

GREENLAWNS SCHOOL, WORLI  
Terminal Examination 2018  
MATHEMATICS

Std: VII  
Date: 28/9/18

Marks: [80]  
Time: 1½ hrs

Question 1.

1. Express  $\frac{3}{7}$  as a rational number with numerator as 12, -18 [1]
2. The product of two integers is -180. If one of them is -12, find the other [½]
3. Arrange the rational numbers  $-\frac{9}{10}, \frac{7}{-8}, \frac{-3}{4}, \frac{3}{-2}$  in ascending order [1]
4. Express 72 in exponential form [1]
5. Simplify **18.35x1.2** and write the answer to nearest hundredth [1]
6. Write 7.04870 correct up to three significant figures [½]
7. Evaluate **(0.4)<sup>3</sup>** [½]
8. Find *x such that*  $-\frac{7}{4} = \frac{x}{8}$  [½]
9. Write which is greater between **(8+10)x5** and **8+10x5** [½]
10. Write the degree of polynomial for  $7p^3q^2 - 9p^2q^5 + p^4q^4$  [½]
11. Solve **4a+3b-7a+4b** [½]
12. Express rational number  $\frac{14}{-56}$  to its lowest term [½]
13. Represent  $\frac{2}{3}$  and  $\frac{-2}{5}$  on a number line [1]
14. If **16 x 125 = 2<sup>x</sup> x 5<sup>y</sup>** find the values of x and y [1]

Question 2.

- a. Solve  $\frac{3}{8} \div 1\frac{1}{5}$  of  $(3\frac{1}{3} + 1\frac{1}{4})$  [2]
- b. The price of milk rises from `40 per lit to `43.20 per lit. Find the percentage increase in the price of milk. [2]
- c. How long will it take for a sum of `12600 invested at 9% per annum simple interest to amount to `16002? [3]
- d. Solve:  $\frac{5x-3}{2} - \frac{3x-2}{3} = \frac{2}{3}$  [3]

Question 3.

- a. Let A={2,4,6,8} B={6,8,10,12} find i) A∪B ii) A∩B iii)A-B iv) B-A [2]
- b. Payal purchased a leather purse for `2500 on which she got a discount of 12%. How much did she pay for the purse? [2]
- c. If  $1\frac{1}{4} : 2\frac{1}{3} = p : q$  and  $q : r = 4\frac{1}{2} : 5\frac{1}{4}$  find p : r [3]
- d. At an election between two candidates 53 votes were declared invalid. The winning candidate secures 58% of the valid votes and wins by 588 votes. Find the total number of votes polled. [3]

Question 4.

- a. Solve :  $\frac{2.5 \times 40.4}{50} - \frac{3.6 \times 2.8}{1.80}$  [2]
- b. Mukesh sold a table for `1840 at a loss of 8%. At what price did he purchase it? [2]
- c. A tap A can fill a tank in 8 hours while another tap B can empty it in 10 hours. How long will it take to fill the tank if both the taps are open [3]
- d. Mr Shyam borrowed `20000 to open a cake shop. He cleared off the debt by

paying ₹25650 at the end of end of 5 years. What was the rate of interest? [3]

Question 5.

- a. If  $A = \{x/x < 9, x \in W\}$ ,  $B = \{y/y < 10, y \in N\}$ ,  $C = \{a/a \leq 0, a \in W\}$ ,  $D = \{\text{multiples of 5 between 20 and 30}\}$  then write the sets in the roster form [2]
- b. Find the simple interest on ₹250 at 8% pa for 3 years, also find the amount. [2]
- c. A certain number of ₹10 notes and a certain number of ₹50 notes are kept in a purse so that there are 60 notes in the purse and their total value is ₹1400. Find the number of each type of notes. [3]
- d. Solve:  $10\frac{2}{3} + \left\{\frac{6}{5} + \left(\frac{2}{3} - \frac{1}{4}\right)\right\} - \frac{16}{3}$  [3]

Question 6.

- a. Find the mean proportion between 4 and 25 [2]
- b. If  $13\frac{1}{3}\%$  of a number is 90, find the number. [2]
- c. A fruit seller buys oranges at the rate of 10 for ₹75 and sells them at 8 for ₹70. Find his gain or loss percent. [3]
- d. If  $A = \{0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15\}$ ,  $B = \{1, 2, 3, 7, 9, 10\}$ ,  $C = \{1, 3, 5, 7, 9\}$ ,  $D = \{25\}$ . Find i)  $A \cup B \cup C$ , ii)  $A \cup C \cup D$  iii)  $A \cap (C \cup B)$  [3]

Question 7.

- a. Three times a number decreased by 2 is 7. Find the number. [2]
- b. Divide 35 sweets between A and B in the ratio  $\frac{1}{2} : \frac{1}{3}$  [2]
- c. Convert  $0.\overline{143}$  in to vulgar fraction [3]
- d. Subhash completed  $\frac{2}{5}$  of his Math homework on one day and  $\frac{1}{3}$  of it the next day. If the number of problems not done are 8 then, how many problems did he have for homework? [3]

Question 8.

- a. What should be subtracted from  $1 + x - x^2$  to get  $2x + x^2$ ? [2]
- b. At what rate percent per annum will ₹6300 yield an interest of ₹2100 in 4 years? [2]
- c. Divide  $x^3 - 4x^2 + x + 6$  by  $x^2 - x - 2$  [2]
- d. On selling a TV for ₹20350, a man gains 10%. What percent does he gain on selling the same for ₹19610? [4]

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