

QB365

Important Questions - Statistics

9th Standard CBSE

Mathematics

Reg.No. :

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Time : 01:00:00 Hrs

Total Marks : 50

Section-A

- 1) The word 'Latam' is a 1
(a) Latin word (b) German word (c) English word (d) Sanskrit word
- 2) Class mark = 1
(a) $\frac{\text{lower limit} + \text{upper limit}}{2}$ (b) lower limit + upper limit (c) upper limit - lower limit
(d) $\frac{\text{lower limit} - \text{upper limit}}{2}$
- 3) The lower limit of the class 31-35 is 1
(a) 31 (b) 33 (c) 35 (d) 30
- 4) The upper limit of the class 36 - 40 is 1
(a) 36 (b) 38 (c) 40 (d) 41.
- 5) In the distribution, the frequency of the class 3 - 5 is 1
4,8,3,6,7,2,3,5,9,4,6,5,5.
(a) 2 (b) 4 (c) 5 (d) 7.
- 6) The range of the data 1
25,10,20,22,16,6,17,12,30,32,10,19,8,11,20.is:
(a) 10 (b) 15 (c) 18 (d) 26
- 7) If the range of a distribution is 50 and class interval is 10, then two number of classes is 1
(a) 6 (b) 10 (c) 5 (d) 4
- 8) The class mark of the class interval 90 - 120 is: 1
(a) 90 (b) 105 (c) 115 (d) 120
- 9) The class marks of a frequency distribution are 15,20,25,... The class corresponding to class mark 25 is: 1
(a) 17.5-22.5 (b) 20-30 (c) 22.5-27.5 (d) 22-27
- 10) In a morning walk, I had 20 rounds of a park. During this period, I came across person A, person B, person C and person D, 11 times, 7 times. 10 times and 5 times respectively. I want to represent this data graphically, which of the following is the best representation? 1
(a) Bar graph (b) Histogram with unequal width (c) Histogram with equal width
(d) Frequency polygon

Section-B

- 11) The class marks of classes in a distribution are 6,10,14,18,22,26,30. Find 2
- (a) class size
 (b) lower limit of second class
 (c) upper limit of last class
 (d) third class
- 12) The marks obtained out of 75 by 30 students of a class in an examination are given below: 2
 42,21,50,37,42,37,38,42,49,52,38,53,57,47,29,59,61,33,17,17,39,44,42,39,14,7,27,19,54,51
 Prepare a frequency distribution table in which the size of class intervals is the same and one class interval is 0-10.
- 13) The marks obtained by 40 students of class IX in an examination are given below: 2
 12,8,18,8,6,16,12,5,
 23,2,10,20,12,9,7,6,
 5,3,5,13,21,13,15,20,
 24,1,7,16,21,13,23,18,
 7,3,18,17,16,16,23,12
 Represent the data in the form of a frequency distribyuting using 15-20 (20 not included) as one of the class intervals.
- 14) The blood group of 30 students are recorded as follows: 2
- | | | | | | |
|----|-----|----|----|-----|----|
| A, | B, | O, | A, | AB, | O, |
| A | O, | B, | A, | O, | B, |
| A | AB, | B, | A, | AB, | B, |
| A, | A, | O, | A, | AB, | B, |
| A, | O, | B, | A, | B, | A |
- Prepare a frequency distribution table for the data.
- 15) 5 people were asking about the time in a week they spend in doing social work in their community. They said 2
 10,7,13,20 and 15 hours, respectively. Find the mean (or average) time in a week denoted by them social work
- 16) Find the mean of first ten multiples of 3. 2
- 17) The heights (in cm) of students of a class are as follows: 2
- | | | | | |
|-----|-----|-----|-----|-----|
| 155 | 160 | 145 | 149 | 150 |
| 147 | 125 | 144 | 148 | |
- Find the median of this data.
- 18) Find the median of the following data 15,28,72,56,44,32,31,43 and 51. If 32 is replaced by 23, find the new 2
 median.
- 19) Find the mode of the following marks (out of 10) obtained by 20 students: 2
 4,6,5,9,3,2,7,7,6,5,4,9,10,10,3,4,7,6,9,9.
- 20) Mean of 50 observations was found to be 80.4. But later on it was discovered that 96 was misread as 69 at one 2
 place. Find the correct mean.

