Data Handling

Question 1.
The difference between the upper and lower limit is called
(a) group
(b) class size
(c) class interval
(d) class mark

Answer: (b) class size

Question 2.
A process which results in some well defined outcome is known as :
(a) outcome
(b) event
(c) experiment
(d) frequency

Answer: (c) experiment
Experiment is a process which results in some well defined outcomes.

Question 3.
What is the median of the data 46,64,87, 41,58,77,35,90,55,33,92?
(a) 87
(b) 77
(c) 58
(d) 60.2

Answer: (c) 58

Question 4.
In a bar chart, a bar of length 4 cm is drawn. If 1 cm = 1.5 l, what will 4 cm be ?
(a) 3 l

(b) 6 l
(c) 5 l
(d) 9 l

Answer: (b) 6 l
1 cm = 1.5 /, 2 cm = 3 /, 3 cm = 4.5 l, 4 cm = 6 l.

Question 5.
The mean weight of 100 students in a class is 46 kg. The mean weight of boys is 50 and of girls is 40 kg. Therefore, the number of boys is:
(a) 50
(b) 60
(c) 70
(d) 65

Answer: (b) 60

Question 6.
The probability of an experiment cannot be greater than :
(a) 0
(b) 0.5
(c) 1
(d) 2

Answer: (c) 1
The maximum probability an event can have is $\frac{100}{100} = \frac{1}{1} = 1$

Question 7.
The number of times an observation occurs in a data is called its
(a) Range
(b) Raw data
(c) Interval
(d) Frequency

Answer: (d) Frequency

Question 8.
Suppose in a game of ludo, the player requires 1, 3, 5 and 6 to be safe. What is the probability of being unsafe ?

(a) $\frac{4}{6}$
(b) $\frac{3}{6}$
(c) $\frac{2}{6}$
(d) 1

Answer: (c) $\frac{2}{6}$
Since the safe places are 4, unsafe places are 2. So probability = $\frac{2}{6}$

Question 9.
When a coin is thrown, total number of possible outcomes is _____.
(a) 5
(b) 2
(c) 6
(d) None of these

Answer: (b) 2

Question 10.
Represent the frequency : 29 in Tally Marks.
(a) 𝍸 𝍸 𝍸 ||||
(b) 𝍸 𝍸 𝍸 𝍸 𝍸 ||||
(c) 𝍸 𝍸 ||||
(d) 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸

Answer:
(b) 𝍸 𝍸 𝍸 𝍸 𝍸 ||||
10 = 𝍸 𝍸, 20 = 𝍸 𝍸 𝍸 𝍸, 29 = 𝍸 𝍸 𝍸 𝍸 𝍸 ||||

Question 11.
There are 2 red, 3 blue and 5 black balls in a bag. A ball is drawn from the bag without looking in to the bag. What is the probability of getting a non-blue ball?
(a) $\frac{3}{5}$
(b) $\frac{7}{10}$
(c) $\frac{2}{5}$
(d) None of these

Answer: (b) $\frac{7}{10}$

Question 12.
Hari is playing snakes and ladders. He wants a six on first dice and a four on other so as to win. What is the probability for him to win if 2nd dice already has a 4 ?
(a) $\frac{6}{6}$
(b) $\frac{1}{6}$
(c) $\frac{4}{6}$
(d) $\frac{1}{2}$

Answer: (b) $\frac{1}{6}$
We require a 6 on the 1st dice. The outcome wanted is one. But dice has 6 outcomes. So probability = ——-

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Question 13.
The mean of 6, y, 7, x and 14 is 8. Which of the following is true?
(a) x+y = 13
(b) x−y = 13
(c) 2x+3y = 13
(d) x^2+y = 15

Answer: (a) x+y = 13

Question 14.
Median of odd number of observation is :
(a) $\frac{Sum\ \ of\ \ all\ \ observations}{Total\ \ number\ \ of\ \ observations}$
(b) Observation that occurs the most time.
(c) $\left(\frac{N+1}{2}\right)^{th}$ observation
(d) $\frac{\left(\frac{N}{2}\right)^{th}+\left(\frac{N}{2}+1\right)^{th}\text{ obs.}}{2}$

Answer:
$\left(\frac{N+1}{2}\right)^{th}$ observation

Median = $\left(\frac{N+1}{2}\right)^{th}$ observation.

