ROLL NUMBER				

SET	A

INDIAN SCHOOL MUSCAT
FINAL EXAMINATION 2022
ENGINEERING GRAPHICS
(SUBJECT CODE:046)

CLASS : XII
DATE: 28.11.2022

TIME ALLOTED: 3 HRS.
MAXIMUM MARKS: 70

GENERAL INSTRUCTIONS:

(i)Attempt all the questions.

(ii) Use both sides of the drawing sheet, if necessary.

(iii) All dimensions are in millimeters.

(iv) Missing and mismatching dimensions, if any, may be suitably assumed.

(v) Follow the SP: 46 – 2003 revised codes. (with first angle method of projection)

(vi) In no view of question 21, are hidden edges or lines required.

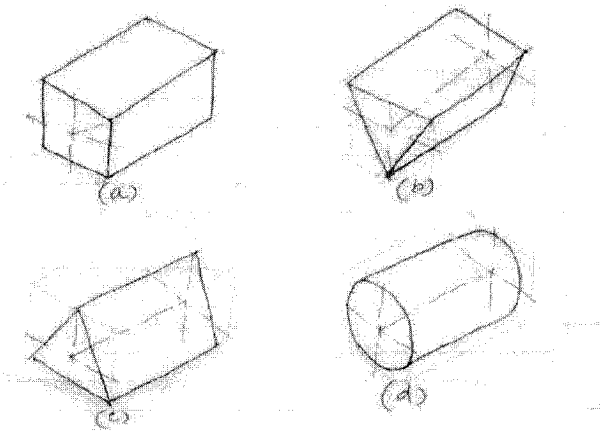
(vii) In question 23, hidden edges or lines are to be shown in views without section.

Q 1 to Q 8 – Answer the following multiple choice questions. Print the correct choice on your drawing sheet:

1. In..... , only two angles between three principal axes are equal and over 90° 1

   A. isometric projection,
   B. diametric projection
   C. trimetric projection
   D. axonometric projection

2. A solid resting on one of its long edges: 1



3. The angle of chamfer is usually _____ with the base of a hexagonal nut. 1

A. 10°

B. 20°

C. 30°

D. 40°

4. CRS in Open Bearing stands for: 1

A. Centre to center distance

B. Edge to edge distance

C. Corner to corner distance

D. Top to bottom distance

5. ..... can also be called as unified thread. 1

A. B.S.W thread
B. Metric thread
C. Square thread
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6. The surface connecting crest and root is called..... 1

A. Lead B. Pitch C. Flank D. Core

7. This joint is used to join two rods of square or rectangular in cross section. 1

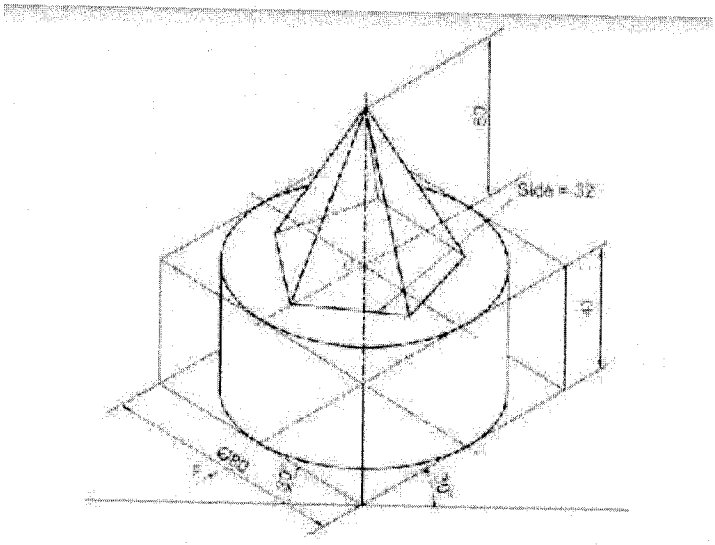
A. Sleeve and cotter
B. Turn buckle
C. Bushed bearing
D. Gib and cotter

8. _____ resembles an inverted solid. 1

A. A cone filled with ice-cream
B. A glass prism
C. Pyramid of Giza
D. A cylindrical glass tumbler

Q 9 to Q 14 – Select the correct option corresponding to the orientation of the given Isometric Projection:

