

$$P(|X| < 1.5) =$$

Select the correct option

☒ $P(-1.5 < X < 1.5)$

☐ $P(X < 1.5)$

☐ $P(X = 1.5)$

☐ $P(X > 1.5)$

Question # 6 of 10 (Start time: 10:53:25 AM, 03 February 2022)

Total Marks:

If $E(x) = 3$ then $E(4x+3)=$...:

Select the correct option

☐ 3

☐ 12

☐ 8

☐ 15



What range of limit to be used for INTEGRATION of joint p.d.f. to obtain its marginal pdf?

Select the correct option

☐ 0 to ∞

☐ 0 to 1

☒ $-\infty$ to $+\infty$

☐ -1 to 1



If $P(B) = 0.75$, $P(A) = 0.35$ and $P(A \text{ and } B) = 0.20$, then $P(B|A)$ is:

Select the correct option

☐

0.41

☐

0.32

☐

0.27

☒

0.57

2

Which property is true for the probability density function $f(x)$?

Select the correct option

☐ $f(x) \leq 0$ for all x

☐ $f(x) < 0$ for all x

☐ $f(x) \geq 0$ for all x

☒ $f(x) > 0$ for all x



Question # 1 of 10 (Start time: 10:45:51 AM, 03 February 2022)

Total Marks:

When A and B are two non-empty and mutually exclusive events, then:

Select the correct option

☐

$$P(A \cap B) = P(A) + P(B)$$

☒

$$P(A \cup B) = P(A) + P(B)$$

☐

$$P(A \cap B) = P(A) \cdot P(B)$$

Which of the following is a relative measure of dispersion ?

Select the correct option



Coefficient of Variation



Standard Deviation



Variance



All

Question # 9 of 10 (Start time: 10:42:22 AM, 03 February 2022)

Total Marks:

The marginal p.d.f. of _____ variables is obtained by integrating the other variable from the joint p.d.f.

Select the correct option

☐

Binomial

☐

Discrete

☒

Continuous



Question # 8 of 10 (Start time: 10:41:18 AM, 03 February 2022)

Total Marks:

If $P(A) = 0.7$ and $P(B) = 0.2$ then find $P(A \cup B)$ where A and B are mutually exclusive events.

Select the correct option

☐ 0.14

☐ 0.1

☒ 0.9

0.5



Question # 6 of 10 (Start time: 10:39:13 AM, 03 February 2022)

Total Marks:

We use the General Rule of Multiplication to combine:

Select the correct option

- ☐ Events that total more than 100
- ☒ Events those are not independent
- ☐ Events based on subjective probabilities
- ☐ Mutually exclusive events

A random variable Y has the following probability distribution:

$y:$ -1 0 1 2
 $P(y):$ 3C 2C 0.4 0.1

Calculate the of 'C'

Select the correct option

☐ 0.15

☐ 0.25

☒ 0.10

☐ 0.20



Question # 2 of 10 (Start time: 10:34:42 AM, 03 February 2022)

Total Marks:

 $E(4X + 5) = \dots\dots\dots$

Select the correct option

 $4 E (X) + 5$  $12 E (X)$  $18 E (X)$ 

Question # 1 of 10 (Start time: 10:32:48 AM, 03 February 2022)

Total Marks:

When a coin is tossed 3 times, the probability of getting 3 or less tails is

Select the correct option

☐

1

☒

3/5

☐

0

If $\mu_3 = 4.5$ and $\mu_2 = 3$ then the skewness of the distribution will be:

▶ Select the correct option

☐ 2.7

☒ 0.75

☐ 3.25

☐ 1.5

Select the correct option

☐

$P(X > x)$

☒

$P(X \leq x)$

☐

$P(X = x)$

☐

$P(X < x)$

Question # 8 of 10 (Start time: 10:25:54 AM, 03 February 2022)

Total Marks:

A coin is tossed and a single 6-sided die is rolled. Find the probability of landing on the head side of the coin and rolling a 3 on the die.

Select the correct option

☐

$1/6$

☒

$1/12$

☐

$3/12$

Question # 7 of 10 (Start time: 10:25:02 AM, 03 February 2022)

Total Marks:

If $\mu = 4.925$ and S.D = 12, then C.V.(X) will be:

Select the correct option

☐ 15.3%

☒ 24.36%

☐ 11.4%

Question # 6 of 10 (Start time: 10:23:31 AM, 03 February 2022)

Total Marks:

From the following table,

x	0	1	2	3
f (x)	0.26	0.49	0.22	0.02

$E(2X+1)$ will be:

Select the correct option

☒ 1.98

☐ 0.99

☐ 2

Select the correct option

☐

0

☐

$y E(a+b)$

☒

$a E(y)$

☐

$y E(a)$



The function abbreviated to d.f. is also called the....