Question 15.
There are 2 red, 3 blue and 5 black balls in a bag. A ball is drawn from the bag without looking in to the bag. What is the probability of getting a non-red ball?
(a) $\frac{4}{5}$
(b) $\frac{2}{5}$
(c) $\frac{3}{5}$
(d) None of these

Answer: (a) $\frac{4}{5}$

Question 16.
If 1 cm = 15 students, what will be the length of line for 90 students ?
(a) 4 cm
(b) 6 cm
(c) 6 students
(d) 9 cm

Answer: (b) 6 cm
1 cm = 15 students, 3 cm = 45 students, 6 cm = 90 students.

Question 17.
The mean of five numbers is 27. If one of the numbers is excluded, the mean gets reduced by 2. What is the excluded number?
(a) 35
(b) 27
(c) 25
(d) 40

Answer: (a) 35

Question 18.
Find the mean if the sum of 18 observations is 90.
(a) 5
(b) 4
(c) 6
(d) 9

Answer: (a) 5
mean = $\frac{Sum\quad of\quad all\quad observations}{Total\quad number\quad of\quad observations} = \frac{90}{18}$

Question 19.
The arithmetic mean of five given numbers is 85. What is their sum?
(a) 425
(b) 85
(c) A number between 85 and 425.
(d) A number greater than 500.

Answer: (a) 425

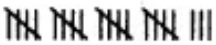
Question 20.
What is the probability of getting a sum of 13 when 2 dice are rolled ?
(a) $\frac{13}{12}$
(b) $\frac{1}{12}$
(c) $\frac{4}{12}$
(d) none of these

Answer: (d) none of these
Two dice can give a maximum of 6 + 6 = 12 as outcome.

Question 21.
Two dice are thrown, find and number of outcomes.
(a) 12
(b) 6
(c) 36
(d) None of these

Answer: (c) 36

Question 22.

If we represent the following in Tally Marks :  .
What would it mean in whole numbers ?
(a) 24
(b) 22

(c) 28
(d) 23

Answer: (d) 23

𝍸 = 5, 𝍸 𝍸 = 10, 𝍸 𝍸 𝍸 = 15, 𝍸 𝍸 𝍸 𝍸 = 20,
𝍸 𝍸 𝍸 𝍸 ||| = 23

Question 23.
There are 2 red, 3 blue and 5 black balls in a bag. A ball is drawn from the bag without looking in to the bag. What is the probability of getting a black ball?
(a) $\frac{2}{5}$
(b) $\frac{3}{5}$
(c) $\frac{1}{2}$
(d) None of these

Answer: (c) $\frac{1}{2}$

Question 24.
How many possible outcomes can we get if we toss a coin and throw a dice respectively ?
(a) 6, 2
(b) 2, 6
(c) 1, 3
(d) 3, 1

Answer: (b) 2, 6
A coin has 3 sides and hence 2 outcomes and a dice has 6 faces, so 6 outcomes.

Questions 25-28 are based on the given table :

Favourite Sport	Cricket	Basket Ball	Swimming	Hockey	Athletics
Watching	1240	470	510	430	250
Participating	620	320	320	250	105

Question 25.
Find the Median of people watching sports
(a) 1240
(b) 470

(c) 510
(d) 430

Answer: (b) 470
When arranged in ascending order, 470 is middle term.

Question 26.
Which sport is least popular ?
(a) Athletics
(b) Cricket
(c) Basket Ball
(d) Hockey

Answer: (a) Athletics
Athletics is watched by 250 people.