Section-C

- 21) The mean of 200 items was 50. Later on, it was discovered that the two items were misread as 92 and 8 5
 instead of 192 and 88. Find the correct mean.

- 22) The mean of 50 observations of a data was 70. At later stage, it was noted that a value of 85 was wrongly read as 60. Find
- total of 50 observations.
 - difference between the recorded value and exact value
 - corrected total of 50 observations
 - corrected mean.
 - Apala has the view that the corrected mean is greater than the recorded mean. Is she right? Which value is depicted by her view?
- 23) (i) The following are the data on the speed of car passing through a particular spot on a highway.

Speed(km/h)	Number of cars
30-40	3
40-50	6
50-60	25
60-70	65
70-80	50
80-90	28
90-100	14

Draw a histogram representing the above data.

(ii) Draw a frequency polygon representing the above data

(iii) Of how many cars is the speed greater than or equal to 30 km/h?

(iv) Apala comments that the number of cars whose speed is greater than or equal to 80 km/h is 10. Is she right? Which value is depicted by her comment?

- 24) A survey conducted by an organization for the cause of illness and death among the women between the ages 15-44 (in years) worldwide, found the following figures (in %):

S.No.	Causes	Female fatality rate (%)
1.	Reproductive health conditions	31.8
2.	Neuropsychiatric conditions	25.4
3.	Injuries	12.4
4.	Cardiovascular conditions	4.3
5.	Respiratory conditions	4.1
6.	Other causes	22.0

(i) Represent the information given above graphically.

(ii) Which condition is the major cause of women's ill health and death worldwide?

(iii) Try to find out, with the help of your teacher, any two factors which play a major role in the cause in (ii) above being the major cause.

Section-A

1) (a) Latin word

1

2) (a) $\frac{\text{lower limit} + \text{upper limit}}{2}$

1

- 3) (a) 31 1
 4) (c) 40 1
 5) (d) 7. 1
 6) (d) 26 1
 7) (c) 5 1
 8) (b) 105 1
 9) (c) 22.5-27.5 1
 10) (a) Bar graph 1

Section-B

- 11) (a) 4 2
 (b) 8
 (c) 32
 (d) 12-16

12)

Class	Frequency
0-10	1
10-20	4
20-30	3
30-40	7
40-50	7
50-60	7
60-70	1
Total	30

13)

0-5	4
5-10	11
10-15	8
15-20	9
20-25	8

14)

O	6
A	12
B	8
AB	4

- 15) 13 hours. 2
 16) 16.5 2
 17) 149 cm 2
 18) 43,43 2
 19) 9 2



20) 80.94

2

Section-C

21) \therefore Mean of 200 items = 50

5

\therefore Sum of items = $200 \times 50 = 10000$

Corrected sum = $10000 - (92 + 8) + (192 + 88)$

= 10180

\therefore Correct mean = $\frac{10180}{200} = 50.9$

22) (i) Total of 50 observations = $50 \times 70 = 3500$

5

(ii) Difference between the recorded value and exact value = $85 - 60 = 25$

(iii) Corrected value of 50 observations

= $3500 - 60 + 85 = 3525$

(iv) Correct mean = $\frac{3525}{50} = 70.5$

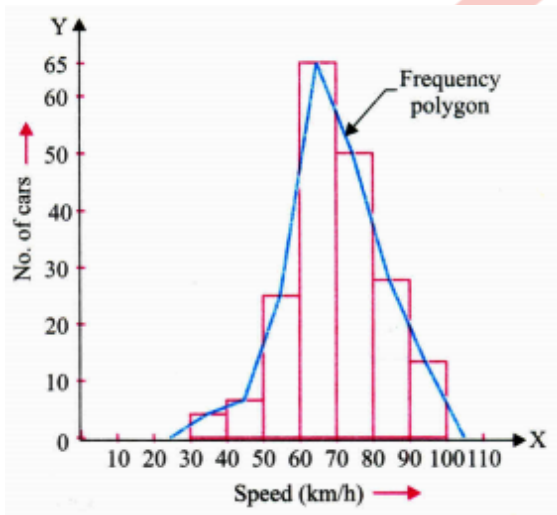
(v) $\therefore 70.5 > 70$

\therefore Corrected mean > Recorded mean

\therefore The value 'wiseness' is depicted by her view.

