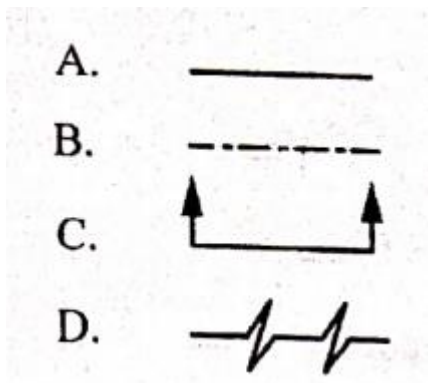| NAME	
SUBJECT	**TECHNICAL DRAWING 1 & 2** CLASS SS 1 DURATION 2 HOURS

INSTRUCTIONS: This booklet consists of two papers. Answer **paper 1** in your Objective Test answer sheet and **paper 2** in your drawing sheet provided. **Paper 1** will last for **1 hour** after which the answer booklet will be collected. Do **not** start **paper 2** until you are told to do so. **Paper 2** will last for **1 ½ hours**.
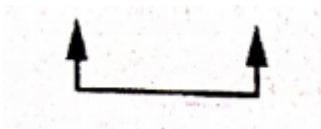
PAPER 1

OBJECTIVES (40 MARKS)

1. _____ is engineering graphic communication using drawings, symbols and convections.
   A. Cultural and creative art
   B. telecommunication
   C. Technical drawing
   D. Graphic design

2. The appropriate to draw circle and arc is
   A. french curve
   B. pair of compasses
   C. pair of dividers
   D. protractor

3. The set of instrument used to draw vertical and inclined lines are

   A. Tee square and protractor
   B. Tee square and set square
   C. Set square and scale rule
   D. pair of compasses

4. The type of lines used for outline is

   A. thin line
   B. thick lines
   C. chain lines
   D. wavy line

5. An acceptable practice in drawing studio is

   A. Appropriate use of drawing instruments
   B. Carefree handling of drawing instruments
   C. Engaging in horse play
   D. Using pair of compasses as pencil

6. The point to be considered in rating drawing is

   A. aesthetics of work
   B. quality of instruments
   C. quality of lines
   D. size of paper

7. The drawn below is used for indicating _____

   ` - - - - - - - - - - - - - - - `

   A. centre line
   B. cutting plane
   C. hidden details
   D. long break

8. The number of bisector required to obtain an angle of 15^0 from 120^0 is
   A. one
   B. two
   C. three
   D. four

9. Safe working habit is emphasized in drawing studio in order to _____ accident
   A. Avert
   B. Enhance
   C. Encourage
   D. increase

10. Which of the following is a type of triangle?
    A. quadrilateral
    B. kite
    C. concentric
    D. equilateral

11. Which of the following is not a type of line?
    A. Straight line
    B. Parallel line
    C. Intersecting lines
    D. ellipse line

12. Which of the following lines is used to indicate long break?

A.

B.

C.

D.

13. The line drawn below is used for indicating

   A. centres of object
   B. cutting plane
   C. hidden details
   D. long break

14. The diagonal of a rectangle bisect to produce _____
   A. unequal angles
   B. right angles
   C. two opposite acute and obtuse angles
   D. complimentary angles

15. A quadrant is bounded by an arc and _____ at right angle
   A. Two chord
   B. segment
   C. tangent
   D. two radii.

16. The area of a circle bonded by a chord and circumference is called _____
   A. sector
   B. semicircle
   C. segment
   D. arc

17. Which of the following statements is correct about kite?
   A. Only opposite angles are right angles
   B. two opposite angles are equal
   C. Sum of interior angles is 270^0
   D. Opposite sides are parallel

18. The following information should be in title block EXCEPT
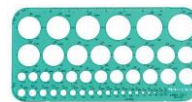   A. name
   B. title
   C. type of pencil
   D. school

19. _____ is the writing of letters and numbers on drawing.
   A. Handwriting
   B. Typing
   C. Lettering
   D. Copywriting

20. Which of the following statement defines square and rectangle?
   A. All angles are not equal
   B. All sides are unequal
   C. The opposite sides are parallel
   D. The two pairs of adjacent sides are equal

21. The drawing instrument shown below is

   A. eraser shield
   B. template
   C. toy
   D. french curve

22. The following are procedure for writing lettering in technical drawing EXCEPT
   A. guide lines are drawn
   B. after writing guide lines are not erase
   C. write with single stroke to touch both guide line for capital letters
   D. shade to make thick
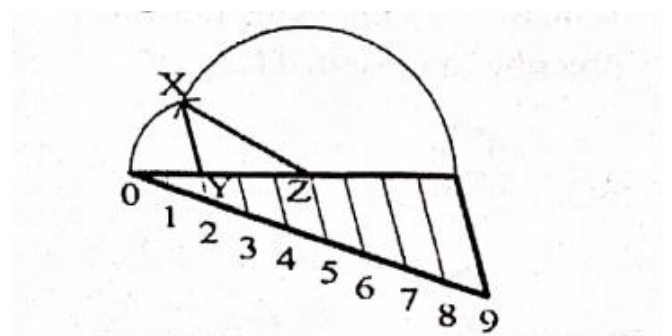
23. A quadrilateral with adjacent sides equal and diagonals bisect at right angle is …….
   A. deltoid/kite
   B. rhombus
   C. square
   D. trapezoid