Question 27.
Find Mean of people participating in sports.
(a) 320
(b) 330
(c) 323
(d) 340

Answer: (c) 323
$\frac{620+320+320+250+105+}{5} = \frac{1615}{5} = 323.$

Question 28.
Which sport is most popular ?
(a) Cricket
(b) Basket Ball
(c) Swimming
(d) Hockey

Answer: (a) Cricket
Cricket is watched by 1240 people.

Question 29.
In the class-interval 70-80, 80 is the
(a) lower limit
(b) upper limit

(c) frequency
(d) range

Answer: (b) upper limit

Question 30.
Mode of the observations 1, 2, 2, 4, 4, 5, 6, 7, 7, 7, 8, 8, 9 is :
(a) 2
(b) 4
(c) 7
(d) 8

Answer: (c) 7
7 is repeated the most number of times.

Question 31.
The heights of six mountains are 8200 m, 6000 m, 8600 m, 7500 m, 8800 m and 6500 m. Based on this information, answer the questions given. Rakesh and Sanjay planned to go trekking on any of these mountains. They wrote the heights on chits of paper, shuffled them and picked one. What is the probability that the height picked is the maximum?
(a) $\frac{1}{3}$
(b) $\frac{2}{3}$
(c) $\frac{1}{6}$
(d) $\frac{1}{4}$

Answer: (c) $\frac{1}{6}$

Question 32.
12. The median of 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11 is :
(a) 5
(b) 6
(c) 7
(d) 8

Answer:

There are 11 obs. So Median = $\left(\frac{11+1}{2}\right)^{\text{th}}$ obs. = 6th obs. = 6.

Question 33.
On which day is the number of tourists minimum?
(a) Friday
(b) Monday
(c) Thursday
(d) Saturday

Answer: (a) Friday

Question 34.
A dice is thrown at random. What is the probability of getting of 2?
(a) $\frac{1}{6}$
(b) $\frac{2}{6}$
(c) $\frac{3}{6}$
(d) $\frac{4}{6}$

Answer: (c) $\frac{3}{6}$
3 outcomes are favourable. So, P = $\frac{3}{6}$

Question 35.
We tossed a coin 150 times, 80 tails and 70 heads were obtained. What is the probability of getting tail ?
(a) $\frac{70}{150}$
(b) $\frac{80}{150}$
(c) $\frac{81}{150}$
(d) $\frac{81}{151}$

Answer: (b) $\frac{80}{150}$
Since tail was the outcome 80 times and total outcomes are 150.
probability = $\frac{80}{150}$

Question 36.
When a die is thrown, total number of possible outcomes is _____.
(a) 2
(b) 6
(c) 36
(d) None of these

Answer: (b) 6

Question 37.
Arithmetic Mean of a set of observations =
(a) $\frac{Sum\quad of\quad all\quad observations}{Total\quad number\quad of\quad observations}$
(b) sum of all observations
(c) $\frac{Total\quad number\quad of\quad observations}{Sum\quad of\quad all\quad observations}$
(d) Total no of observations x 100

Answer:

Answer: (a) $\frac{Sum\quad of\quad all\quad observations}{Total\quad number\quad of\quad observations}$
Mean of a set of observations = $\frac{Sum\quad of\quad all\quad observations}{Totalnumberofobservations}$

Question 38.
In a given data, arranged in an ascending or descending order, what gives the middle observation ?
(a) Mode
(b) Mean
(c) Median
(d) None of these

Answer: (c) Median
median = $\left(\frac{N+1}{2}\right)^{th}$ observations. This means that the middle term will be the mean.

