

SIR ARTHUR LEWIS COMMUNITY COLLEGE
DTEEL

EXAMINATION : FINAL EXAMINATION

COURSE CODE : MAT 248

COURSE TITLE : **Perform Basic Mathematical Computations**

LECTURER : Mrs. Nitha Mauricette-Philip

DATE : 17th December, 2024

TIME : **1:00 PM**

DURATION : 2 HOURS

INSTRUCTIONS:

- Answer **all questions** in the Examination Booklet.
- Show all necessary workings for Part B.
- Write in blue or black ink.
- Non-programmable calculators are **not** permitted.

Section A

Circle the most correct answer.

1. What is the value of the 5 in 9 656?
(A) 50 (B) 500 (C) 5 000 (D) tens
2. Which of the following is a composite number?
(A) 7 (B) 39 (C) 19 (D) 37
3. A prime number greater than 51 and less than 68 is
(A) 57 (B) 65 (C) 67 (D) 54
4. The highest common factor (H.C.F.) of 45, 60 and 75 is
(A) 5 (B) 25 (C) 15 (D) 45
5. Which of the following statements is TRUE?
(A) $3 \times (8 \times 3) > 6 \times (14 - 2)$
(B) $12 - 2 \times 4 > 20 - 4 + 8$
(C) $2 \times 7 + 3 < 25 - 3$
(D) $12 \times 2 - (2 + 3) > 14 \times 2$
6. The difference between two numbers is 152. The smallest number is 237. What is the larger number?
(A) 389
(B) 85
(C) 36,024
(D) 1.56

Question 7 refers to the sequence:

5, 11, 23, 47, , ...

7. The missing number is
(A) 71
(B) 95
(C) 52
(D) 63

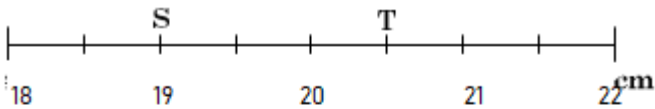
8. Light M flashes every 4 minutes. Light N flashes every 6 minutes. Light O flashes every 8 minutes. If the lights flashed together at 6:00 a.m., at what time would they next flash together?
- (A) 6:24 a.m.
(B) 6:08 a.m.
(C) 6:04 a.m.
(D) 7:00 am
9. What fraction of your cheese do you have left, if you grated $\frac{2}{3}$ of the cheese?
- (A) 1 (B) $\frac{2}{6}$ (C) $\frac{2}{1}$ (D) $\frac{3}{1}$
10. What fraction of an hour is 20 minutes?
- (A) $\frac{1}{3}$ (B) $\frac{3}{4}$ (C) 33.33 (D) $\frac{1}{4}$
11. Multiply $3\frac{2}{3}$ by $1\frac{1}{2}$
- (A) $4\frac{3}{6}$ (B) $5\frac{1}{2}$ (C) 5 (D) $5\frac{1}{6}$
12. The length of a water pipe is 8 m. How many $\frac{1}{4} m$ lengths can Jane cut from the pipe?
- (A) $8\frac{1}{4}$
(B) 32
(C) 29
(D) 2
13. Mrs. John is sewing uniforms. Each uniform requires $2\frac{1}{2} m$ of fabric. How many uniforms can be made from 20 m of fabric?
- (A) 4
(B) 8
(C) 10
(D) 50

14. Rhonda completed her homework in $1\frac{1}{2}$ hours. Jerry took $2\frac{1}{4}$ hours to do the same homework. How much longer did Jerry take than Rhonda did, to complete the homework.
- (A) $\frac{3}{4}$ hours
(B) $1\frac{1}{4}$ hours
(C) $\frac{1}{4}$ hours
(D) $\frac{1}{2}$ hours
15. A length of pipe is 12 feet long. Three pieces each of length $2\frac{1}{2}$ feet are cut off. What fraction of the original length of wood remains?
- (A) $\frac{9}{2}$ (B) $\frac{19}{2}$ (C) $\frac{11}{2}$ (D) $5\frac{1}{2}$
16. A ribbon, 9.65 m long, is cut into six equal pieces. What is the length, in centimeters (cm), of each piece?
- (A) 1.605
(B) 165
(C) 160.5
(D) 136
17. Which of the following sets of numbers is written in order of size, starting with the LARGEST?
- (A) 0.8, 0.08, 0.008, 8
(B) 8, 0.08, 0.8, 0.008
(C) 8, 0.8, 0.08, 0.008
(D) 0.008, 0.08, 0.8, 8
18. In January, Bart's electricity bill was \$35.00. In February, his bill was \$42.00. By what percent did his electricity bill increase?
- (A) 7% (B) 12% (C) 16% (D) 20%

