

QB365 Question Bank Software Study Materials

Statistics and Probability 50 Important 1 Marks Questions With Answers (Book Back and Creative)

10th Standard

Maths

Total Marks : 50

Multiple Choice Question

50 x 1 = 50

- 1) Which of the following is not a measure of dispersion?
(a) Range (b) Standard deviation (c) **Arithmetic mean** (d) Variance
- 2) The range of the data 8, 8, 8, 8, 8, ... 8 is
(a) **0** (b) 1 (c) 8 (d) 3
- 3) The sum of all deviations of the data from its mean is
(a) Always positive (b) always negative (c) **zero** (d) non-zero integer
- 4) The mean of 100 observations is 40 and their standard deviation is 3. The sum of squares of all observations is
(a) 40000 (b) **160900** (c) 160000 (d) 30000
- 5) Variance of first 20 natural numbers is
(a) 32.25 (b) 44.25 (c) **33.25** (d) 30
- 6) The standard deviation of a data is 3. If each value is multiplied by 5 then the new variance is
(a) 3 (b) 15 (c) 5 (d) **225**
- 7) If the standard deviation of x, y, z is p then the standard deviation of 3x + 5, 3y + 5, 3z + 5 is
(a) 3p + 5 (b) **3p** (c) p + 5 (d) 9p + 15
- 8) If the mean and coefficient of variation of a data are 4 and 87.5% then the standard deviation is
(a) **3.5** (b) 3 (c) 4.5 (d) 2.5
- 9) Which of the following is incorrect?
(a) **P(A) > 1** (b) $0 \leq P(A) \leq 1$ (c) $P(\phi) = 0$ (d) $P(A) + P(\bar{A}) = 1$
- 10) The probability a red marble selected at random from a jar containing p red, q blue and r green marbles is
(a) $\frac{q}{p+q+r}$ (b) $\frac{p}{p+q+r}$ (c) $\frac{p+q}{p+q+r}$ (d) $\frac{p+r}{p+q+r}$
- 11) A page is selected at random from a book. The probability that the digit at units place of the page number chosen is less than 7 is
(a) $\frac{3}{10}$ (b) $\frac{7}{10}$ (c) $\frac{3}{9}$ (d) $\frac{7}{9}$
- 12) The probability of getting a job for a person is $\frac{x}{3}$. If the probability of not getting the job is $\frac{2}{3}$ then the value of x is
(a) 2 (b) **1** (c) 3 (d) 1.5
- 13) Kamalam went to play a lucky draw contest. 135 tickets of the lucky draw were sold. If the probability of Kamalam winning is $\frac{1}{9}$, then the number of tickets bought by Kamalam is
(a) 5 (b) 10 (c) **15** (d) 20
- 14) If a letter is chosen at random from the English alphabets {a, b, ..., z}, then the probability that the letter chosen precedes x
(a) $\frac{12}{13}$ (b) $\frac{1}{13}$ (c) $\frac{23}{26}$ (d) $\frac{3}{26}$

- 15) A purse contains 10 notes of Rs. 2000, 15 notes of Rs. 500, and 25 notes of Rs. 200. One note is drawn at random. What is the probability that the note is either a Rs. 500 note or Rs. 200 note?
- (a) $\frac{1}{5}$ (b) $\frac{3}{10}$ (c) $\frac{2}{3}$ (d) $\frac{4}{5}$
- 16) If the sum and mean of a data are 407 and 11 respectively, then the number of observations in the data are _____.
- (a) **37** (b) 4477 (c) 396 (d) 418
- 17) Two dice are through simultaneously the probability if getting a double is _____
- (a) $\frac{5}{36}$ (b) $\frac{1}{12}$ (c) $\frac{1}{9}$ (d) $\frac{1}{6}$
- 18) A girl calculates the probability of her winning in a match is 0.08 what is the probability of her losing the game _____
- (a) **91%** (b) 8% (c) 92% (d) 80%
- 19) A number x is chosen at random from -4, -3, -2, -1, 0, 1, 2, 3, 4 find the probability that $|x| \leq 4$
- (a) **0** (b) 1 (c) $\frac{1}{2}$ (d) $\frac{1}{9}$
- 20) which of the following is true?
- (a) **$0 \leq p(\epsilon) \leq 1$** (b) $p(\epsilon) > 1$ (c) $p(\epsilon) < 0$ (d) $-\frac{1}{2} \geq P(\epsilon) \leq \frac{1}{2}$
- 21) IF the probability of the non-happening of a event is q, then the probability of happening of that event is
- (a) **1-q** (b) q (c) q/2 (d) αq
- 22) The mean of a observation $x_1, x_2, x_3, \dots, x_n$ is \bar{x} . If each observation is multiplied by p, there the mean of the new observations is _____
- (a) $\frac{\bar{x}}{p}$ (b) $p\bar{x}$ (c) \bar{x} (d) $P+\bar{x}$
- 23) If a digit is chosed at random from the digits 1, 2, 3, 4, 5, 6, 7, 8, 9 then the probobility that it is odd is _____
- (a) **4/9** (b) 5/9 (c) 1/9 (d) 2/3
- 24) The standard deviation of a data is 5. If each value is multiplied by 2, then the new variance is _____
- (a) 3 (b) **100** (c) 10 (d) 225
- 25) The range of first 10 prime number is _____
- (a) 9 (b) 20 (c) **27** (d) 5
- 26) If the observations 1, 2, 3, ... 50 have the variance V_1 and the observations 51, 52, 53, ... 100 have the variance V_2 then $\frac{V_1}{V_2}$ is _____
- (a) 2 (b) **1** (c) 3 (d) 0
- 27) If the standard deviation of a variable x is 4 and if $y = \frac{3x+5}{4}$, then the standard deviation of y is _____
- (a) 4 (b) 3.5 (c) **3** (d) 2.5
- 28) If the data is multiplied by 4, then the corresponding variances is get multiplied by _____
- (a) 4 (b) **16** (c) 2 (d) None
- 29) If an event occurs surely, then its probablility is _____
- (a) **1** (b) 0 (c) $\frac{1}{2}$ (d) $\frac{3}{4}$
- 30) A letter is selected at randam from the the word 'PROBABILITY'. The probability that its is nota vowel is _____
- (a) $\frac{4}{11}$ (b) $\frac{7}{11}$ (c) $\frac{3}{11}$ (d) $\frac{6}{11}$
- 31) A nuber x is chosen at random drom -4, -3, -2, -1, 0, 1, 2, 3, 4. The probability that $|x| \leq 3$ is _____