Question 39.
What is the mean of x, x+3, x+6, x+9 and x+12?
(a) x+3
(b) x+6
(c) x+9
(d) x+12

Answer: (b) x+6

Question 40.
Find the median of data : 24, 36, 46, 17
(a) 24

(b) 26
(c) 27
(d) 25

Answer: (d) 25
17, 18, 24, 25, 35, 36, 46 are in ascending order.
Median = $\left(\frac{7+1}{2}\right)^{th}$ obs. = 4th obs. = 25

Questions 41 – 45 are based on the table given below. The performance of a student in 1st term and 2nd term is given. Read the data carefully and answer the following questions :

Subject	English	Hindi	Maths	Science	S. Science
1st Term	67	72	88	81	73
2nd Term	70	65	95	85	75

Question 41.
What is the Median for 1st term marks ?
(a) 67
(b) 72
(c) 73
(d) 81

Answer: (c) 73
When the 1st term marks are arranged in ascending order, 73 is the middle term.

Question 42.
In which subject has the marks of the child decreased ?
(a) English
(b) Hindi
(c) Maths
(d) Science

Answer: (b) Hindi
His marks decreased by 7 in Hindi.

Question 43.
In which subject, has the child improved his performance the most ?
(a) English
(b) Hindi

(c) Maths
(d) Science

Answer: (c) Maths
He improved by 7 marks in Maths.

Question 44.
What is the Mean for 2nd Term marks ?
(a) 70
(b) 75
(c) 78
(d) 80

Answer: (c) 78
$\frac{70+65+95+85+75}{5} = \frac{390}{5} = 78$

Question 45.
In which of the following, the improvement is least ?
(a) English
(b) Maths
(c) Science
(d) S. Science

Answer: (d) S. Science
He increased by only 2 marks in S. Science.

Question 46.
Which of the following is correct about mode?
(a) It is central.
(b) It occurs most frequently.
(c) It lies between the maximum and minimum observations.
(d) It is the average of the two middle terms.

Answer: (b) It occurs most frequently.

Question 47.
A coin is tossed to decide which team starts the game. What is the probability that team x starts it ?
(a) 1

(b) $\frac{1}{2}$
(c) $\frac{2}{1}$
(d) 0

Answer: (b) $\frac{1}{2}$
Both the teams have 50% chances of winning the toss. $\frac{50}{100} = \frac{1}{2}$

Question 48.
Find the mode of given set of numbers : 1, 1, 2, 4, 3, 2, 1, 2, 2, 4.
(a) 3
(b) 2
(c) 4
(d) 1

Answer: (b) 2
2 occurs most the times.

Fill in the blanks:

1. A bar graph is a ……. of numerical data.

Answer: pictorial representation

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2. An outcome is the result of an …….

Answer: experiment

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3. The arrangement of data in a systematic form, generally a table form is called …….

Answer: tabulation

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4. An …… is something that happens.

Answer: event

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5. ……. is a number, which tells us how many times does a particular data appears in a given set of data.

Answer: Frequency

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6. It is …….. for sun to rise in west.

Answer: not possible

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7. The set of numerical facts collected in order to reveal useful information is called ……

Answer: data

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8. A process which results in well defined …….. is known as experiment.

Answer: outcome

Match the following:

Question 1.

1. Mean	(a) Number that occurs most of the times
2. Mode	(b) $\frac{n+1}{2}$ th observation
3. Median	(c) $\frac{Sum\quad of\quad all\quad observations}{Total\quad number\quad of\quad observations}$

Answer:

1. Mean	(c) $\frac{Sum\quad of\quad all\quad observations}{Total\quad number\quad of\quad observations}$
2. Mode	(a) Number that occurs most of the times
3. Median	(b) $\frac{n+1}{2}$ th observation

State whether the given statements are true or false:

Question 1.
The mode is always one of the numbers in a data.

Answer: True

Question 2.
The mean is one of the numbers in. a data.

Answer: False

Question 3.
The median is always one of numbers in a data.

Answer: True

Question 4.
The data 6, 4, 3, 8, 9, 12, 13, 9 has mean 9.

Answer: False