Select the correct option

☐

Discrete function

☒

Commutative distribution function

☐

Probability distribution function



Question # 1 of 10 (Start time: 10:14:59 AM, 03 February 2022)

Total Marks:

If $\mu = 3.82$ and $S.D(X) = 1.2$, then $C.V(X)$ will be:

Select the correct option



31.412

24.896



Tickets numbered 1 to 20 are mixed up and then a ticket is drawn at random. What is the probability that the ticket drawn has a number which is a multiple of 3 or 5?

Select the correct option



$1/2$



$8/15$



$2/5$



$1/3$

When X and Y are _____ variables, then their joint probability function can be obtained by multiplying together their marginal probability functions.

Select the correct option



Independent



Dependent



Normal



Bivariate

Question # 2 of 10 (Start time: 08:22:04 PM, 03 February 2022)

Total Marks: 1

In a binomial experiment successive trials are:

Select the correct option



Independent



None



Both



Dependent

Question # 1 of 10 (Start time: 08:21:07 PM, 03 February 2022)

Total Marks: 1

Using the following table, calculate $P(X < 3)$

x	0	1	2	3
f(x)	1/8	3/8	3/8	1/8

Select the correct option

- | | |
|----------------------------------|-----|
| ☐ | 3/8 |
| ☐ | 1/8 |
| ☒ | 7/8 |
| ☐ | 6/8 |
- 

What does it mean when a data set has a standard deviation equal to zero:

Select the correct option

☐	The mean of the data is also zero
☐	All values of the data appear with the same frequency
☐	Mean = median = mode
☐	All of the values in the data are same



Question # 10 of 10 (Start time: 04:19:49 PM, 05 February 2022)

Total Marks: 1

When the random variables X and Y are independent, then its co-variance must be:

Select the correct option

☐

Negative

☐

Positive

☐

One

☐

Zero

[Click to Save Answer & Move to Next Question](#)

Question #10 of 10 (Start time: 04:19:08 PM, 05 February 2022)

Total Marks: 1

In a binomial experiment:

Select the correct option



Number of trials " n " is not specified



None of the above



Number of trials " n " is a fixed



Number of trials " n " is a variable

Click to Save Answer & Move to Next Question

Question # 9 of 10 (Start time: 04:16:50 PM, 05 February 2022)

Let A and B are two independent events. If $P(A \cap B) = 0.12$ and $P(A) = 0.3$ then find $P(B)$.

Select the correct option

- | | |
|-----------------------|------|
| ☐ | 0.3 |
| ☐ | 0.36 |
| ☐ | 0.4 |
| ☐ | 0.12 |
- 

[Click to Save Answer & ?](#)

+92 316 6715438

uesti 9 of 10 (Start time: 04:33:12 PM, 05 February 2022)

Just now



The probability of a continuous random variable X on any PARTICULAR point is always

Select the correct option



0



0.5



undefined



1



If $P(A) = 0.45$, $P(B) = 0.35$, and $P(A \text{ and } B) = 0.25$, then $P(A | B)$ is:

Select the correct option



1.4



0.714



0.556



1.8



A fair die is rolled. Probability of getting even face given that face is less than 5 is given by:

Select the correct option



2



5



$\frac{1}{2}$



6



Activate Windows
Go to Settings to activate Windows

Which of the following statements is not an example of a continuous random variable?

Select the correct option

☐

The weight gain in pounds per month for a calf

☐

The time it takes you to finish this statistics test

☐

The time to failure for an electronic system

☒

The price for cheese cake in New York Style cheese cake

Activate Windows
Go to Settings to activate Windows.

The probability mass function $p(x)$ of a discrete random variable X is: $P(0)=0.10$, $P(1)=0.15$, $P(2)=0.45$, $P(3)=0.05$, and $P(4)=0.25$.

What is the value of cumulative distribution function $F(x)$ at $X = 3$?

Select the correct option



0.45



0.75



0.35

Activate Windows
Go to Settings to activate Windows.

A bag contains 10 white, 2 orange and 3 black balls. What is the probability of block balls?



Select the correct option



10/15



2/15



5/15



3/15

Activate Windows
Go to Settings to activate Windows.

If we have $f(x) = 4x$, $0 \leq x \leq 1$, then $f(x)$ is a:

Select the correct option

- | | |
|----------------------------------|------------------------------|
| ☐ | Probability distribution |
| ☒ | Probability density function |
| ☐ | Distribution function |
| ☐ | Continuous random variable |

Activate Windows
Go to Settings to activate Windows

Using the following table, calculate $P(1 < X < 3)$

X	0	1	2	3
f(x)	1/8	3/8	2/8	1/8

Select the correct option

☐ 5/8

☐ 1/8

☐ 2/8

☒ 3/8

Activate Windows
Go to Settings to activate Windows

The conditional probability of the event A when event B has occurred is denoted by:

$$P(A|B)$$

Select the correct option



$P(A|B)$



$P(A - B)$



$P(A + B)$

$P()$

Activate Windows
Go to Settings to activate Windows

$$E(4X + 5) = \text{-----}$$

Select the correct option



$$4 E (X) + 5$$



$$16 E (X) + 5$$



$$16 E (X)$$

Activate Windows

Go to Settings to activate Windows.

