Sub. : Maths	**Question Paper**	**Marks : 20**
Std. : VIIIth - S.B.	**11. Statistics**	**Time : 45 min.**

Q.1 : A) Select the most appropriate Alternative. 02

1) If the mean of 10 observations is 12, what is their sum ?

   a) 120   b) 1.2   c) 12   d) 60

2) If the mean of 3, 7, 11 and x is 9, what is the value of x ?

   a) 9   b) 11   c) 13   d) 15

: B) Solve the following. 01

1) What is mean of first five prime numbers ?

Q.2 : A) Solve any one of the following. (Activity) 02

1) The number of pages in a book Ninad read for five consecutive days were 60, 50, 54, 46, 50. Find the average number of pages he read everyday.

Ans : $\text{Average} = \dfrac{\text{Sum of all scores}}{\text{Total number of scores}}$

$$= \frac{60 + \boxed{} + \boxed{} + \boxed{} + 50}{\boxed{}} = \frac{\boxed{}}{\boxed{}} = \boxed{}$$

∴ average number of pages read daily is $\boxed{}$

2) The following table shows the electricity (in units) used by 25 families of Eklara village in a month of May. Complete the table.

Electricity ued (Units) x_i	Number of families (frequency)f_i	$f_i \times x_i$
30	7	....
45	2	....
60	8	....
75	5	....
90	3	....
	N = ...	$\sum f_i x_i$ = ...

: **B) Solve any one of the following.** 02

1) The sides of two squares are 4cm and 10 cm respectively. What is their mean perimeter ?

2) The weights (in kg) of 10 boys from a team are recorded as follows :
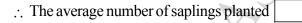
55, 53, 48, 47, 54, 49, 64, 45, 55, 50.

Find their mean weight.

Q.3 : **A) Solve any one of the following.(Activity)** 03

1) The following table shows the number of saplings planted by 30 students. Fill in the boxes and find the average number of saplings planted by each student.

Number of saplings (Scores)x_i	Number of students (frequency)f_i	$f_i \times x_i$
1	4	4
2	6	☐
3	12	☐
4	8	☐
	N = ☐	$\sum f_i x_i = $ ☐

Mean $\overline{x} = \dfrac{\boxed{}}{N}$

$= \dfrac{\boxed{}}{\boxed{}}$

$= \boxed{}$

∴ The average number of saplings planted $\boxed{}$.

2) The frequency distribution table is given below. Complete the column $f_i \times x_i$ and find the mean score.

Score(x_i)	Tally marks	Frequency f_i	$f_i x_i$
2	||||	4	
3	|||	3	
4	⦀⦀	10	
5	⦀⦀	9	
6	|||	4	
		N =	$\sum f_i x_i = $

Mean $\bar{x} = \boxed{}$ formula

$= \dfrac{\boxed{}}{30}$

$= \boxed{}$.

:   B) Solve any one of the following.   03

1) In the following table number of saplings planted in the years 2016 and 2017 in four towns is given. Show the data with the help of subdivided bar graph.
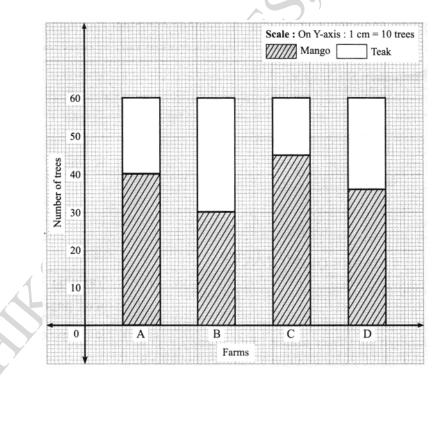
town/year	Karjat	Wadgoan	Shivapur	Khandala
2016	150	250	200	100
2017	200	300	250	150

2) Show the following information by a percentage bar graph.

Division of standard 8	A	B	C	D
Number of students securing grade A	45	33	10	15
Total number of students	60	55	40	75

Q.4   :   Solve any one of the following.   04

1) Observe the subdivided bar graph given below and answer the following questions :

i) What is the ratio of the number of teak trees to the number of mango trees in farm A ?

ii) What is the total number of mango trees in four farms ?

iii) What is the ratio of the number of mango trees to the number of teak trees in the farm D ?

iv) In which of the four farms is the number of teak trees the highest ?

2) The following data is collected in a survey of some students of 10ᵗʰ standard from some schools. Draw the percentage bar graph of the data.

School	1st	2nd	3rd	4th
Inclination towards science stream	90	60	25	16
Inclination towards commerce stream	60	20	25	24

Q.5 : Solve any one of the following. 03

1) The number of peas in each of the 50 pods is given below :

4, 3, 2, 4, 3, 4, 3, 3, 2, 8, 2, 3, 3, 4, 3, 4, 4, 5, 2, 8, 8, 2, 5, 3, 4, 4, 3, 6, 2, 3, 4, 4, 3, 3, 2, 6, 4, 4, 7, 2, 7, 6, 3, 6, 6, 6, 7, 6, 7, 3.

Find the mean number of peas in each pod.

2) The number of Science and Mathematics projects submitted by Model high school, Nandpur in last 20 years at the state level science exhibition is :

2, 3, 4, 1, 2, 3, 1, 5, 4, 2, 3, 1, 3, 5, 4, 3, 2, 2, 3, 2. Prepare a frequency table and find the mean of the data.

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