

**GATITU MIX3D SECONDARY SCHOOL**

**MATHS FORM ONE END OF TERM 2 2015**

1. List the prime numbers between **640** and **650** (3 marks)

2. Which of the following numbers are divisible by 9? (3 marks)

**405, 5346 and 8432**

3. Three similar steel bars of length **200cm, 300cm and 360cm** are cut into equal pieces. Find the largest possible area of a square which can be made from any of the three pieces. (3 marks)

4. Three bells ring at intervals of **40 minutes, 45minutes and 60 minute**. If they ring simultaneously at 6.30 a.m. at what time will they next ring together? (3 marks)

5. Perform the following operations and represent it on a number line. (4 marks)

a)  $(-6) + (+4) + (-8)$

b)  $(-7) + (+2)$

c)  $(-5) + (-5) + (-5)$

d)  $(-15) + (+12)$

6. Rhoda walked four floors down from the tenth floor and then took a lift to the eighteenth floor. How many floors did she go through while in the lift? (3 marks)

7. Arrange the following fractions in ascending order (4 marks)

$5/12, 7/3, 11/5, 9/4$

8. Find the value of the unknown in :

a)  $3p/5 = 36/15p$

b)  $9/2t = 18/28$

9. Work out: (3marks)

$$5^2/3 + 1^4/5 - 2^1/3$$

10. It takes  $1\frac{1}{2}$  days to make a toy train. How many such toys can be made in two weeks? (3 Mks)

11. Evaluate:

$$\frac{1}{2} \{3/5 + 1/4(7/3 - 3/7)\} \text{ of } 1\frac{1}{2} \div 5 \quad (3 \text{ marks})$$

12. An integer  $p$  is two thirds of another and their difference is 10. Find the two integers. (3 marks)

13. Express the following as fraction:

$$3.256$$

14. The periodic time for swing of a swing of a pendulum in seconds is given by the formula.  $T = 2\pi \sqrt{l/g}$ . Calculate the value of  $T$  when  $l = 23.7 \text{ cm}$  and  $g = 1000 \text{ cm s}^{-2}$  (3 marks)

15. Express the following as a single fraction in its lowest form: (3 marks)

$$2r + \frac{t}{t} + r + \frac{1}{r}$$

16. An alloy is to be made by combining copper and aluminium in the ratio 3:8. If there is 39kg of copper, how much of aluminium is required to make the alloy? (3 marks)