Data Handling

QUESTIONS

1. If mode of the observations 28, 17, 16, 13, 25, 13, 17, 28, 18, 16, 28, 17, 16, 15, 3x-5, 16, 19, 21, 15, 13, 12, 16, then find the value of x.

(a) 0 (b) -5

(b) 7 (d) cannot be determined

(e) None of these

2. If the median of the observation 19, 21, 23, 35, 47, x, x+2, 71, 79, 80, 92, 95 arranged in ascending order is 50. Find the value of x.

(a) 48 (b) 49

(c) 51 (d) 53

(e) None of these

3. The marks (out of 100) obtained by group of students in a mathematic test are 80, 79, 84, 92, 77, 64, 57, 75, 80, 54, 72 and 78. Based on this information, choose the statement which is correct?

(a) The range of the data is 36. (b) Median of the data is 77

(c) The mode of the data is 84. (d) All the above

(e) None of these

4. If the mean of 13, 17, 18, 20, x and 9 is 16 find the value of x.

(a) 16 (b) 18

(c) 1.9 (d) 20

(e) None of these

5. If the range of 10 observations is 68 and its lowest score of the data is 34 then find the highest score of the data.

(a) 68 (b) 86

(c) 102 (d) 112

(e) None of these

6. If the mean of a data is 316 and the sum of its observations is 3792. Find the number of observations in the data.

(a) 22 (b) 12

(c) 17 (d) 27

(e) None of these

7. **If the mean of m, 3n and 2t is same as the mean of 3m, 2t and s, then which one of the following is correct?**

(a) $2m+s=2n$ (b) $m+2s=3n$

(c) $2m+s=3n$ (d) $m+s=2n$

(e) None of these

8. **If the of the data 19, 28, 25, 21, 32, 17, 12, m, 11, 34, 21, 27, 29, 31, 22 is 23 then _____ .**

(a) $m>34$ (b) $11\le m\le 34$

(c) $23\le m\le 34$ (d) $19\le m\le 42$

(e) None of these

9. **In a box, there are 7 red balls, x white balls and 3 green balls. A ball is drawn from the box. If the probability of getting a white ball is found to be $\frac{1}{3}$ then how many white balls in the box?**

(a) 15 (b) 6

(c) 9 (d) 5

(e) None of these

10. **The mean of n number of observations is 36. If sum of the observations is 1044, then find the value of n.**

(a) 26 (b) 19

(c) 24 (d) 29

(e) None of these

11. **If x is an even integer and sum of 12 Consecutive numbers from x is found to be 588, then find the mean of 10 consecutive even numbers starting from $x-20$.**

(a) 22 (b) 27

(c) 28 (d) 32

(e) None of these

12. **In a pie chart, the central angle for a component value of 320 when the total value is 1440, is _____**

(a) 90° (b) 85°

(c) 80° (d) 75°

(e) None of these

13. **The least value of the probability of an event is _____.**

(a) 0 (b) –1

(c) 1 (d) 0.1

(e) None of these

14. In a pictograph if 1 picture represents 120 bikes, then 14640 bikes can be represented by _____.

(a) 120 pictures (b) 132 pictures

(c) 122 pictures (d) 170 pictures

(e) None of these

15. Which one among the following statements is incorrect?

(a) Median is the middle value of a data, when it is arranged in ascending or descending order.

(b) On throwing a dice, the outcomes are 1, 2, 3, 4, 5 and 6

(c) Mean, median and made are the measures of central tendency.

(e) None of these

16. In a bar graph, a bar of length 9.2 cm is represented by 460 units. The length of another bar, which is represented by 335 units, is _____

(a) 8.8 (b) 8.7

(c) 6.7 (d) 6.8

(e) None of these

17. A coin is tossed 18 times and the recorded outcomes are:

H H T H T T H T T T H T H H H T H T

The chance of occurrence of a tail is_____.

(a) 50% (b) 40%

(c) 60% (d) 70%

(e) None of these

18. Which one among the following statements is incorrect?

(a) The data 11, 13, 17, 19, 21, 25 has every observation as mode.

(b) The measures of central tendency he between, the maximum and minimum values of data.

(c) Mean of the data is always from the given data.

(d) The range of the data 13, 18, 16, 14, 19, 23, 17 would not change If 8 was subtracted from each value in the data.