19. Given that $7.2 \times 1.2 = 8.64$, what is the value of 0.072×12 ?
- (A) 8.64
 - (B) 84.6
 - (C) 846
 - (D) 0.864
20. Tom got 3 out of 20 questions correct. The percentage he got **INCORRECT** was
- (A) 30%
 - (B) 75%
 - (C) 15%
 - (D) 85%
21. if 40% of a number is 8, what is the number?
- (A) 22
 - (B) 15
 - (C) 25
 - (D) 20
22. A shopkeeper bought a 15-pound bag of flour for \$120 and sold it at \$10 per pound. What was his profit as a percentage of the cost price?
- (A) 25%
 - (B) 50%
 - (C) 75%
 - (D) 20%
23. A school has 60 girls and 90 boys. The ratio of girls to boys is
- (A) 2:3
 - (B) 3:2
 - (C) 9:6
 - (D) 90:60

24. For every 4 votes that AL received, Paul received 6. If Paul received 120 votes, how many votes did Al receive?
- (A) 100
(B) 48
(C) 20
(D) 80

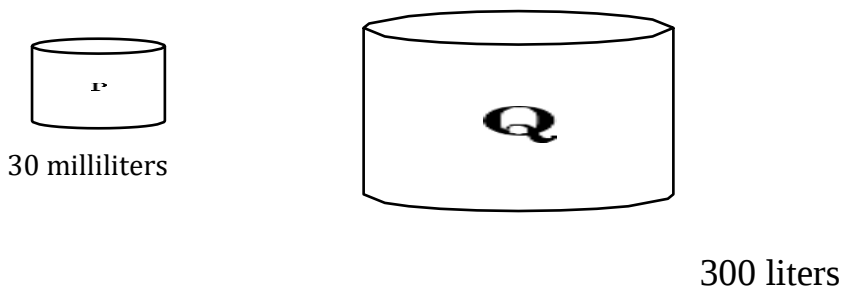
Question 25 refers to the following diagram.



25. The length of ST, in cm, is
- (A) 3
(B) 4
(C) 9
(D) 20.5

Question 26 refers to the following diagram which shows two containers, P and Q.

26. Container Q is to be filled with juice using container P. How many of container P will it take, to fill container Q?



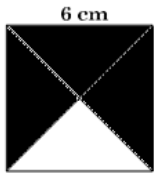
- (A) 10
(B) 100
(C) 1000
(D) 10000

Question 27 refers to the following diagram which shows a field is shape like a rectangle. Its perimeter is 28cm.



27. The area of the field, in m^2 , is
- (A) 25
 - (B) 81
 - (C) 45
 - (d) 49
28. The perimeter of a rectangle is 26 cm. One side is half of 14 cm. The lengths of the other three sides, in cm, are
- (A) 7, 6, 6
 - (B) 7, 7, 6
 - (C) 7, 8, 8
 - (D) 7,5,5
29. 500 g of flour was used from a packet containing 5.5 kg. What is the weight of the ricere remaining in the packet?
- (A) 5 kg
 - (B) 50 kg
 - (C) 1.5 kg
 - (D) 11 kg

Question 31 refers to the following diagram of a square.



30. The area of the non - shaded part of the square is

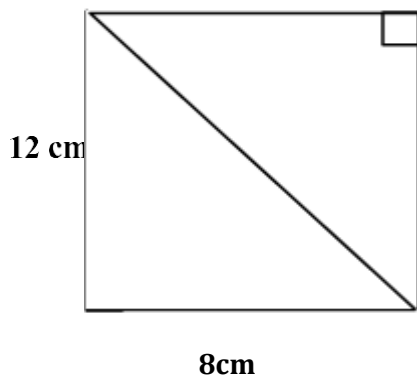
(A) $\frac{6+6+6+6}{3}$

(B) $\frac{6 \times 6}{4}$

(C) $\frac{6 \times 6}{3}$

(D) $\frac{2(6 \times 6)}{4}$

Question 32 refers to the diagram below which represents a rectangle.



31. The area of triangle A, in cm^2 , is approximately

(A) 20

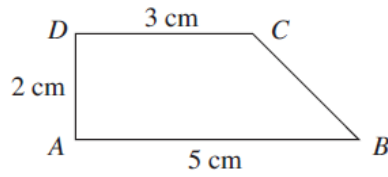
(B) 40

(C) 48

(D) 96

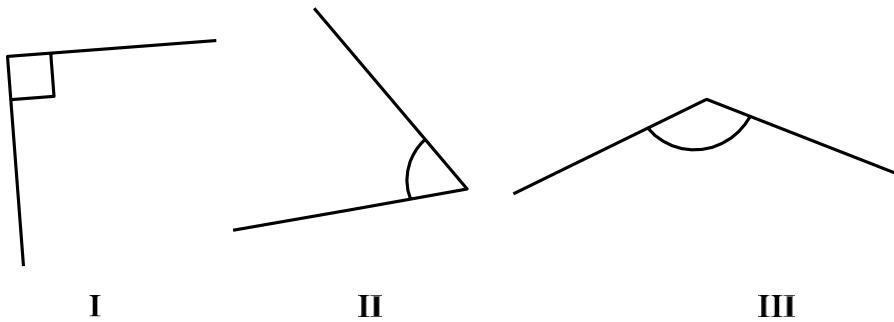
(E) 46

32. The area of the trapezium ABCD below is



- (A) 8cm^2 (B) 10cm^2 (C) 16cm^2 (D) 30cm^2

Questions 33 – 34 refer to the following diagrams.



