JUNE 2019
EBS 143
GEOMETRY AND TRIGONOMETRY
30 MINUTES

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 QUIZ 1, JUNE 2019

JUNE 3, 2019   GEOMETRY AND TRIGONOMETRY   8:00 AM – 8:30 AM

Answer ALL the questions. Circle the letter of the correct or best option. (30 Marks)

1. The exterior angles of a pentagon are y, $2y$, $3y$ and $4y$. Find the value of y.
   A. 27°
   B. 36°   Bonus
   C. 54°
   D. 72°

2. Find the sum of the interior angles of a polygon with 14 sides.
   A. 1800°
   B. 2060°
   C. 2160°
   D. 2520°

3. Which of the following describes the locus of points equidistant from two fixed intersecting lines?
   A. Angle bisector
   B. Bisector
   C. Parallel line
   D. Perpendicular bisector

4. The interior angles of a hexagon are x^o, $2x^o$, $(2x + 30)^o$, $(5x + 25)^o$, 125° and 120°. What is the value of x?
   A. 42
   B. 43
   C. 52
   D. 53

5. Given that P is the locus of points equidistant from a fixed line AB, then P represents a _____.
    A. circle with line AB as diameter
    B. circle with line AB as radius
    C. line parallel to line AB
    D. perpendicular bisector of line AB

6. The sum of the interior angles of a polygon is $2700°$. Find the number of sides the polygon has.
    A. 12
    B. 13
    C. 15
    D. 17

7. The exterior angle of a regular polygon is $36°$. What is the size of each interior angle?
    A. $40°$
    B. $120°$
    C. $144°$
    D. $180°$

8. The diagram below shows the construction of angle of _____.
    A. $15°$
    B. $45°$
    C. $105°$
    D. $120°$
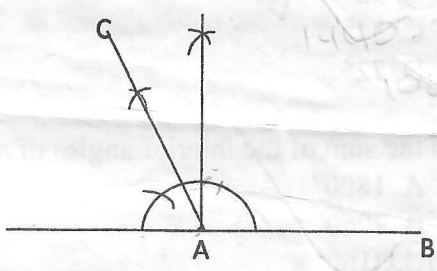
9. Two interior angles of an octagon are such that one is $42°$ more than the other. The remaining angles are $150°$ each. Find the smallest of the interior angles of the polygon.
    A. $42°$
    B. $69°$
    C. $111°$
    D. $192°$

10. Which of the following best describes a perpendicular bisector of a line? It _____.
    A. bisects a circle into two equal parts known as semi circles
    B. divides a line segment into two equal parts
    B. divides an angle into two equal angles
    D. passes through the midpoint and makes $90°$ with the line

11. Which of the following processes is true about constructing an angle at a point on a straight line? Constructing _____ at the other side of the same point.
    A. 160° at one side of a reference point on the line is the same as constructing 15°
    B. 105° at one side of a point on the line is the same as constructing 45°
    C. 135° at one side of a point on the line is the same as constructing 75°
    D. 120° at one side of a point on the line is the same as constructing 60°.

12. To construct angle ABC of measure 135°, first construct 90 at _____.
   A. A and then bisect one of the 90° angles
    B. B and then bisect one of the 90° angles
    C. A, then 60° at the other side of A and then bisect this 60°
    D. B, then 60° at the other side of B and then bisect this 60°

13. Which one of the following describes the locus of points equidistant from two given intersecting lines?
    A. Angle bisector
    B. Circle
    C. Mediator
    D. Perpendicular bisector

14. Calculate the value of the angle marked $6x$ in the diagram below.
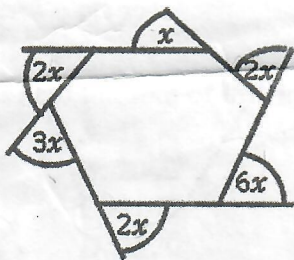
    A. 22.5°
    B. 45°
    C. 135°
    D. 157.5°

15. Four of the interior angles of a pentagon are $(90 - x)°$, $(90 + x)°$, $(110 - 2x)°$, $(110 + 2x)°$.
    Calculate the fifth angle.
    A. 40°
    B. 72°
    C. 108°
    D. 140°