UNIVERSITY OF CAPE COAST
COLLEGE OF EDUCATION STUDIES
SCHOOL OF EDUCATIONAL DEVELOPMENT AND OUTREACH
INSTITUTE OF EDUCATION

COLLEGES OF EDUCATION
FOUR-YEAR BACHELOR OF EDUCATION (B.ED)
FIRST YEAR, SECOND SEMESTER MID SEMESTER QUIZ, AUGUST 2022

MARKING SCHEME

COURSE CODE: EBS 143
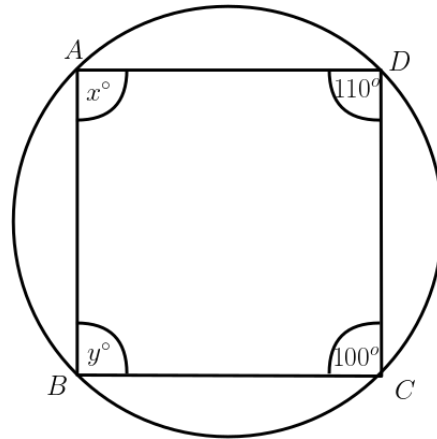**COURSE TITLE:** GEOMETRY AND TRIGONOMETRY

Answer ALL the questions.

For items 1 to 19, each stem is followed by four options lettered A to D. Read each item carefully and circle the letter of the correct or best option.

1. The sum of interior angles of a polygon is 3420^0. How many sides does the polygon have?
   A. 18
   B. 19
   C. 20
   D. 21

2. The angles, *m* and 60^0 are supplementary, what is the value of *m*?
   A. 60^0
   B. 120^0
   C. 150^0
   D. 180^0

3. Which of the following is the longest chord in a circle?
   A. Arc.
   B. Diameter.
   C. Radius.
   D. Sector.

4. A quadrilateral drawn inside a circle with the vertices at the circumference of the circle is called ………………
   A. circle quadrilateral.
   B. circumscribed quadrilateral.
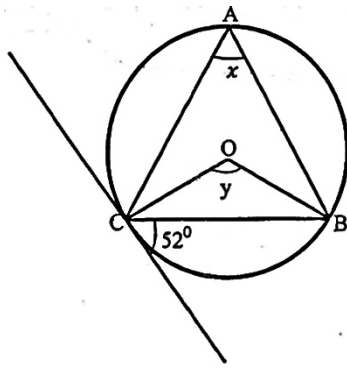   **C. cyclic quadrilateral.**
   D. inscribed quadrilateral.

5. In the diagram below find the angle marked y.

    A. 70^0
    B. 80^0
    C. 100^0
    D. 110^0

6. Which of the following process is true about constructing an angle at a point on a straight line? Constructing ……………… at the other side of the same point.
    A. 135^0 at one side of a point on the line is the same as 35^0.
    B. 135^0 at one side of a point on the line is the same as 45^0.
    C. 150^0 at one side of a point on the line is the same as 60^0.
    D. 90^0 at one side of a point on the line is the same as 110^0.

7. Two interior angles of an octagon are such that one is **42 degrees more than the other**. The remaining angles are 150 each. Find the measure of the bigger of the two remaining interior angles of this polygon.
    A. 42^0
    B. 69^0
    C. 111^0
    D. 192^0

8. Which one of the following sets of points represent the sides of a triangle?
        I. 3, 4, and 5
        II. 6, 8, and 10
        III. 3, 4, and 9

    A. I and II only
    B. I only
    C. II only
    D. III only

9. The exterior angle of a polygon is 36^0. What is the size of each interior angle?
    A. 40^0
    B. 120^0
    C. 144^0
    D. 180^0

10. Two interior angles of an octagon is such that one is 42^0 more than the other. The remaining angles are 150^0 each. Find the smallest of the interior angles of the polygon.
    A. 11^0
    B. 42^0
    C. 69^0
    D. 192^0

11. In the diagram below, O is the centre of the circle and the angle between the tangent and the chord CB is 52^0. Calculate the value of x + y.

    A. 52^0
    B. 52^0
    C. 76^0
    D. 156^0

12. The volume of a cube is $729cm^3$. Find the total surface area.
    A. $9cm^2$
    B. $81cm^2$
    C. $243cm^2$
    D. $486cm^2$

13. A solid figure with uniform cross sectional-area is called ………………
    A. Cone.
    B. Prism.
    C. Pyramid.
    D. Sphere.

14. To draw the perpendicular bisector of line segment AB, we open the compass ………………
    A. equal to ½ AB.
    B. full length of AB.
    C. less than ½ AB.
    D. more than ½ AB.

15. Which of the following is **not** needed to inscribe a triangle in a circle?
    A. Construction of a polygon the minimum number of sides.
    B. Locus of points equidistant from a fixed point.
    C. Locus of points equidistant from two fixed points.
    D. Locus of points equidistant from two intersecting straight lines.

16. A polygon with 7 non-overlapping triangles is called ………………
    A. Decagon.
    B. Hexagon.
    C. Nonagon.
    D. Octagon.

17. Which of the following are **true**?
    I. The opposite interior angles of a cyclic quadrilateral are supplementary
    II. The radius and a tangent of a circle join orthogonally
    III. Equal chords subtend the congruent angles at the circumference of a circle

    A. I and II only
    B. I and III only
    C. I, II and III
    D. III and II only

18. The bisectors of angles of a parallelogram form a ………………
    A. Kite.
    B. Rectangle.
    C. Rhombus.
    D. Square.

19. The length of a chord of circle of radius 10 cm is 12 cm. Determine the distance of the chord from the centre.
    A. 8 cm
    B. 7 cm
    C. 6 cm
    D. 5 cm

Items 20 is a statement followed by True and False options. Read the statement carefully and indicate whether it is True or False by circling the letter of the correct option.

20. The area bounded by two radii in a circle is called the segment.
    A. True
    B. False