SET   A

INDIAN SCHOOL MUSCAT
FIRST TERM EXAMINATION
ENGINEERING GRAPHICS (046)

CLASS: XI

Time Allotted: 90 min.
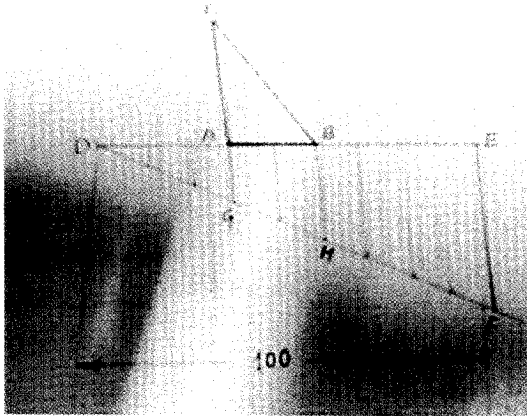
17.11.2021

Max. Marks: 35

General Instructions:

1. The Question Paper contains three sections A, B and C.
2. Section A has 25 questions. Attempt any 20 questions.
3. Section B has 24 questions. Attempt any 20 questions.
4. Section C has 6 questions. Attempt any 5 questions.
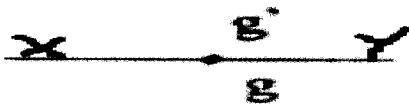5. All questions carry equal marks.
6. There is no negative marking.

SECTION A

1   An ellipse has _____ foci.
    (A) 1   (B) 2   (C) 3   (D) 4

2   Initial work and construction lines are drawn using __ pencil.
    (A) 0.7   (B) 0.5   (C) 0.3   (D) All of the above

3   How many tangents can be drawn from a point outside a given circle?
    (A) 4   (B) 3   (C) 2   (D) 1

4   Which are the two systems of placing dimensions?
    i. Aligned system, ii. Break system, iii. Unidirectional system, iv. Directional system
    (A) i, ii   (B) i, iii   (C) ii, iv   (D) i, iv

5   Drawing pencils are graded according to increase in relative _____
    (A) diameter   (B) sharpness   (C) length   (D) hardness

14 An ogee curve is a....
(A) Semi ellipse
(B) continuous double curve with convex and concave
(C) freehand curve which connects two parallel lines
(D) semi hyperbola

15 The side view, top view and front view of a regular pentagonal prism placed axis perpendicular to vertical plane.
(A) rectangle, rectangle and pentagon
(B) pentagon, rectangle and rectangle
(C) pentagon, rectangle and pentagon
(D) rectangle, pentagon and rectangle

16 When a line is inclined to a plane, produced if necessary. The point in which the line meets the plane is called its _____
(A) meeting point   (B) locus   (C) complete end   (D) trace

17 In the adjacent fig, if the perimeter of Δ ABC, is 100mm then the sides are divided in the ratio.......
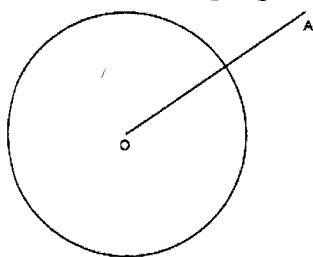

(A) 3:2:4 (B) 2:2:4 (C) 3:4:2 (D) 4:3:2

18

Which of the following statements correctly describes the orthographic projection of point G, from the above fig?
(A) Point G lies in the first quadrant   (B) Point G lies in the second quadrant
(C) Point G lies in the fourth quadrant   (D) Point G lies in the on both VP & HP

19 If a line meets horizontal plane the point of intersection is called _____
(A) horizontal trace   (B) regular trace   (C) parallel trace   (D) general trace