24. _____ is to divide a line into two equal parts.
   A. Trisection
   B. Division
   C. Bisection
   D. Dissect

25. Side XY, ZY and ZX of the triangle in figure below are in what ratio?
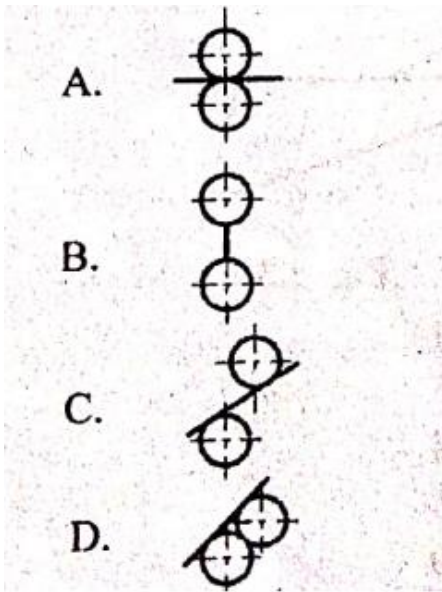
A. 2:3:4
B. 2:4:5
C. 2:5:4
D. 2:5:5

26. The line used for cutting planes is

A. thick continuous s
B. thick long chain
C. thin continuous
D. thin long dashes

27. Which of the following drawing describes an external tangent?

A.
B.
C.
D.

28. To bisect a given line ……… number of arc are needed.

A. 2
B. 3
C. 4
D. 5

29. Which of the following is part of a triangle?

A. sector
B. segment
C. tangent
D. vertex

30. The type of lettering that should be used for good title block is …… letters.
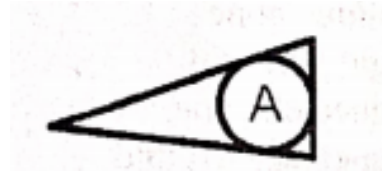
A. straight, upright, bold and double strokes
B. curve, italics, bold, and single stroke
C. staright, thin and double strokes
D. straight, upright, capital, bold and single stroke

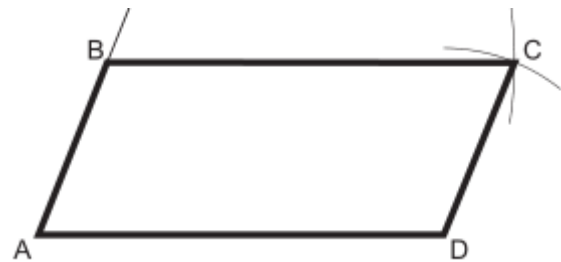31. _____ is freedom from danger during drawing

A. security
B. safety
C. protection
D. caution

32. In figure below, circle A is _____ to a triangle

A. circumscribe
B. concentric
C. escribed
D. inscribed

33. The parallelogram shown below has following characteristic EXCEPT

A. opposite sides are equal
B. opposite angles are equal
C. diagonals bisect to produce two opposite acute and obtuse angles
D. only one opposite sides is equal

34. The margins drawn around the edges of the drawing paper is called _____.

A. Title block
B. lettering
C. border lines
D. dimension

35. To set your drawing paper following steps are taken EXCEPT

A. place your paper on the board with space on around it
B. place your Tee square gently on it
C. slide to the top with paper edge barely visible
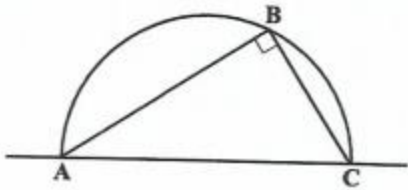D. draw on the paper

