Probability & Statistics Quiz

Question 1

Formula to calculate standardized normal random variable is

(A) $x - \mu / \sigma$

(B) $x + \mu / \sigma$

(C) $x - \sigma / \mu$

(D) $x + \sigma / \mu$

Question 2

In random experiment, observations of random variable are classified as

(A) events

(B) composition

(C) trials

(D) functions

Question 3

Which of the following describe the middle part of a group of numbers?

(A) Measures of Variability

(B) Measures of Central Tendency

(C) Measure of Association

(D) Measure of Shape

Question 4

According to empirical rule, approximately what percent of data should lie within $\mu \pm 2\sigma$

(A) 68%

(B) 99%

(C) 92%

(D) 95%

Question 5

The Middle Value of an ordered array of numbers is the

(A) Mode

(B) Mean

(C) Median

(D) Midpoint

Question 6

Sum of Dots when two Dice are rolled in

(A) A discrete variable

(B) A continuous variable

(C) A constant

(D) A qualitative variable

Question 7

Weights of students in a college/school is a

(A) discrete variable

(B) continuous variable

(C) A constant variable

(D) A qualitative variable

Question 8

Which of these represent qualitative data

(A) Height of a student

(B) Liking or disliking of (500) persons of a product

(C) Income of a government servant in a city

(D) Yield from a wheat plot

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Question 10

The mean of distribution is 14 and the standard deviation is 5. What is the value of Co-efficient of variation?

(A) 28%

(B) 22.43%

(C) 35.7%

(D) 32.56%

Question 11

If z-score of normal distribution is 2.5, mean of distribution is 45 and standard deviation of normal distribution is 3 then value of x for a normal distribution is

(A) 97.5

(B) 52.5

(C) 37.5

(D) 67.5

Question 12

Population census is conducted through

(A) Sample Survey

(B) Accounting

(C) Investigation

(D) Complete Enumeration

Question 13

Parameter is a measure which is computed from

(A) Population Data

(B) Sample Data

(C) Test Statistics

(D) None of these

Question 14

The average monthly production of a factory for the first 8 months is 2,500 units, and for the next 4 months the production was 1,200 units. The average monthly production of the year will be

(A) 5031.10 units

(B) 3012.11 units

(C) 2066.55 units

(D) 4021.12 units

Question 15

A listing of the possible outcomes of an experiment and their corresponding probability is called

(A) Random Variable

(B) Contingency Table

(C) Bayesian Table

(D) Probability Distribution

(E) Frequency Distribution

Question 16

Which of the following is not an example of a discrete probability distribution?

(A) The Sale or Purchase price of a house

(B) The number of bedrooms in a house

(C) The number of bathrooms in a house

(D) Whether or not a home has swimming pool in it

Question 17

Which of the following is not a condition of the binomial distribution?

(A) Only 2 possible outcomes

(B) Have constant probability of success

(C) Must have at-least 3 trials

(D) Trials must be independent

Question 18

The collection of one or more outcomes from an experiment is called

(A) Probability

(B) Event

(C) Random Variable

(D) Z-value

(E) Random Experiment

Question 19

Which of the following is *not* a correct statement about a probability

(A) It must have a value between 0 and 1

(B) It can be reported as a decimal or a fraction

(C) A value near 0 means that the event is not likely to occur/happens

(D) It is a collection of several experiments

Question 20

In a Poisson probability distribution

(A) The mean and variance of the distribution are same (equal)

(B) The probability of success is always greater than 5

(C) The number of trials is always less than 5

(D) It always contains a contingency table

Question 21

How is stratified sampling carried out?

(A) Divide the group into homogenous groups and select equally but randomly

(B) Assigning numbers to the population and selecting the numbers

(C) Sample is made up of elements which are say 10^{th} from the previous selection

(D) Population divides itself into groups and we select equally but randomly from each

Question 22

The sampling procedure in which an interviewer is asked to interview 25 teachers, 50 public servants and 25 farmers is called

(A) Stratified Sampling

(B) Accidental Sampling

(C) Spatial Sampling

(D) Quota Sampling

Question 23

Why do sampling errors occur?

(A) Differences between sample and population

(B) Differences among sample themselves

(C) Choice of elements of sampling

(D) All of the above

(E) None of these

Question 24

Which of the following is an example of using statistical sampling?

(A) Statistical sampling will be looked upon by the courts as providing superior audit evidence

(B) Statistical sampling requires the auditor to make fewer judgemental decisions

(C) Statistical sampling aids the auditor in evaluating results

(D) Statistical sampling is more convenient to use than non-statistical sampling

Question 25

If *X* is a continuous random variable, then function *f(X)* is

(A) None of these

(B) Distribution Function

(C) Probability density function

(D) Probability Function

Question 26

Probability which explains x is equal to or less than particular value is classified as

(A) Discrete Probability

(B) Cumulative Probability

(C) Marginal Probability

(D) Continuous probability

Question 27

If *X* and *Y* are random variable then *E(X + Y)* is equal to

(A) E(X) + Y

(B) E(X) - E(Y)

(C) X + Y

(D) E(X) + E(Y)

Question 28

Consider probability distribution as standard normal, if value of μ is 75, value of x is 120 with unknown standard deviation of distribution then value of z-statistic

(A) Will be one

(B) Will be zero

(C) Will be negative

(D) Will be positive

Question 29

If value of x is less than μ of standard normal probability distribution then the

(A) z-statistic is negative

(B) z-statistic is positive

(C) f(x) will be even number

(D) f(x) will be prime number

Question 30

Probability distribution of discrete random variable is classified as

(A) Probability mass function

(B) Posterior mass function

(C) Interior mass function

(D) Continuous mass function

Question 31

Standard normal probability distribution has mean equal to 40, whereas value of random variable x is 80 and z-statistic is equal to 1.8 then standard deviation of standard normal probability distribution is

(A) 120

(B) 80

(C) 40

(D) 20

Question 32

In standard normal probability distribution, z-score of distribution will be zero if

(A) $x < \mu$

(B) $x > \mu$

(C) $x = \mu$

(D) All of the above

Question 33

A fair coin is tossed four times, the probability of getting four heads is

(A) 1/4
(B) 1/2
(C) 1/16
(D) 1
(E) 0

Question 34

In a frequency distribution the last cumulative frequency is 500. Q3 must lie in

(A) 175^{th} item

(B) 275^{th} item

(C) 150^{th} item

(D) 375^{th} item

Question 35

If *x* is 4 and the distribution is 2, 3, 4, 5, 6, the sum of squared deviations from the *x* will be:

(A) 10

(B) 12

(C) 6

(D) 8

(E) 0

Question 36

Considering normal distribution, spread is increased and height of curve is decreased for the

(A) smaller value of variance

(B) larger value of variance

(C) larger value of standard deviation

(D) Smaller value of standard deviation

Question 37

Process in which trials are statistically independent and each trial of event has only two outcomes is classified as

(A) Bernoulli process

(B) Bayes Process

(C) Functional process

(D) Independent limited process

Question 38

If chances of success in a distribution are 0.68 and number of values in distribution are 4 then mean of Poisson probability distribution is

(A) 3.72

(B) 1.72

(C) 2.72

(D) 4.72

Question 39

In normal distribution, z-score and z-statistic are classified as names of

(A) standardized normal random variable

(B) Poisson random variable

(C) normal geometric variable

(D) weighted average variable

Question 40

Symbol λ is used to represent

(A) variance of Poisson distribution

(B) standard deviation in Poisson distribution

(C) mean in Poisson distribution

(D) mean in cumulative distribution