25 A plate of a negligible thickness of circular shape is placed parallel to horizontal plane the front view will be _____
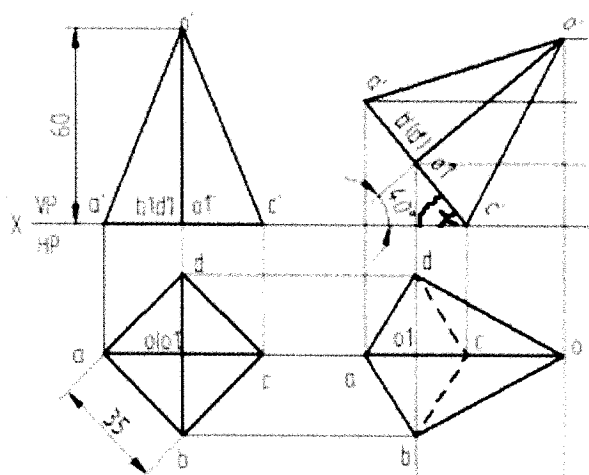(A) line   (B) circle   (C) rectangle   (D) ellipse

SECTION B

26 A pentagonal lamina or plane is perpendicular to HP and parallel to VP, then the front view will be a...... and top view will be a......
(A) Line , pentagon   (B) Pentagon , line   (C) Pentagon , pentagon   (D) Line, line

27 In the following figure, how will we draw a tangent from the point outside the circle?

(A) By drawing a semicircle with diameter as OA
(B) By drawing a perpendicular bisector
(C) By drawing an angle bisector
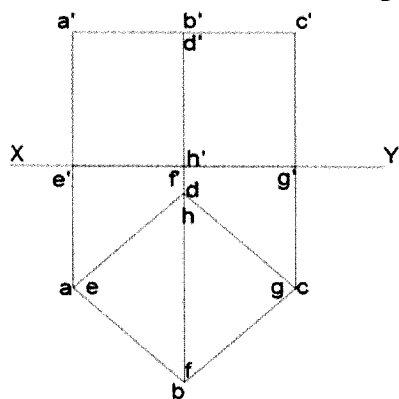(D) By drawing circle with the same radius from A

28

What is the value of angle X in the above fig?

(A) 40°   (B) 50°   (C) 60°   (D) 90°

29 The straight lines which are drawn from various points on the contour of an object to meet a plane are called as _____

(A) connecting lines   (B) projectors   (C) perpendicular lines   (D) hidden lines
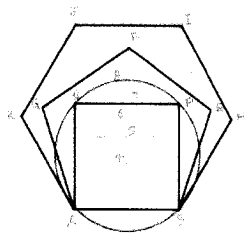
33 Identify the solid from the given projection?

(A) Cube   (B) Cuboid   (C) Pyramid   (D) Tetrahedron

34 A Square lamina is placed perpendicular to vertical plane and inclined to the horizontal plane which of the following is true?
(A) Front view-line, top view- square
(B) Front view- line, top view- rectangle
(C) Front view –line, top view-line
(D) Top view-line, side view- rectangle

35 In the adjacent fig, to draw the pentagon on a common side AB, the radius of the circle containing the pentagon would be.....

(A) 6A   (B) 7A   (C) 4A   (D) 5A

36   The length through perpendicular gives the shortest length from a point to the line.
(A) True   (B) False

37 In 1st angle projection the positions of front and top views are _____.
(A) top view lies above the front view
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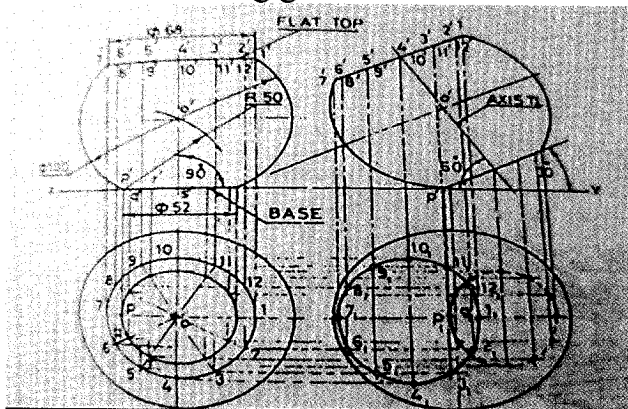(D) top view lie left side to front view

38 Cone is generated by revolving _____, around one of its perpendicular sides which is kept fixed.

(A) Right-angled triangle   (B) Rectangle   (C) Square   (D) Half-rectangle

42 A: Minimum two views are required to represent a solid on a flat surface.
R: A single view represents any two dimensions of a solid.