9. 1



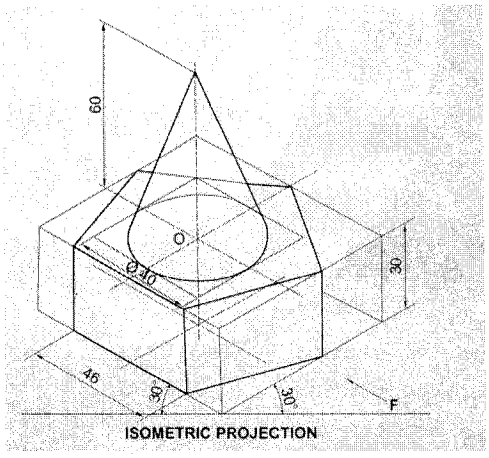
A. The size of common axis is true 90mm.

B. The size of common axis is less than true 90mm.

C. The size of common axis is more than true 90mm.

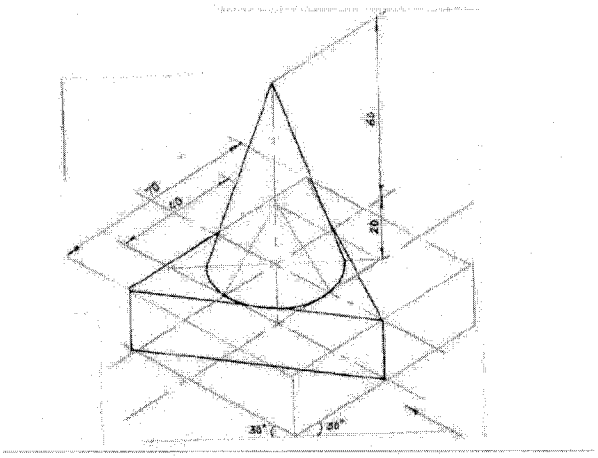
D. The size of common axis is true 100mm

10. 1

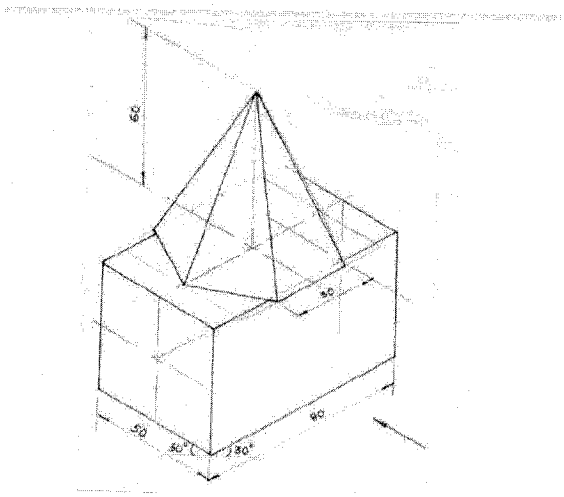


A. One of the sides of the pentagonal prism is parallel to VP and away from it.
B. One of the sides of the pentagonal prism is perpendicular to VP and closer to it.
C. One of the sides of the pentagonal prism is parallel to VP and closer to it.
D. One of the sides of the pentagonal prism is perpendicular to VP.

11. 1



A. Both the solids are vertical and one of the base edges of the prism is parallel to VP and nearer the observer.
B. Both the solids are vertical and one of the base edges of the prism is perpendicular to VP.
C. Both the solids are vertical and one of the base edges of the prism is parallel to VP and near it.
D. Both the solids are vertical and two of the base edges of the prism are parallel to VP.

12. 

1

A. A vertical pentagonal pyramid with one of its base edges parallel to VP is placed centrally on a horizontal square prism with its square ends parallel to VP.
B. A vertical pentagonal pyramid with one of its base edges perpendicular to VP is placed centrally on a horizontal square prism with its square ends perpendicular to VP.
C. A vertical hexagonal pyramid with two of its base edges perpendicular to VP is placed centrally on a horizontal square prism with its square ends parallel to VP.
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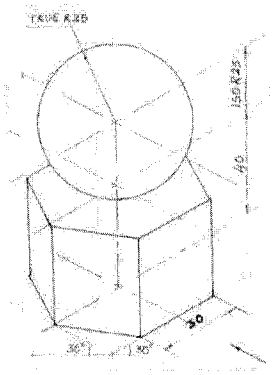
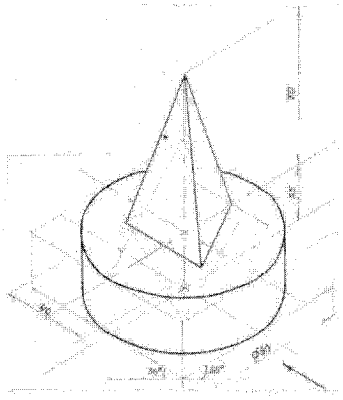
13. 