23) (i) (i)

5



(iii) Number of cars whose speed is greater than or equal to 30 km/h

= $3 + 6 + 25 + 65 + 50 + 28 + 14$

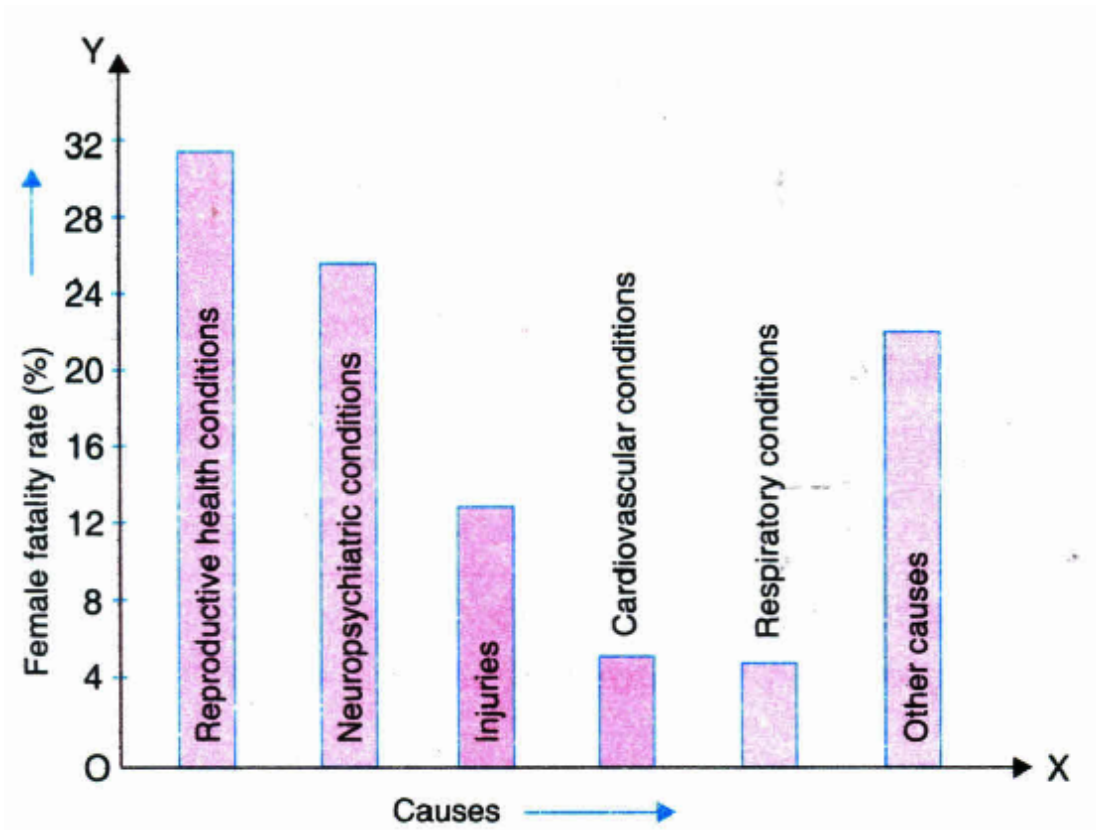
= 191

(iv) Number of cars whose speed is greater than or equal to 80 km/h

= $28 + 14 = 42 \neq 40$

\therefore Apala is wrong.

\therefore The value 'non-exactness' is depicted by the comment made by Apala.



(ii) Reproductive health conditions is the major cause of women's ill health and death worldwide.

(ii) Lack of proper diet, lack of advised exercises.