43 A: The number of corners that exist for a pyramid is one less than number of sides of the base.
R: The imaginary line that joins the apex to the center of the base, for a pyramid is called a generator.

44 A: When a solid is positioned with its axis perpendicular to HP then the axis is parallel to VP.
R: The axis of the solid is always perpendicular to the HP.

45 A: If a line AB lies on the vertical plane, then the front view will give the true length of the line.
R: Vertical plane always contains the true length of the line.

46 A: In unidirectional system of dimensioning, the dimensions are broken in the middle for inserting the dimensions.
R: In aligned system of dimensioning, the dimensions are placed above the dimension line.

47 A: In first angle projection, front view lies above the XY line.
R: In third angle projection, front view lies below the XY line.

48 A: A point Q, 25 mm above HP and 15 mm in front of VP lies in the first quadrant.
R: In the first quadrant a point lies above the HP and in front of VP.

49 A: Second and fourth quadrant are not widely used for projection of objects.
R: Both the front and the top view lie on the same side of the XY line in second and fourth quadrant.

SECTION C

A decor tray, made up of thin sheet of steel, is spherical in shape with flat circular top of diameter 68mm and bottom diameter of 52 mm parallel to each other. The greatest diameter of it is 100 mm. Draw the projections of the tray when its axis is kept parallel to VP and makes an angle of 60° with HP. Answer the following questions, with reference to the fig given below.

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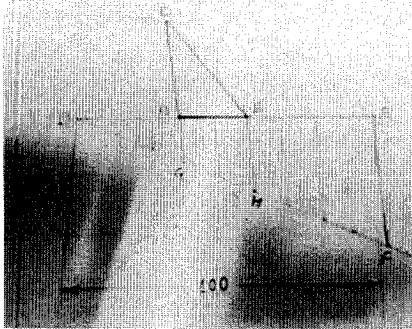
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SECTION A

1   Initial work and construction lines are drawn using __ pencil.
    (A) 0.7   (B) 0.5   (C) 0.3   (D) All of the above

2   An ellipse has ____ foci.
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3   How many tangents can be drawn from a point outside a given circle?
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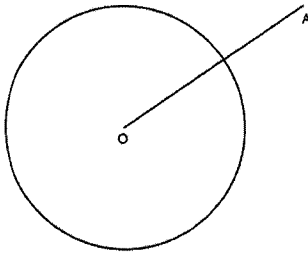Which of the following statements correctly describes the orthographic projection of point G, from the above fig?

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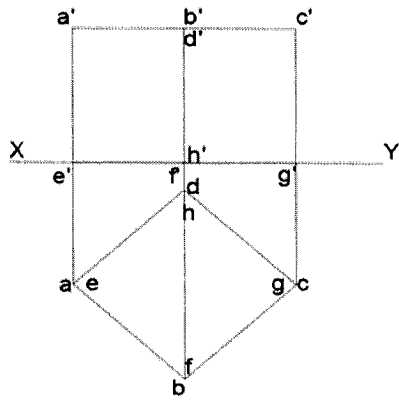27 In the following figure, how will we draw a tangent from the point outside the circle?

