MARTHOMA RESIDENTIAL SCHOOL, TIRUVALLA
SECOND TERMINAL EXAMINATION, 2018

MATHEMATICS

s: VI

Time: 2hrs
Marks: 80

I. Fill in the blanks

[10]

1. The simplest form of 42% = _____
2. $|-5| =$ _____
3. Additive inverse of 29 is _____
4. Reciprocal of 6 is _____
5. $0-(-17) =$_____
6. The _____ and a _____ are examples of non-regular polygons of four sides.
7. _____ are the numbers that are multiplied to get a product.
8. If one number is a multiple of a second number, then the greater number is the _____ while the smaller is the _____.
9. A 4-sided polygon with equal sides and non-equal diagonals is called a _____.
10. A square pyramid has _____ vertices.

II. Each question carries *two* marks

1. Write in descending order : $-9, 7, -1, 0, 3, -5, -11, 13.$
2. (a) Find $\frac{4}{5} \div \frac{7}{15}$

   (b) Change $\frac{17}{5}$ into mixed fraction
3. Represent $\frac{3}{7}$ on a number line.
4. Write 4 equivalent fractions of $\frac{2}{5}$.
5. Find the fourth term of the proportion whose first three terms are 2, 3,4.
6. Find the ratio in simplest form: 8 months to a year.

III. Each question carries *three* marks

1. (a) Find $5 + (-6) + (-2)$
   (b) What should be added to -76 to get 20?
2. (a) Which of the two fractions is greater $\frac{3}{5}$ or $\frac{10}{11}$?

   (b) Represent $1\frac{1}{3}$ pictorially.
3. Simplify $2\frac{5}{12} + 5\frac{5}{9} - 2\frac{2}{3}$

4. Convert (a) 2.1 into percentage
(b) 6.5% as a decimal
(c) $\frac{7}{20}$ into percentage

5. Find (a) $3\frac{4}{7} \times 1\frac{2}{5}$
(b) Prime factors of 98

6. Find the LCM of 10, 12, 18, 24 and 27 using common division method.

IV. Each question carries *four* marks

1. (a) Write the fraction $9 + \frac{2}{100} + \frac{6}{1000}$ in terms of decimals.
(b) A bag of rice weighs 85.500kg and a tin of oil weighs 35.1500kg. How much heavier is the bag of rice than the tin of oil?
2. Simplify $95 - 7 \times 2 \; of \; 6 + (35 - 5) \div 10$
3. (a) Check if 3288 is divisible by 6
(b) Using factor tree method, express 136 as a product of prime factors.

4. Reduce $\frac{289}{391}$ to the lowest terms.
5. Express the speed 54km/hr in
(a) m/min
(b) cm/s

V. Each question carries *five* marks

1. (a) What is the HCF of two consecutives numbers?
(b) Find the greatest number that exactly divides 1332 and 1888 leaving remainders 12 and 16 respectively.

2. A yield of wheat from 5 hectares of land is 260 quintals.
(a) Find the yield from 8 hectares.
(b) How much land will be needed for a yield of 572 quintals?

3. (a) Using prime factorisation method, determine the HCF of 145, 232
(b) The product of two numbers is 2160. If their HCF is 16, find their LCM.

4. (a) State Euler's formula.
(b) Verify the above formula for a square pyramid.
(c) Draw a 5-sided polygon. Draw its all diagonals.