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**GARISSA UNIVERSITY**

**UNIVERSITY EXAMINATION 2020/2021 ACADEMIC YEAR ONE**

**SECOND SEMESTER EXAMINATION**

**SCHOOL OF EDUCATION, ARTS AND SOCIAL SCIENCES**

**FOR THE DEGREE OF BACHELOR OF EDUCATION (ARTS)**

**COURSE CODE: EPE 102**

**COURSE TITLE: PRIMARY MATHEMATICS**

**EXAMINATION DURATION: 2 HOURS**

**DATE: 09/10/2021 TIME: 3.00-5.00 PM**

**INSTRUCTION TO CANDIDATES**

* **The examination has FIVE (5) questions**
* **Question ONE (1) is COMPULSORY**
* **Choose any other TWO (2) questions from the remaining FOUR (4) questions**
* **Use sketch diagrams to illustrate your answer whenever necessary**
* **Do not carry mobile phones or any other written materials in examination room**
* **Do not write on this paper**

**This paper consists of FOUR (4) printed pages *please turn over***

**QUESTION ONE (COMPULSORY)**

1. Express 3.123123123…………………….. as a rational number (3 marks)
2. Suppose the date 31st April 2021 is assigned zero on the number line, what number would you assign each of the following dates
3. 18th May 2021 (2Marks)
4. 29th June 2021             (2Marks)
5. Evaluate the following
6. – 26-(-19) (1Mark)
7. – 40-(20) (1Mark)
8. – 36-(+52) (1Mark)
9. (+56)-(-36) (1Mark)
10. Give brief definition of the following
11. Even number (1Mark)
12. Rational number (1Mark)
13. Difference (1Mark)
14. List all the common factor of 218 and 524. (3Marks)
15. Round off 529, 639 to the nearest one thousand. (1Mark)
16. What do you call the result of dividing two or more numbers?               (1Mark)
17. Differentiate between speed and velocity. (2Marks)
18. What is a composite number? (2Marks)
19. State the divisibility test for 9 (1Mark)
20. A session started at 2200 hours and lasted for 10hours. At what time did it end? Express your answer in 12 hours and 24hour clock. (3Marks)
21. Express 0.07333733………………….. as a fraction. (3Marks)

**QUESTION TWO (20MARKS)**

1. Define a fractional number and involve the terms numerator and denominator in your definition, (3Marks)
2. Express 0.111……………….as a fraction. (2Marks)
3. Use equivalent fractions to arrange in an ascending order:

34 ,56 ,78 ,89 (2Marks)

1. Subtract (355m, 16mm) from (1km, 2Dm) giving your answer in meters (3 Marks)
2. Two thirds of 2 million is shared equally among four children. What fraction of the loaf does each get?               (4Marks)
3. Two business partners received 57 and 27 of the business proceeds after a year. The businessman who received the larger share was required to spend 18 of his share to pay all workers. If the business realized Sh.180, 000, how much did the workers receive? (4Marks)
4. The cost of a rectangular Manila paper of length 0.5m, width 0.3m and thickness 1mm is Sh.4 per m2. Find the total cost of a pile of similar Manila paper of height 4.4m. (3Marks)

**QUESTION THREE (20MARKS)**

1. Use equivalent fractions to arrange the following in ascending order

12 ,35 ,47 ,89 ,23 (4Marks)

1. Evaluate 819-234+94 (2Marks)
2. A cyclist delivered 3 cartons weighing 3 ½ kg each, 8 parcels weighing 2 ¼ kg each and 125 sachets weighing ¼ kg each to a shop. What was the total load? (3Marks)
3. A pile of books is ¾ meters high and each book is ¾ cm thick. How many books are in the pile? (2Marks)
4. The product of two numbers is 27 one of the numbers is 821, find the other.  (2Marks)
5. A car consumer 858 liters of petrol to cover 51 ¾ km. what average distance does it travel for every liter? (3Marks)
6. A wheel of diameter 14cm is rotating at 2500 revolution per minute. Express the speed of a point on the rim in meters per sec. (3Marks)

**QUESTION FOUR (20 MARKS)**

1. Express each of the following as a single fraction in its lowest form.
2. 2a2+abab- 3a2-ab6ab (3Marks)
3. p+qp- p-qq (3Marks)
4. Simplify    ra+rbma+mb- 1/m (3Marks)
5. Subtract the first quantity from the second giving your answer in meters
6. 95mm ; 320cm (2Marks)
7. 0.8mm ; 4m, 7mm (2Marks)
8. The area of a square is 38.44cm2. Find the perimeter of this square. (3Marks)
9. A rectangular plot measures 100m by 200m.Find it’s;
10. Perimeter (1Mark)
11. Area in m2 (2Marks)
12. Area in ha (2Marks)
13. A floor is covered by 1800 rectangular tiles each measuring 20cm by 15cm. Find the total area of the floor in m2. (2 Marks)

**QUESTION FIVE (20 MARKS)**

1. A rectangular piece of cloth is (x +5) cm by (x -1) cm. a strip 2cm wide is cut off all around it. Write an expression for the area of the strip. (3Marks)
2. A father is three times as old as his son. Find an expression for the sum of their ages five years ago if the son is x years old now. (3Marks)
3. Express 3.845 to two significant figures. (1Mark)
4. Add 4km, 4cm, 4mm and express your answer in meters. (2Marks)
5. How many fencing posts spaced 5m apart are required to fence a rectangular shamba measuring 745m by 230m? (3Marks
6. A rectangular mat measuring 10m by 8m covers an area inside a floor measuring 14m by 12m. Find the area not covered by the mat. (3Marks)
7. In a 3000m race, one athlete took 5 minutes and 39 seconds to complete. If he finished at 4.17pm, at what time did the race start?                                                           (2marks)
8. Find the angle subtended at the centre of a circle by an arc of length 11cm if the radius of the circle is 21cm. (3Marks)