1

A. The isometric projection of a sphere is a circle whose diameter is equal to the isometric diameter of the sphere.
B. The isometric projection of a sphere is a circle whose diameter is equal to the true diameter of the sphere.
C. The isometric projection of a sphere is a circle whose diameter is equal to half of the true diameter of the sphere.
D. The isometric projection of a sphere is a circle whose diameter is equal to double of the true diameter of the sphere

14. 1



A. A vertical square pyramid is kept on a vertical circular disc.
B. A vertical triangular pyramid is kept on a vertical square slab.
C. A vertical square pyramid is kept on a vertical square slab.
D. A vertical triangular pyramid is kept on a vertical circular disc

15. Two statements are given – one labelled assertion (A) and the other labelled reason (R). 1

Select the correct answer to the following question from the codes (a), (b), (c) and (d) as given below:

A. Both A and R are true and R is the correct explanation of A.
B. Both A and R are true and R is not the correct explanation of A.
C. A is true but R is false.
D. A is false and R is also false.

A: The actual depth of square thread is given as 0.96P, where P represents the pitch of thread.

R: The portion between crest and root is called as pitch

Q16 to Q 20 – Answer Read the following para and answer the following questions. 5

Rehan who is in class 12 Engineering Graphics student, came across a fastener similar to the image given below on the broken handle a pressure cooker at home. He tried fastening it back to the body of the pressure cooker but failed. Help him to know more about this fastener.

16. What kind of fastener is this?

A. Temporary
B. Permanent
C. Nail
D. Stud

17. It is a …….. , which is also use d in bridges, boilers and other engineering works.

A. Turn buckle
B. Sleeve and cotter
C. Rivet
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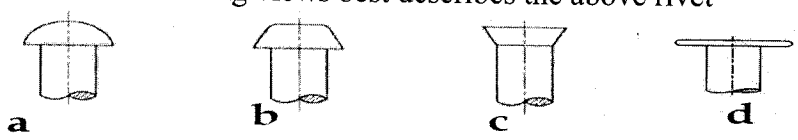
18. Which of the following views best describes the above rivet