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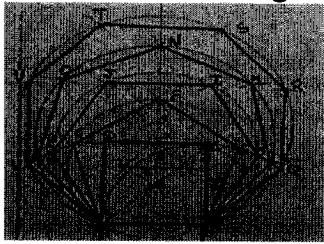28 Which of the following statements is true with respect to the following projection?
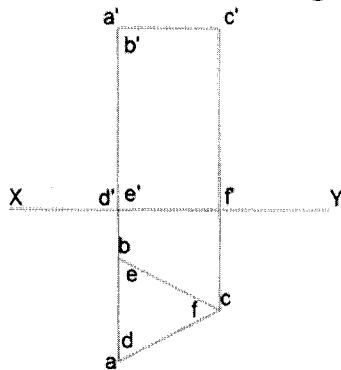
(A) Cone with the base perpendicular to V.P and H.P
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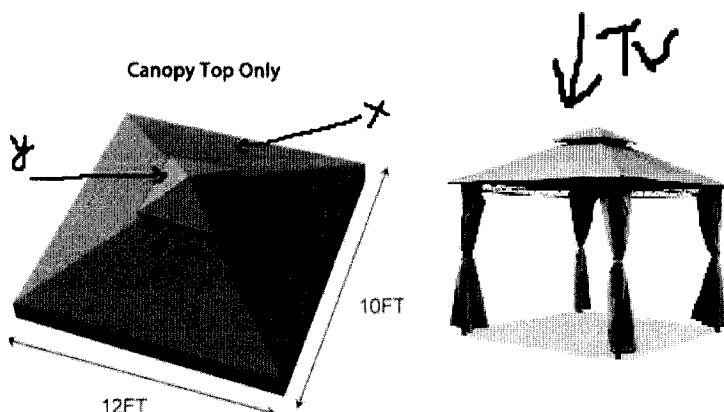
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SECTION C

During the recent storm, the top portion of Jeff's garden canopy was blown away. He wanted to replace the same. Help him identify the structure of the top portion so that he could get it customized for his garden.

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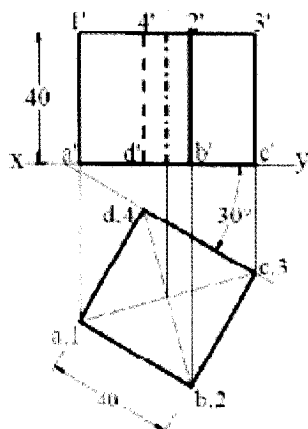
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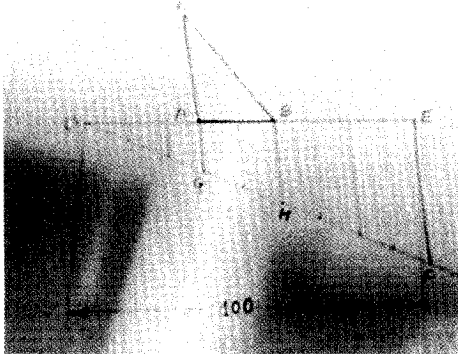
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SECTION A

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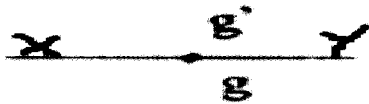(A) diameter (B) sharpness (C) length (D) hardness

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20   What is the shape with 'n' no. of sides, in which all the sides are equal, called?
(A) Rectangle   (B) Circle   (C) Triangle   (D) Regular polygon

21   To represent the object on paper by orthographic projection the horizontal plane (H.P) should be placed in which way?
(A) The H.P is turned in a clockwise direction up to 90 degrees
(B) The H.P is turned in anti-clockwise direction up to 90 degrees
(C) H.P plane is placed to left side of vertical plane parallel to it
(D) H.P plane is placed to right side of vertical plane parallel to it

22   When a solid is placed such that axis is inclined with the V.P and parallel to the H.P. Its projections are drawn in _____ stages.
(A) 1   (B) 4   (C) 2   (D) 3

27   In the following figure, how will we draw a tangent from the point outside the circle?
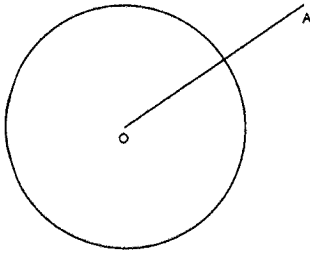
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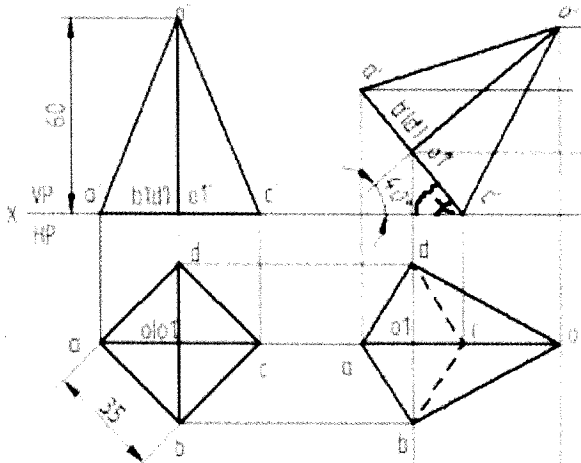
What is the value of angle X in the above fig?
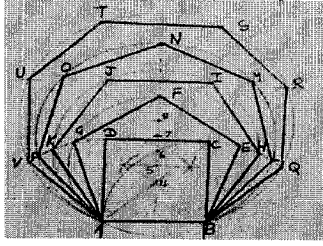(A) 40°   (B) 50°   (C) 60°   (D) 90°

