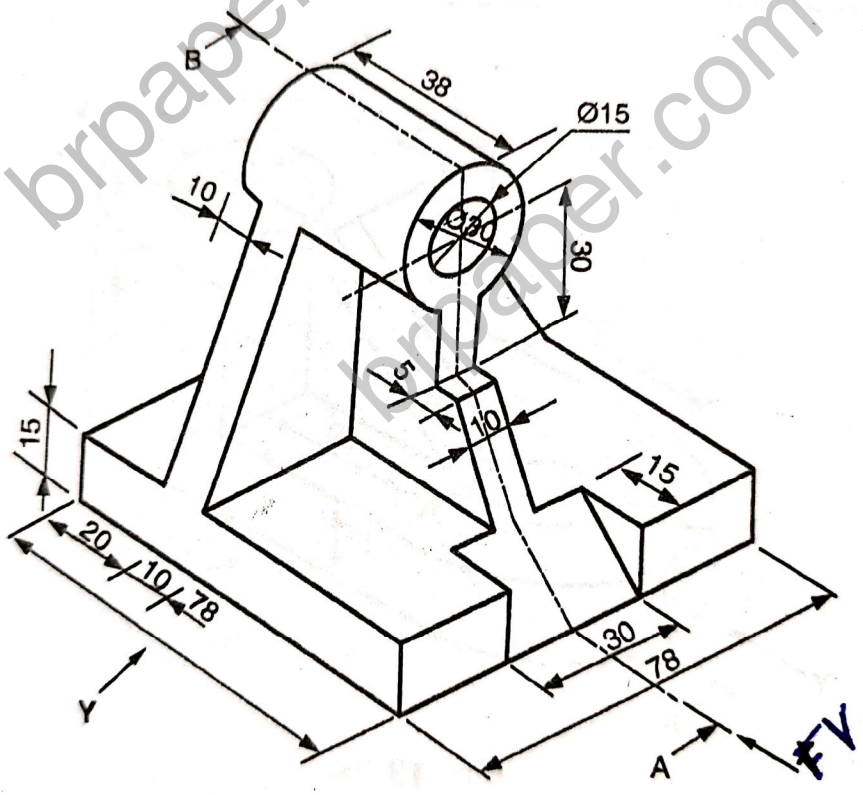


Fig. (b)