19. It is a ……

A. Snap head rivet
B. Stud with collar neck
C. Plain stud
D. 60°CSK rivet

20. If the top view of the above machine part were to be drawn, the diameter of the outermost circle would be……

A. D
B. 2D
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D. 1.6D

21. (a) Construct an isometric scale 5

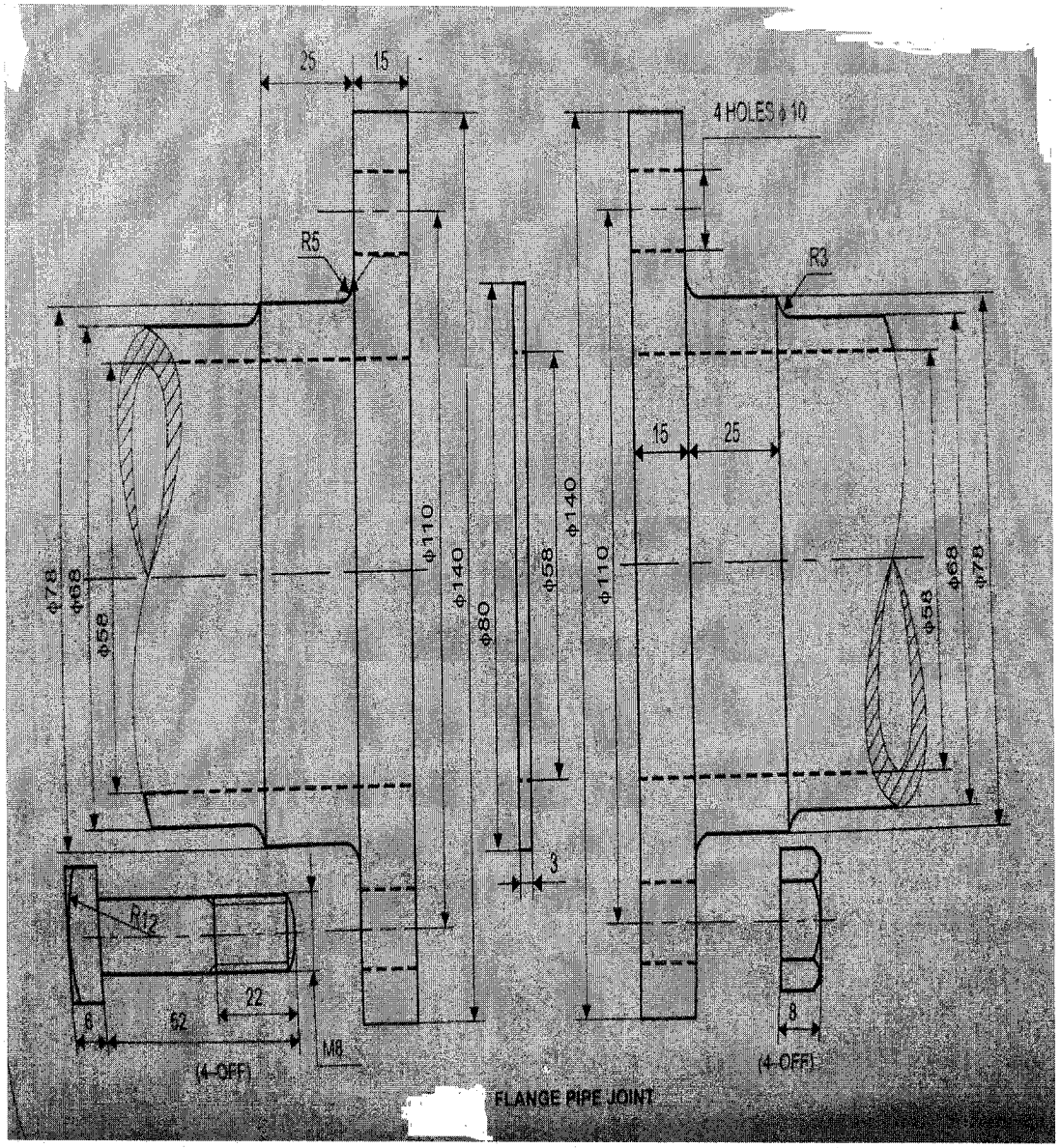
(b) Draw the isometric projection of a pentagonal prism (base edge 25 mm, axial length 55mm) resting on its face with its axis parallel to H.P. and V.P. both. Indicate the direction of viewing. Give all the dimensions. 10

22. Draw to scale 1:1, the front view and top view of a square headed nut across flat, the diameter is given as 25 mm. The axis of the nut is vertical. Give the standard dimensions. 8

23. Figure shows the details parts of a PIPE JOINT. Assemble all the parts correctly and then draw to scale 1:1; it's following views: 27

(a) Front View, right half in section (b) Left side View Print the title and scale used.

Draw projection symbol. Give 6 important dimensions.



******END OF THE QUESTION PAPER******

ROLL NUMBER				

SET	C

INDIAN SCHOOL MUSCAT

FINAL EXAMINATION 2022

ENGINEERING GRAPHICS

(SUBJECT CODE:046)

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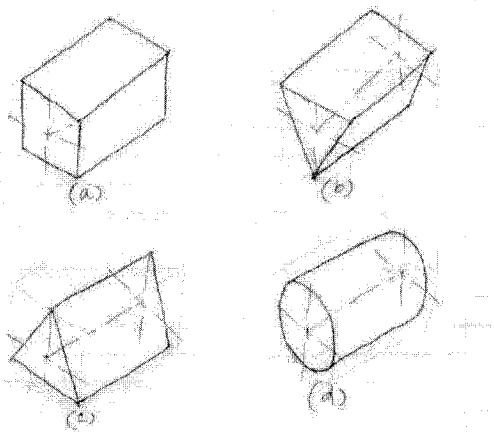

