



FUSCO'S SCHOOL (I.C.S.E)
Indiranagar, Bangalore
HALF YEARLY EXAMINATION 2016-17
Subject: Mathematics

Time: 2 1/2 hrs.
Marks: 80

Class: VII

Section - A

Question 1

- a) In how many years will Rs. 870 amount to Rs.1,044, the rate of interest being $2\frac{1}{2}$ % p.a. 3
- b) Find : 3
- i. $(x + 6) (x + 12)$
- ii. $(y + 0.7) (y - 0.1)$
- c) What sum of money lent out at 5% for 3 years will produce the same interest as Rs. 900 lent out at 4% for 5 years ? 4

Question 2

- a) Simplify : $\frac{2a+1}{3} + \frac{3a-1}{2}$ 3
- b) Simplify : 3
- i. $5b - \{ 6a + (8 - b - a) \}$
- ii. $3x + [4x - (6x - 3)]$
- c) Find the mean from the given table: 4

x	2	3	4	5	6	7	8	9	10
f	1	2	4	6	4	3	2	1	1

Question 3

- a) Find the S. I. and amount on Rs. 225 for 3 years 9 months at 16% p. a. 3
- b) If the mean of 8, 5, x, 4, x + 3 and 2x - 4 is 6, find the value of x. 3
- c) Simplify : 4
- $(x + y - z) x + (z + x - y) y - (x + y - z) z$

Question 4

- a) Simplify : 3
- i. $\frac{a}{10} + \frac{2a}{5}$
- ii. $\frac{2y}{4} + \frac{3y}{5}$
- b) Evaluate using formulae : 3
- i. $(3x + 2y)^2$
- ii. $(3m - 5n) (3m + 5n)$
- iii. 153×147
- c) The following observations show the number of children present for daily sports practice during the month of May. Represent the given data in the form of a frequency distribution: 4
- 35 40 40 42 41 40 41 44 40 40
- 38 37 40 41 39 38 39 40 42 37
- 35 30 35 36 38 37 41 42 41 38 37

Section B

Question 5

- a) The following table shows the market positions of some brands of soap. 5
Draw a pie-graph.

Soap(brands) :	A	B	C	D	E
No of buyers :	51	27	15	24	18

- b) Simplify : 5
i. $9x + 5 - [4x - \{3x - 2(4x - 3)\}]$
ii. $2a - 3b - [3a - 2b - \{a - c - (a - 2b)\}]$

Question 6

- a) Simplify the following , using formulae : 3
i. 106^2 ii. $89^2 - 79^2$
b) Find the arithmetic mean of the numbers given below: 3
i. 6, 10, 16, 20, 8, 19, 30, 57, 2, 0, 8.
ii. first ten whole numbers.
c) The number of boys taking part in different activities is shown in the table given below. Display the data by a bar graph. 4

Activities	scouts	Debate	Science Club	Inst. Music	S.U.P.W.
No.of boys	25	13	7	30	15

Question 7

- a) Find 3
i. $(x - \frac{4}{9})(x - \frac{5}{9})$
ii. $(x - 18)(x + 3)$
b) Find the square of: 3
i. $5p - 1$
ii. $abc + cd$
c) A sum of Rs. 1,780 becomes Rs. 2,136 in 4 years. Find : 4
i. The rate of interest .
ii. The sum that will become Rs. 810 in 7 years at the same rate of interest.

Question 8

- a) Simplify: 3
i. $(p + \frac{p}{3})(2p + \frac{p}{2})(3p - \frac{2p}{3})$
ii. $8(2a + 3b - c) - 10(a + 2b + 3c)$
b) Find which of the following are perfect square trinomials : 3
i. $x^2 - 8x + 9$
ii. $9x^2 + 6xy + 4y^2$
iii. $m^2 + 2m + 4$
c) Find the S. I. and amount on Rs. 600 from July 12 to Dec. 5 at 10% p. a. 4