B/DHARMADUTHA COLLEGE.
FIRST TERM TEST - 2017
MATHEMATICS

Grade 9   Time :- 2 hours

- **Answer all the questions.**

01) Write as a fraction 0.35

02) When the number 5300 is indicated in scientific notation it is written as 5.3×10^n.
     (n is an integer)
     Find the value of n,

03) Fill in the blanks $0.04 \longrightarrow 4 \times \underline{1} \longrightarrow 4.0 \times 10^{\square}$

04)   The area of Sri Lanka is 65610km.round off the area to nearest 1000

05)   There is a number with two digits. It`s units place is 7. If it is round off to the nearest 1000 or 100,the answer are equal. What is the number mention above?

06)   Find the first term of the number pattern ………. , 5 , 12 , 22 ,35 , 51

07)   Write suitable numbers for A,   If   2 , 4 , A,………… is a number pattern in ascending order started from 2.

08)   Find first two terms of the number pattern, if the general term is $5 + (-1)^n$

09)   Write the general term of the number pattern $\dfrac{3}{7} , \dfrac{5}{10} , \dfrac{7}{13}$…………

10)   What is the different between two consequents term of 43 ,37 ,31 , ……………

11)   Write in Milliliters , 2.5l

12)   Simplify X- 7 = 3

13) Add $\frac{1}{4} + \frac{1}{4}$

14) Find the value of $\frac{2}{3}$ of $\frac{3}{5}$

15) Find the $\frac{3}{4}$ of a minute

16) Put a (√) for correct statements

$1\frac{4}{5}$ of $1\frac{2}{3}$ $= 1\frac{2}{3}$ X $1\frac{4}{5}$ ☐

$\frac{3}{7} + \frac{1}{2} - \frac{2}{3} = \frac{2}{3} + \frac{1}{4} - \frac{2}{5}$ ☐

$3\frac{1}{4} \div \left(\frac{1}{2} + \frac{1}{2} \right) = 3\frac{1}{4}$ X $\left(\frac{1}{3} + \frac{2}{3} \right)$ ☐

17) Find the profit by selling an object at Rs.525,which was bought for Rs.450.

18) Find the value of $3x^2$,if x = 2

19) Select more profitable deal
A : Selling an article for Rs.80 of which was bought for Rs.72

B : Selling an article for Rs.67 of which was bought for Rs.60

20) Put a (√) for correct statements and put a (X) for incorrect statements

*If the unit place number is 5 or less than 5,it can round off to the nearest lower multiple of 10   ☐

* Reciprocal can obtain by inter changing the denominator and the numerator of a fraction   ☐

* There was a loss by selling an article. We can obtain buying price by adding selling price and the loss together   ☐

Part 2

- **Answer six (06) questions only**

01) There are 15 chairs in the first raw of a film hall.There are two more chairs included in each and every raw from the front raw.
  - i) Write the number of chairs in the first 4 raws in order
  - ii) Find the number of chairs in n^{th} raw in term of n
  - iii) Find the number of chairs in 10th raw, by using expression of (ii)
  - iv) In which raw contains 49 chairs
  - v) Show that there is not a raw with 88 chairs

02) a) $1\dfrac{2}{3} + \dfrac{2}{5}$ of $\dfrac{5}{6} \div \left(\dfrac{3}{4} - \dfrac{1}{3}\right)$

i) Write mathematical operations in simplification order

ii) Simplify above expression

b) Complete the empty boxes by using suitable fractions

1. $\dfrac{2}{3} - \boxed{} = \dfrac{3}{5}$

11. $\dfrac{3}{8} \div \boxed{} = \dfrac{3}{4}$

03) a) Find the general term of the number pattern

1. 1 x 4 , 2 x 7 , 3 x 10 ,………………

11. $\dfrac{5}{1}$, $\dfrac{5}{4}$, $\dfrac{5}{9}$, ……………….

111. 71 , 67 ,63 ,…………………

b) Write first three terms of the number pattern for the given general terms.
   1) 6n – 5   11) 100 -3n

04) The price of a mango is Rs.12.A man bought 200 mangoes and he separate them in to three sizes and labeled there prices. The price of a small size mango is Rs.25,midum size mango is Rs.30 and large size mango is Rs.40.
60 small mangoes, 80 midieum mangoes and 50 large mangoes were sold. Other mangoes couldn`t sold as they were spoiled.
i) How many mangoes couldn`t sold?
ii) Find the profit and the percentage of the profit he got by selling mangoes?

05) i) Write in general form 5.3×10^5

ii) When the number P is indicated in scientific notation it is written as $P = a \times 10^n$. Write the range of the values for the number a
iii) The price of a pair of shoe is Rs.3788.Represt the price of the item in three ways by rounding off the value.Give the reason for them.
iv) The number 1.9745 round off to the

a) nearest third decimal place
b) nearest second decimal place
c) nearest first decimal place

06) A trader buys an article at Rs.400/=.and marked its price expecting a profit at 25%.A 10% discount is given on the marked price for an outright purchase.

i) Find the profit and the percentage of the profit the trader has got

07) i) Simplify $(x + 3) (x + 7)$
ii) Find factors of $4x^2 - 25$
iii) Find the value of $x^2 - 2xy + y^2$,if $x = 4$ and $y = 2$
iv) Fill in the blanks

a) ax + bx + ………….. +cy
=x(…….+……) +y (……+……)
=(a + b) (……. +………)

b) x^2 +7x +12
=x^2 + ……..+…….+12
= x( ) +3( )
= ( ) ( )