(e) None of these

19. Find the probability that a student chosen at random out of 5 girls and 8 boys is a boy.

(a) $\frac{5}{13}$ (b) $\frac{1}{8}$

(c) $\frac{5}{8}$ (d) $\frac{8}{13}$

(e) None of these

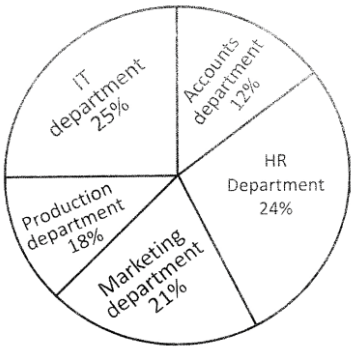
20. The mean of first 8 odd natural numbers is

(a) 8 (b) 7

(c) 6 (d) 9

(e) None of these

Directions (21 - 25): Read the following pie chart carefully and answer the questions given below it:



Percentage of Employees in different departments of an organization = 3600

21. What is the number of employees of accounts department?

(a) 432 (b) 362

(c) 482 (d) 512

(e) None of these

22. The ration of the number of employees of Production department to HR Department is _____.

(a) 3 : 8 (b) 3 : 4

(c) 4 : 7 (d) 7 : 12

(e) None of these

23. If 400 new employees are hired in the marketing department, then find the ratio of number of employees of the marketing department to the number of employees in the IT department.

(a) 289 : 225 (b) 17 : 15

(c) 19 : 16 (d) 17 : 196

(e) None of these

24. If 300 employees are shifted from HR department to production department, then new ratio of number of employees of HR department to the production department is

(a) 91 : 37 (b) 97 : 29

(c) 28 : 59 (d) 38 : 17

(e) None of these

25. If 200 new employees are hired in accounts department and 100 employees of IT department left the organization, then new ratio of number of employees of IT department to accounts department is _____.

(a) 79 : 100 (b) 85 : 97

(c) 81 : 100 (d) 77 : 97

(e) None of these

26. If the mean of the following distribution is 21, then find the value of P.

x	12	18	20	25	P+6
f	8	3	7	4	6

(a) 29 (b) 20

(c) 27 (d) 12

(e) None of these

27. Find the value of m if mean of the following distribution is 33-75.

x	16	22	28	37	45	52
f	9	7	3	m+2	7	9

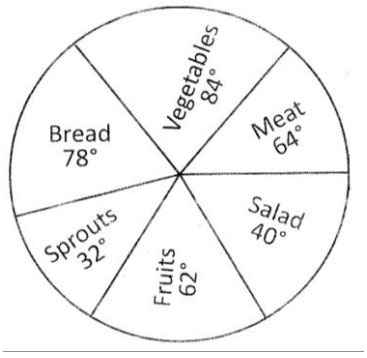
(a) 4 (b) 12

(c) 3 (d) 9

(e) None of these

Directions (28 - 31): Study the following pie chart the questions given below:

A Survey was conducted on 21600 people on the food items preferred by them.



28. What is the total number of people preferring vegetables?

(a) 3020 (b) 4080

(c) 5040 (d) 5080

(e) None of these

29. Find the difference between the number of people preferring Bread and salad.

(a) 2260 (b) 2280

(c) 2298 (d) 2320

(e) None of these

30. People preferring fruits were what percent of the people preferring meat?

(a) 96.875% (b) 93.678%

(c) 94.82% (d) 95.72%

(e) None of these

31. How many percent of people had preferred sprouts?

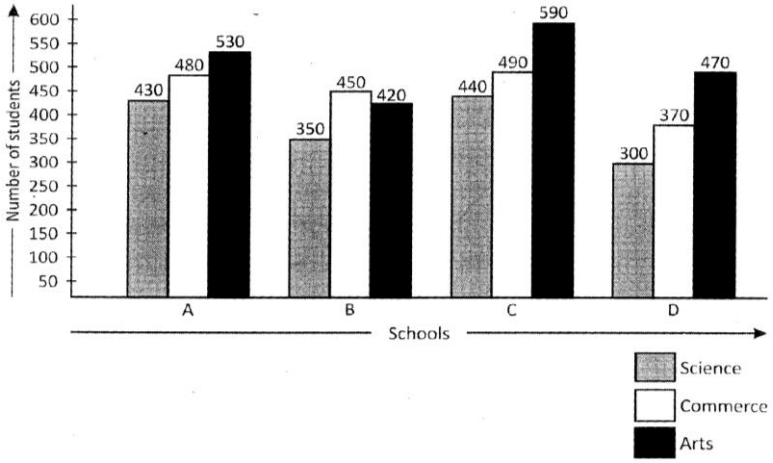
(a) $8.\overline{8}\%$ (b) $7.\overline{9}\%$