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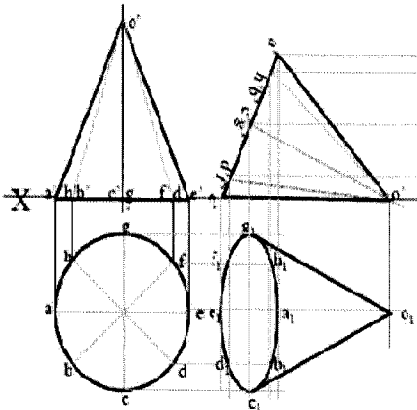30   Which of the following statements is true with respect to the following projection?
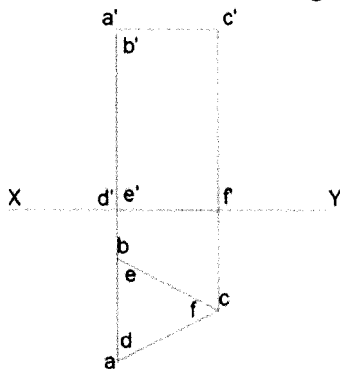
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35   In the adjacent fig, to draw the pentagon on a common side AB, the radius of
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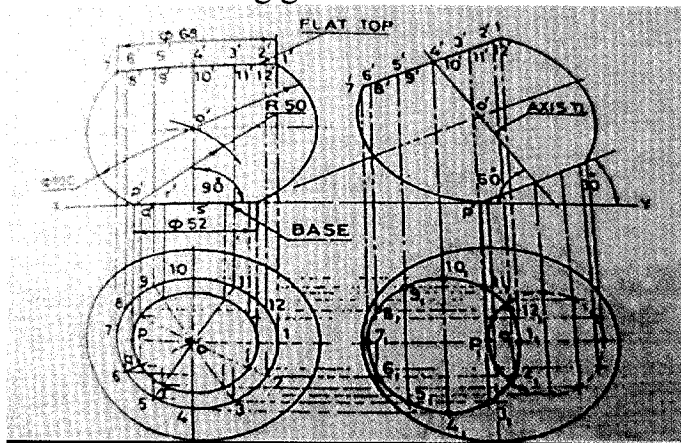
39

     Which of the following statements correctly describes the position of the cone in the
     second stage?
     (A) The cone is resting on one of its generators
     (B) The cone is resting on its longer edges
     (C) The axis of the cone is perpendicular to VP.
     (D) Both (A)&(B)

46   A: In unidirectional system of dimensioning, the dimensions are broken in the middle for inserting the dimensions.
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SECTION C

A decor tray, made up of thin sheet of steel, is spherical in shape with flat circular top of diameter 68mm and bottom diameter of 52 mm parallel to each other. The greatest diameter of it is 100 mm. Draw the projections of the tray when its axis is kept parallel to VP and makes an angle of 60° with HP. Answer the following questions, with reference to the fig given below.

50   The diameters of the circles in the top view (first stage) are......mm.
     (A) 50,34,26   (B) 100,68,52   (C) 50,68,52   (D) 100,34,26

51   When the axis is inclined at 60°, apparently the base is inclined at....
     (A) 60°   (B) 120°   (C) 0°   (D) 30°

52   The diameter of the hidden circle in the top view is......mm.
     (A) 52   (B) 68   (C) 100   (D) None of the above

53   The axis of the decor tray with respect to HP is....
     (A) Perpendicular to it   (B) Parallel to it
     (C) Both parallel and perpendicular to it   (D) None of the above