33. The order of the above angles when arranged in size from **largest** to smallest is

- (A) II, I, III
(B) III, I, II
(C) I, II, III
(D) III, II, I

34. Which of the angles shown above is Obtuse?

- (A) I
(B) III
(C) II
(D) None of the above

Questions 35-36 refers to the following diagrams of circles with centre O.

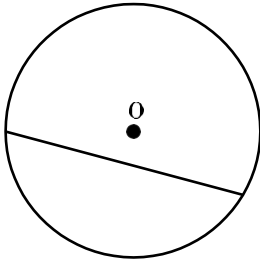


Diagram P

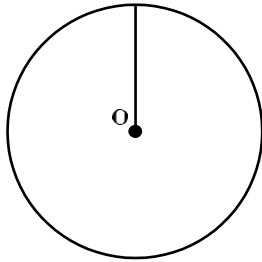


Diagram Q

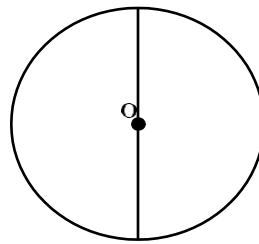


Diagram R

35. Which of the diagrams above shows the radius of a circle?
- (A) Diagram P
(B) Diagram R
(C) Diagram Q
(D) None of the above.
36. Suppose the circumference of Diagram R is 36 cm, what would be the approximate length of the radius?
- (A) About 12 cm
(B) About 6 cm
(C) About 9 cm
(D) About 4 cm
37. Triangle P has two angles which measure 49° and 31° . What kind of triangle is P?
- (A) Acute-angled
(B) Obtuse-angled
(C) Right-angled
(D) Reflex angle triangle
38. A rectangle is BEST described as a shape with
- (A) two pairs of parallel sides and four lines of symmetry
(B) four lines of symmetry and two pairs of parallel sides
(C) four equal angles and two lines of symmetry
(D) two pairs of parallel sides and four equal sides
39. A tank shaped as a cuboid is 100 cm long, 10 cm wide and 5 cm deep. If 1000cm = 1 liters, then the volume of liquid it will hold is
- (A) 50 litres (B) 5 litres (C) 5000 litres (D) 500 litres

40. A group of workers is hired to complete a task in 12 days. If the number of workers is doubled, how many days will they take to complete the same task, assuming they work at the same rate?
- A) 24 days
 - B) 6 days
 - C) 18 days
 - D) 9 days

PART B

Answer ALL questions below:

1. Evaluate:

a. $\left(4\frac{4}{5} \div 2\frac{2}{3}\right) - \left(1\frac{1}{3}\right)$ (4 marks)

2. A sum of money is divided among A, B and C in the ratio 2:3:5. If 10% of the amount shared is \$400,

- a) find the total amount shared (3 marks)
- b) Find the amount obtained by B (3 marks)

3. The table below shows the number of students in each grade at a certain Primary School. Use the table to answer the questions bellow.

Grade	Number of students
Grade 3	102
Grade 4	?
Grade 5	96
Grade 6	?

- (a) The number of students in Grade 4 is $\frac{5}{6}$ of the number of students in Grade 3. How many students are in Grade 4? [3]

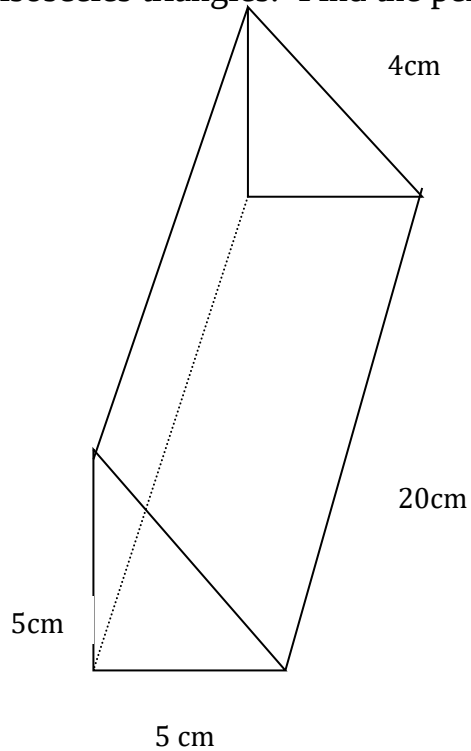
- (b) The ratio of the number of students in Grade 5 to Grade 6 is 4 : 3. How many students are in Grade 6? [3]

4. The diagram shows a triangular prism. The Volume can be calculated by finding the area one of the triangular base and multiply that area by the length of the Prism. Find

a) its volume,

[3]

b) If the triangles at the bases are isosceles triangles. Find the perimeter of one of the triangles. [3]



END