36. The sum of angles at a point is _____
A. 360^0
B. 90^0
C. 180^0
D. 270^0

37. The following are types of triangle by angles EXCEPT…..
A. acute angle triangle

B. equilateral triangle
C. quadrilateral triangle
D. scalene triangle

38. The diagram below shows the consruction of a triangle when given the

A. altitude and vertical angle
B. hypotenuse and one angle
C. altitude and base angle
D. perimeter and vertical height

39. _____ is a plane figure bounded by three straight lines with three interior angles.
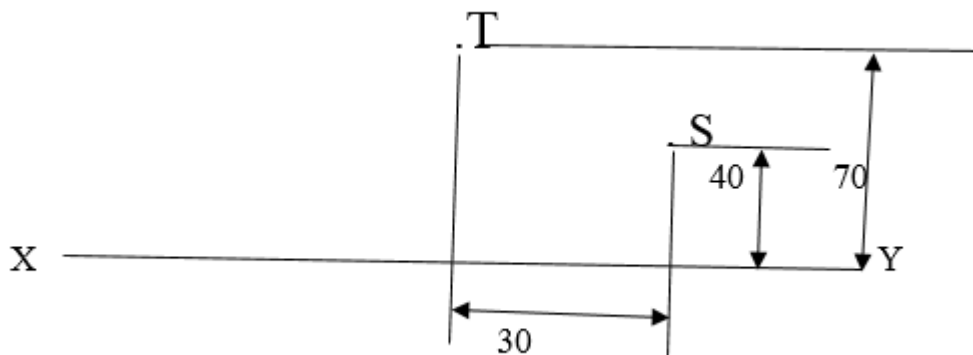
A. quadrilateral
B. polygon
C. triangle
D. three angles

40. A _____ is a quadrilateral with two opposite sides equal and angle not necessarily 90^0 is

A. square
B. kite
C. rhombus
D. parallelogram

PAPER 2
GEOMETRY
(60 MARKS)
Answer three questions from this Part. Question one is compulsory.

1. a. Draw border line and title bock, fill in the following information name, class, subject, scale and date
(10 marks)
   b. Write numbers 1 to 30 in gap of 5mm (5 marks)
   c. Write letters A to Z in capital letters in space of 7mm (5 marks)

2. a. i. Construct a triangle with the following specifications:
   base =120, vertical angle = 60^0, altitude = 50 (8 marks)
   ii. Measure and state two sides of the triangle (2 marks)
   WASC 2023, Q.2a

b. The sketch in the figure below shows point T and S, drawn above XY

   i.   Construct a circle to touch line XY and pass through point T and S (7 marks)
   ii.   Measure and state the radius of the circle. (3 marks)
   WASC 2023 Q. 3b

2.   (A) Construct a triangle PQR with side PQ = 80, and angle PQR = QPR = 60^0 (show all construction lines)   i. Find the length of PR and QR
        ii. Inscribe a circle in the triangle PQR   iii. Name the triangle PQR
        WASSCE 2010 P1, Q. 2a   (10 marks)
        (b) Construct line AB =156   .   (1marks)
            i. use the line to construct a triangle with side ratio 2:3:2   (7 marks)
            ii. Name the triangle constructed   (2 marks)

3. Draw these angles using protractor i. 65 ii. 183   iii. 279   iv. 95 v. 360   (5marks)
b. construct line AB =165mm   (1 marks)
   ii. use the line to construct a triangle with sides ratio 2:4:5   (7 marks)
   iii. measure and state length of each side of the triangle.   (2 marks)
c. Construct two eccentric circles of radius 30mm and 40mm.   (5 marks)

4. (A) The circumference of a circle is 115
    i. Determine by construction the diameter of the circle.   (8 marks)
    ii. Measure the diameter   (2marks)
(b) i. Construct and escribed circle to a triangle of sides 50, 65, and 75 to touch the shortest side of the triangle.   (8 marks)
   ii. Measure and state the radius of the circle.   (2 marks)
                         WAEC, Technical drawing 2, August/September 2020, Q. 1

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FIRST TERM EXAMINATION 2025/2026 ACADEMIC SESSION

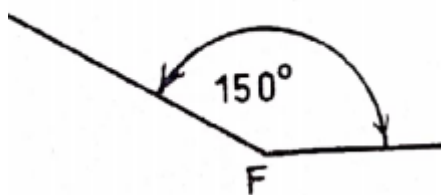| NAME					
SUBJECT	TECHNICAL DRAWING Paper 3 (Practical)	CLASS	SS 1	DURATION	1 ½ HOURS

Instruction: Answer three questions in this paper, question one is compulsory.

1. (A) Draw boarder lines. (5 marks)
(b) Draw a title block and write your name, school, class and date on it. (5 marks)
   (c) Use lettering to write capital letters A-Z (5 marks)
   (d) Use lettering to write 1 to 30. (5 marks)

2 (a) Draw a table of five types of lines used in technical drawing and their uses. (5 marks)
  (b) Draw ten lines of 110mm with 10mm gaps between the lines at 30^0 (5 marks)
  (c) Construct a triangle with perimeter 150mm and altitude 50mm .(5 marks)
  (d) Construct a rhombus with diagonal 100mm and length of sides 70 mm. (5 marks)

3. (a) Construct angle 7.5^0. (5 marks)
   (b) Draw a line of 110mm and divide it into ratio $2:1:2^1/_2$: (5 marks)
   (c) Construct two circles of radius 25 mm and centres 125 mm apart, draw common internal tangent to both. (5 marks)
   (d) List five safety habits in technical drawing. (5 marks)

4. Copy the given angle and bisect it.

(5 marks)
b. Name five drawing materials and their uses. (5 marks

c. Construct angle 120^0 and bisect it (5 marks)

d. Construct a trapezium with parallel sides 110 mm and 90mm with height/altitude 50 mm, draw the two diagonals and measure it. (5 marks)