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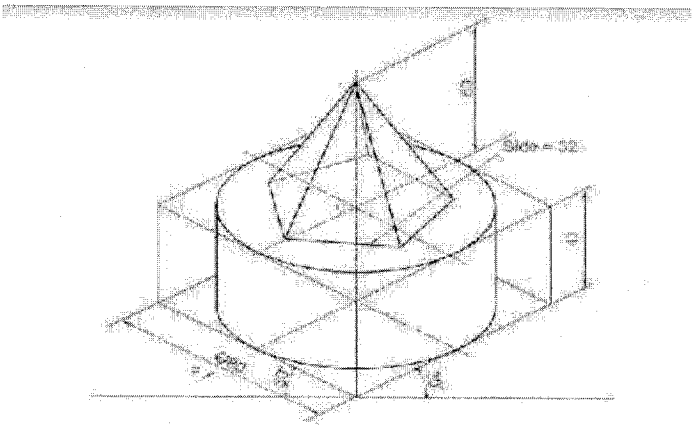
9.  1

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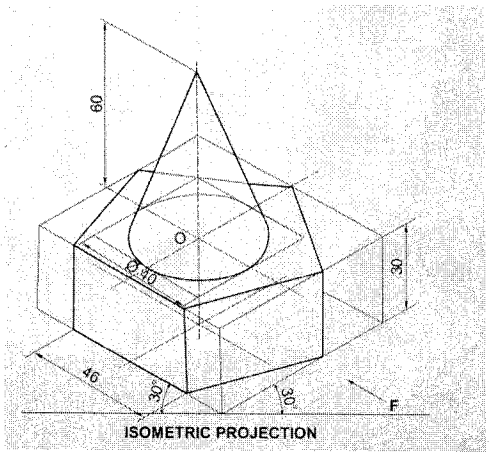
10. 

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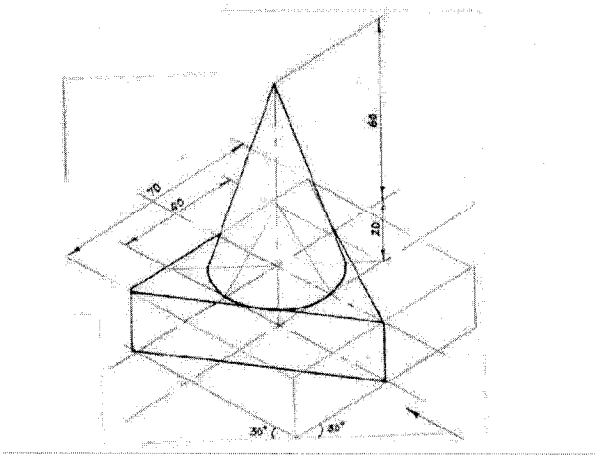

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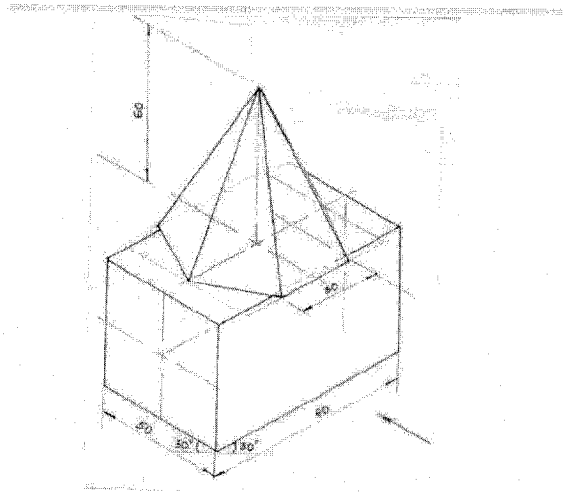
12.  1

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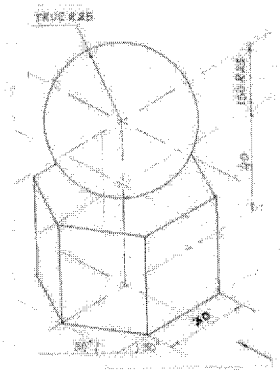
13.  1

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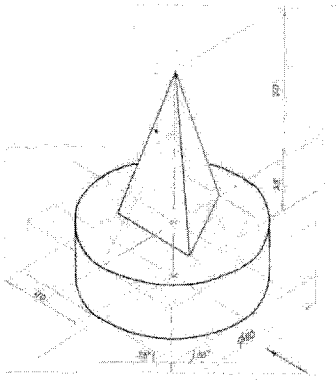