(c) $8.\overline{3}\%$ (d) 7.5%

(e) None of these

Directions (32-34): Study the following graph carefully to answer the questions that follow:

Number of Students enrolled in three different disciplines in four different schools.



32. What is the total number of students enrolled in Arts and Science in all the schools together?

(a) 2530 (b) 3530

(c) 2820 (d) 2720

(e) None of these

33. What is the respective ratio of total number of students enrolled in Science, Commerce and Arts in all the schools together?

(a) 152: 179: 201 (b) 153: 211:: 179

(c) 209: 177: 184 (d) 141: 133: 179

(e) None of these

34. Number of students enrolled in commerce in school B form what percent of total number of students enrolled in all the discipline together in that school? (Rounded off to two digits after decimal)

(a) 36.89%
(b) 46.39%
(c) 42.48%
(d) 40.45%
(e) None of these

35. The weights (in kg) of 18 students are: 32, 28, 26, 25, 29, 27, 30, 42, 35, 33, 28, 26, 29, 38, 27, 32, 34, 36. The median of their weight is represented by M. If the weight 42 kg is replaced by 32 kg and weight 38 kg is replaced by 29 kg, and the median of their weights is represented by M' then find the value of M' – M.

(a) 0 kg
(b) -0.5 kg
(c) 0.5 kg
(d) 1 kg
(e) None of these

36. Which one of the following is not an example of an impossible event?

(a) Getting a number less than 1 on throwing a die.
(b) Getting neither head nor tail on tossing an unbiased corn
(c) On throwing a die, getting a prime number which is not an even number.
(d) 53 Sundays in a leap year.
(e) None of these

37. In a cricket match, a batsman hits a boundary n times out of 71 he plays. If the probability that he did not hit a boundary is $\frac{8}{9}$ find the value of n.

(a) 9
(b) 8
(c) 18
(d) 36
(e) None of these

38. In a survey of 500 students, it was found that 220 like milk, 150 like coffee and 130 like tea. Out of these students, one student is chosen at random. Based on this information choose the statement which is incorrect.

(a) The probability that the chosen girl like tea is $\frac{13}{50}$

(b) The probability that the chosen girl does not like coffee is $\frac{7}{10}$.

(c) The probability that the chosen girl dislikes milk is $\frac{2}{5}$

(d) The probability that the chosen girl likes coffee is $\frac{3}{10}$.

(e) None of these

39. A coin is tossed 400 times and get the following outcomes.

Head: 225 times Tail: 175 times when a coin is tossed at random, the probability of getting a head is _____.

(a) $\frac{3}{4}$ (b) $\frac{9}{16}$

(c) $\frac{8}{9}$ (d) $\frac{8}{16}$

(e) None of these

40. A die is thrown 120 times having following outcomes.

Outcomes	1	2	3	4	5	6
Frequency	18	24	22	16	19	21

A die is thrown randomly, then find the probability of getting an even 40 number.

(a) $\frac{59}{120}$ (b) $\frac{1}{2}$

(c) $\frac{61}{120}$ (d) $\frac{31}{60}$

(e) None of these

ANSWER - KEY				
1. (C)	**2.** (B)	**3.** (B)	**4.** (C)	**5.** (C)
6. (B)	**7.** (C)	**8.** (B)	**9.** (D)	**10.** (D)
11. (B)	**12.** (C)	**13.** (A)	**14.** (C)	**15.** (D)
16. (C)	**17.** (A)	**18.** (C)	**19.** (D)	**20.** (A)
21. (A)	**22.** (B)	**23.** (A)	**24.** (B)	**25.** (A)
26. (C)	**27.** (C)	**28.** (C)	**29.** (B)	**30.** (A)
31. (A)	**32.** (B)	**33.** (A)	**34.** (A)	**35.** (B)
36. (D)	**37.** (B)	**38.** (C)	**39.** (B)	**40.** (C)