GREENLAWNS SCHOOL, WORLI
TERMINAL EXAMINATION
MATHEMATICS

STD: VIII MARKS: 80
DATE: 01/10 /19 TIMES: 2½ hrs

Answers to this Paper must be written on the paper provided separately. You will not be allowed to write during the first 15 minutes. This time is to be spent in reading the question paper. The time given at the head of this Paper is the time allowed for writing the answers. Attempt all questions from **Section A** and any four questions from **Section B**. All working, including rough work, must be clearly shown and must be done on the same sheet as the rest of the answer. Omission of essential working will result in loss of marks.
The intended marks for questions or parts of questions are given in brackets **[ ].**

Section A
(Attempt all questions of this section)

Question 1

a. Write the following sets in roaster form.
i) {x/ x is a two digit number whose sum of digits is 13}.
ii) {x/ x = $\frac{2n+1}{2n+3}$, n ϵ W and n < 10 } **[2]**

b. Write the following set in set builder form.
i) {1, 1/4, 1/9, 1/16 -------- 1/100}
ii) {1, 2, 3, 4, 6, 8, 12, 16, 24, 48} **[2]**

c. If 5 men or 7 women can earn Rs. 225, how much 10 men and 13 women would will earn per day. **[3]**

d. Simplify: $\frac{x^{m+n} \, X \, x^{n+l} X \; x^{l+m}}{\left(x^m \, X \, x^n \, X \, x^l\right)^2}$ **[3]**

Question 2

a. evaluate $\left[5\frac{1}{18} - 2\frac{5}{6}\right] of \; 2\frac{3}{5} \; X \; \frac{3}{4}$ **[3]**

b. A former can reap a field in 10 days while his wife can do it in 8 days. If they work together, in how much time they can reap the field. **[3]**

c. A man donated 1/10th of his money to a school, 1/6th of remains to a church and remaining money he distributed equally among his three children. If each child gets Rs. 5000, how much money did the man originally have? **[4]**

Question 3

a. Find the least number that must be subtracted from number 11021 to make it perfect square **[3]**

b. Divide 137592 by the smallest number so that the quotient is a perfect cube. **[3]**

c. Find the least number that must be added to number 8000, to make it perfect square. **[4]**

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Question 4

a. $X^2 + y^2 + z^2 = 29$ and $x + y + z = 9$, find $xy + yz + zx$ **[3]**

b. Subtract the sum of $2a + 5b – 7c + 1$ and $7a - 3b + 9c - 5$ from $5c – 3a + b + 13$. **[3]**

c. Multiply $(3a^2 + 5ab + 7b^2)$ by $(7a + 2b – 2ab)$ **[4]**

Section B
(Attempt any four questions)

Question 5

a. On reducing the price of a formal shirt by 8%, it Becomes Rs 423.20. Find its original price? **[3]**

b. By selling an article for Rs 770, a man loses of Rs 110. Find his loss percentage. **[3]**

c. In examination 82% students passed in math and 75% passed in science 8% students failed in both the subjects.

i) Find the percentage of students who failed in any of the subject.

ii) If 390 students passed in both subjects, then how many appeared in the examination? **[4]**

Question 6

a. Factorize: $121 – (a- 3b)^2$ **[3]**

b. Factorize: $a^2 - 5a – 300$ **[3]**

c. Smith buys an article marked at Rs. 2,200. The rate of tax is 12%. He asks the shopkeeper to reduce the price of the article to such an extent that he does not have to pay anything more than Rs. 2240 including tax. Calculate the reduction, as percent, needed in the marked price of the article. **[4]**

Question 7

a. $x – y = 17$ and $xy = 89$ find these value of $x^2 + y^2$ **[3]**

b. Calculate the compound interest on Rs 1850 at 10% per annum for 2 years. **[3]**

c. $a^2 + \frac{1}{a^2} = 7$, find i) $a + \frac{1}{a}$ ii) $a - \frac{1}{a}$ iii) $a^2 - \frac{1}{a^2}$ **[4]**

Question 8

a. Divide $10x^3 - 27x^2 + 36x - 27$ by $(2x - 3)$. **[3]**

b. An investment of Rs 1000 in a fixed deposit scheme becomes Rs 4000 in 2 years. Find the rate of interest compounded annually. **[3]**

c. Simplify $8x - [5x - 3x - 5y - 3\ \{2x - (3x - 2x - 3y)\}]$ **[4]**

Question 9

a. Simplify: $\dfrac{(3^{-2})^2 X (5^2)^{-3} X (t^{-3})^2}{(3^{-2})^5 X (5^3)^{-2} X (t^{-4})^3}$ **[3]**

b. Let p = {x: x is a vowel in the word 'mississippi'} write all the subsets of and which of these are proper subsets and which are improper subsets. **[3]**

c. 1200 soldiers in a fort had enough food for 28 days. After 4 days, some soldiers were sent to another fort and thus, the food lasted for 32 more days how many soldiers were left in the fort. **[4]**

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