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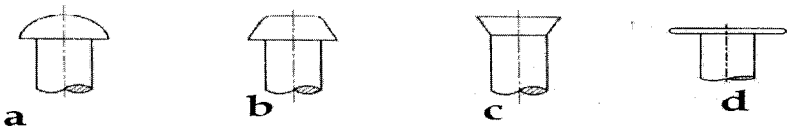

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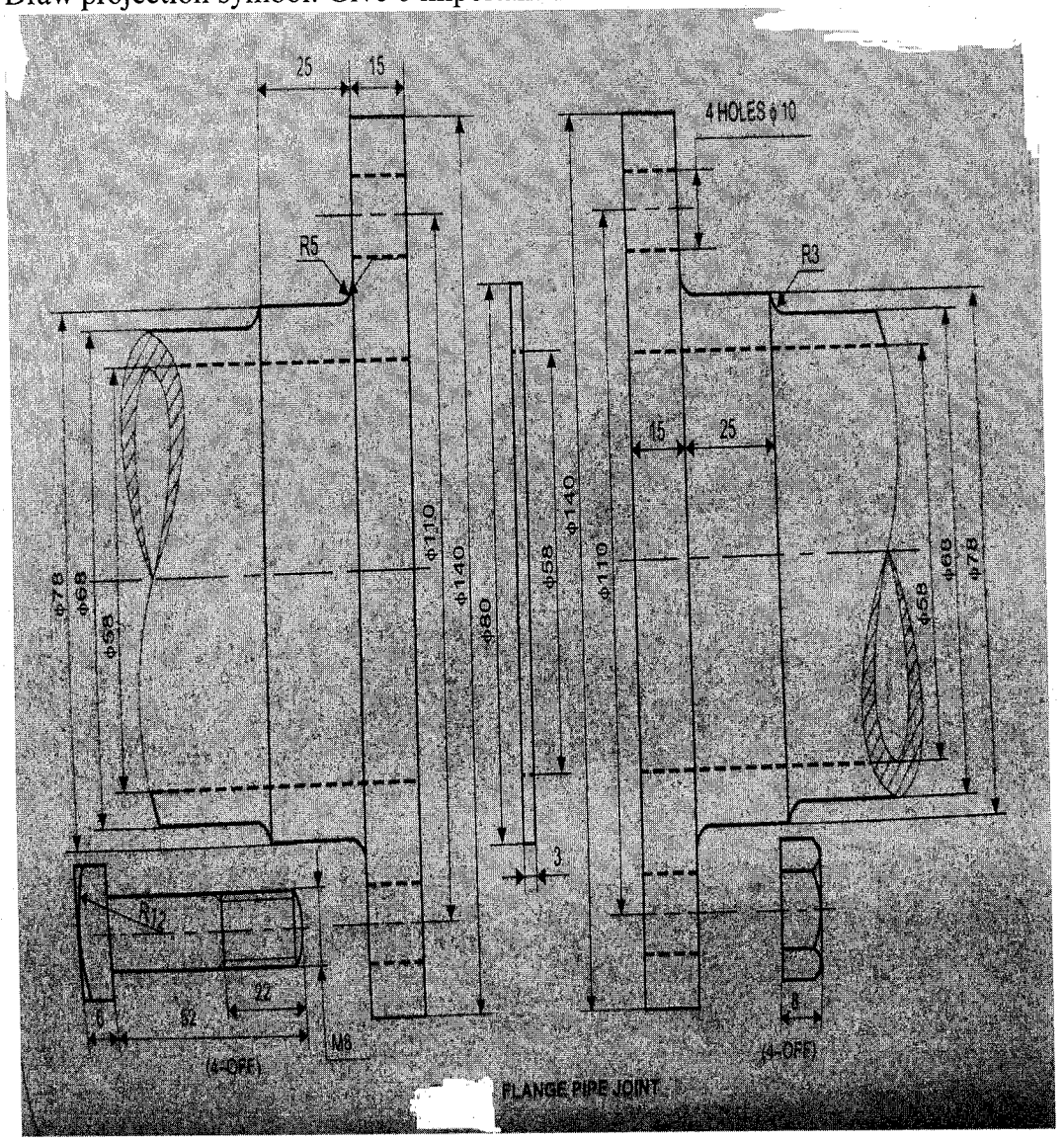

******END OF THE QUESTION PAPER******