- (a) $\frac{3}{9}$ (b) $\frac{4}{9}$ (c) $\frac{1}{9}$ (d) $\frac{7}{9}$
- 32) In one thousand lottery tickets, there are 50 prizes to be given. The probability of happening of the event is _____
- (a) $1-q$ (b) q (c) $\frac{q}{2}$ (d) $2q$
- 33) Sum of deviations of a variable from its mean is always _____
- (a) 0 (b) 1 (c) 2 (d) 5
- 34) Price of apple per kg for three days are as 98, 97, 100 then the value of standard deviation with assumed mean method is _____
- (a) 15 (b) 10 (c) 1 (d) 11
- 35) Range of the scores 80, 90, 90, 85, 60, 70, 75, 85, 90, 60, 80 is _____
- (a) 30 (b) 70 (c) 90 (d) 40
- 36) The average of first 'n' natural numbers is _____
- (a) $\frac{n(n+1)}{2n}$ (b) $\frac{n}{2}$ (c) $\frac{n+1}{2}$ (d) n
- 37) _____ is used to compare the variation or dispersion in two or more sets of data even though they are measured in different units.
- (a) Range (b) Standard deviation (c) Co-efficient of variation (d) Mean deviation
- 38) If the co-efficient of variation of marks of Brinda is 25% and that of Buvana is 40% Who is more stable in scoring?
- (a) Brinda (b) Buvana (c) Both (d) None
- 39) If a digit is chosen at random from the digits 1, 2, 3, 4, 5, 6, 7, 8, 9 then the probability that it is odd is _____
- (a) $\frac{4}{9}$ (b) $\frac{5}{9}$ (c) $\frac{1}{9}$ (d) $\frac{2}{3}$
- 40) In a single throw of die, the probability of getting a multiple of 3 is _____
- (a) $\frac{1}{2}$ (b) $\frac{1}{3}$ (c) $\frac{1}{6}$ (d) $\frac{2}{3}$
- 41) The probability throwing a number greater than 2 with a fair dice is _____
- (a) $\frac{3}{5}$ (b) $\frac{2}{5}$ (c) $\frac{2}{3}$ (d) $\frac{1}{3}$
- 42) A card is dropped from a pack of 52 playing cards. The probability that it is an ace is _____
- (a) $\frac{1}{4}$ (b) $\frac{1}{13}$ (c) $\frac{1}{52}$ (d) $\frac{12}{13}$
- 43) The probability of a certain event is _____
- (a) 0 (b) 1 (c) $\frac{1}{2}$ (d) Not exists
- 44) The probability of an impossible event is _____
- (a) 0 (b) 1 (c) $\frac{1}{2}$ (d) Not exists
- 45) Probability of getting 3 heads or 3 tails in tossing a coin 3 times is _____
- (a) $\frac{1}{8}$ (b) $\frac{1}{4}$ (c) $\frac{3}{8}$ (d) $\frac{1}{2}$
- 46) If $P(E) = 0.05$, then $P(\text{not } E) =$ _____
- (a) -0.05 (b) 0.5 (c) 0.9 (d) 0.95
- 47) Which of the following statement is wrong.
- (a) $A \cap B$ is an event that occurs only when both A and B occurs
- (b) $A \cup B$ is an event that occurs only when at least one of A or B occurs.
- (c) \bar{A} is an event that occurs only when A does not occur (d) \bar{B} is an event that occurs when B occur
- 48) $A \cup \bar{A} =$ _____

(a) 0 (b) 1 (c) ϕ (d) **S**

49) $A \cap \bar{A} = \underline{\hspace{2cm}}$

(a) 0 (b) 1 (c) **ϕ** (d) S

50) Which of the following values cannot be a probability of an event?

(a) 0 (b) 0.5 (c) **1.05** (d) 1