PRISM WORLD

Std.: 9 (English) **Maths - I** **Marks: 20**

Date: **Time: 1 hour**

Chapter: 7

Q.1 Choose the correct alternatives. **(3)**

1) Let a, b and c be these observations. The mean of these observation is

a. $\frac{a \times b \times c}{3}$ b. $\frac{a+b+c}{3}$ c. $\frac{a-b-c}{3}$ d. $\frac{a \times b+c}{3}$

2) If $\overline{x}$ mean of $x_1, x_2, ..., x_n$ and $\overline{y}$ is the mean of $y_1, y_2, ..., y_n$ and $\overline{z}$ is the mean of $x_1, x_2,$ $..., x_n, y_1, y_2, ..., y_n$ then $\overline{z}$ = ?

a. $\frac{\overline{x}+\overline{y}}{2}$ b. $\overline{x}+\overline{y}$ c. $\frac{\overline{x}+\overline{y}}{n}$ d. $\frac{\overline{x}+\overline{y}}{2n}$

3) Following statements are true for bar graph.
a. All bars have the same width
b. The scale is clearly mentioned on graph.
c. The X axis and Y - axis clearly show the quantities which are represented on them.
d. All of the them

Q.2 Solve the following question. (Any Two) **(4)**

1) Find the mean of the first seven odd prime numbers.

2) If the class mark of a class is 10 and the class width is 6, then find the class.

3) Give below are the marks obtained by 27 students in a test:
21, 3, 28, 38, 6, 40, 20, 26, 9, 8, 14, 18, 20, 16, 17, 10, 8, 5, 22, 27, 34, 2, 35, 31, 16, 28, 37.
i. Using the class intervals 1 - 10, 11 - 20 etc. construct a frequency table.
ii. State the class mark of the third class of your frequency table.

Q.3 Solve the following question. (Any Two) **(6)**

1) Given below are the number of children in each of 34 families in a each of 34 families in a certain area.
2,3,3,1,2,4,3,2,1,2,2,1,2,1,3,1,2,1,2,1,2,2,2,3,1,2,2,1,1,2,2,3,1,2.
Prepare an ungrouped frequency distribution table.

2) The marks scored in a test of Marathi are recorded as follows :
41,48,46,31,46,25,37,43,55,38,18,41,55,46,58,42,23,35,41,31,45,26,11,
46,43,53,47,56,46,42,20,57,41,61,71,52,66,33,43,59,55,63,57,40,43,22,58,74,
63,53,47, 32,58,39,66,45.
Prepare a grouped frequency distribution table. (Take the classes 11-20, 21-30, ...)

3) A survey was undertaken to judge the inclination of students towards business and service in five different schools. Draw subdivided bar diagram for the following data:

School number	I	II	III	IV	V
Business (No. of students)	32	56	45	55	60
Service (No. of students)	48	24	45	25	40

Q.4 Solve the following question. (Any One) **(4)**

1) Using the data in example (3) above, prepare less than type cumulative frequency table and answer the following questions.

55, 60, 81, 90, 45, 65, 45, 52, 30, 85, 20, 10, 75, 95, 09, 20, 25, 39, 45,
50, 78, 70, 46, 64, 42, 58, 31, 82, 27, 11, 78, 97, 07, 22, 27, 36, 35, 40,
75, 80, 47, 69, 48, 59, 32, 83, 23, 17, 77, 45, 05, 23, 37, 38, 35, 25, 46,
57, 68, 45, 47, 49.

Prepare less than type cumulative frequency table and answer the following questions.

(i) How many students obtained less than 40 marks?

(ii) How many students obtained less than 10 marks?

(iii) How many students obtained less than 60 marks?

(iv) Find the cumulative frequency of the class 50 – 60.

2) There are 68 students of 9th standard from Model High School, Nandpur. They have scored the following marks out of 80, in the written examination of mathematics.

70, 50, 60, 66, 45, 46, 38, 30, 40, 47, 56, 68, 80, 79,
39, 43, 57, 61, 51, 32, 42, 43, 75, 43, 36, 37, 61, 71,
32, 40, 45, 32, 36, 42, 43, 55, 56, 62, 66, 72, 73, 78,
36, 46, 47, 52, 68, 78, 80, 49, 59, 69, 65, 35, 46, 56,
57, 60, 36, 37, 45, 42, 70, 37, 45, 66, 56, 47.

Prepare a frequency distribution table (less than type) taking 30 – 40, 40 – 50, ...

Using the table, answer the following questions :

(i) How many students scored less than 80 marks?

(ii) How many students scored less than 40 marks?

(iii) How many students scored less than 60 marks?

Q.5 Solve the following question. (Any One) **(3)**

1) Compete the following cumulative frequency table :

Class (Height in cm)	Frequency (Number of students)	Cumulative frequency (less than type)
150 – 153	5	5
153 – 156	7	5 + □ = □
156 – 159	15	□ + 15 = □
159 – 162	10	□ + □ = 37
162 – 165	5	37 + 5 = 42

165 – 168	3	□ + □ = 45
	Total = 45	

2) In the tables given below, class mark and frequencies are given. Construct the frequency tables taking inclusive and exclusive classes.

Class mark	Frequency
5	3
15	9
25	15
35	13