The second moment-ratio of a particular continuous probability distribution found to be 3.845. What does this value tell us about the distribution?

Select the correct option

☐

Neither very peaked nor flatter

☒

Flatter than normal distribution

☐

Normal distribution

Activate Windows

Go to Settings to activate Windows.

In a multiplication theorem $P(A \text{ and } B)$ equals (when events are not independent):

Select the correct option

☐

$$P(A) + P(B) - P(A \cup B)$$

☐

$$P(A) + P(B)$$

☐

$$P(A) P(B)$$

☒

$$P(A) \cdot P(B|A)$$

Activate Windows
Go to Settings to activate Windows.

Activate Windows
Go to Settings to activate Windows.

Question # 10 of 10 (Start time: 09:36:15 PM, 04 February 2022)

Total Marks

Two discrete r.v.'s X and Y are said to be statistically independent, if and only if, for all possible pairs of values (X_i, Y_j) the joint probability function $f(x, y)$ can be expressed as the _____ of the two marginal probability functions.

Select the correct option

☐	Average
☐	Sum
☒	Product
☐	Inverse

Question # 9 of 10 (Start time: 09:35:22 PM, 04 February 2022)

If $\mu = 4.925$ and S.D = 1.2, then C.V(X) will be:

Select the correct option

- | | |
|----------------------------------|--------|
| ☒ | 24.36% |
| ☐ | 15.3% |
| ☐ | 11.4% |
| ☐ | 20.4% |



UARY 2024

$$S = \{1, 2, 3, 4, 5, 6\}$$
$$A = \{2, 4\}$$
$$P(A) = \frac{n(A)}{n(S)} = \frac{2}{6} = \frac{1}{3}$$

$6^n = \text{total outcomes}$

$$6^3 = 6 \times 6 \times 6 = 216$$

$$C.V = \frac{S.D}{\bar{X}} \text{ or } \frac{S.D}{4} \times 100$$
$$= \frac{1.2}{4.925} \times 100$$
$$= 0.2436 \times 100$$
$$C.V = 24.36\%$$

Screenshot has been saved to/Pictures/
Screenshot

Question # 9 of 10 (Start time: 09:35:22 PM, 04 February 2022)

If $\mu = 4.925$ and S.D = 1.2, then C.V(X) will be:

Select the correct option

- | | |
|----------------------------------|--------|
| ☒ | 24.36% |
| ☐ | 15.3% |
| ☐ | 11.4% |
| ☐ | 20.4% |



Question # 8 of 10 (Start time: 09:34:25 PM, 04 February 2022)

Which of the following statements is an example of a continuous random variable?

Select the correct option

- | | |
|-----------------------|--|
| ☐ | The depth of Lake Michigan at a randomly chosen point on the surface |
| ☐ | The number of gas stations in Detroit |
| ☐ | The number of credit hours you have this semester |
| ☐ | All of the above |
- 



Question # 7 of 10 (Start time: 09:33:29 PM, 04 February 2022)

A discrete probability function $f(x)$ is always:

Select the correct option

☒	Non-negative
☐	Negative
☐	0
☐	1

Question # 6 of 10 (Start time: 09:32:50 PM, 04 February 2022)

$P(|X| < 1.5) =$

<

Select the correct option

- | | |
|----------------------------------|---------------------|
| ☒ | $P(-1.5 < X < 1.5)$ |
| ☐ | $P(X = 1.5)$ |
| ☐ | $P(X < 1.5)$ |
| ☐ | $P(X > 1.5)$ |

Question # 5 of 10 (Start time: 09:31:41 PM, 04 February 2022)

Total M

If an experiment produces different results even if it is repeated a large number of times under similar conditions is known as

Select the correct option

☒	Random Experiment
☐	Fixed Value
☐	None of the above
☐	Experiment



Question # 3 of 10 (Start time: 09:29:29 PM, 04 February 2022)

We use the General Rule of Multiplication to combine:

► Select the correct option

- | | |
|-----------------------|--|
| ☐ | Events those are not independent |
| ☐ | Mutually exclusive events |
| ☐ | Events that total more than 1.00 |
| ☐ | Events based on subjective probabilities |



Question # 2 of 10 (Start time: 09:28:24 PM, 04 February 2022)

Using the following table, calculate $P(X < 1)$

X	0	1	2	3
f(x)	1/8	3/8	3/8	1/8

Select the correct option

☐	1/4
☐	1/8
☐	0

$$S = \{1, 2, 3, 4, 5, 6\}$$

$$A = \{2, 4\}$$

$$P(A) = \frac{n(A)}{n(S)} = \frac{2}{6} = \frac{1}{3}$$

6^n = Total outcomes

$$6^3 = 6 \times 6 \times 6 = 216$$

$$C.V = \frac{S.D}{\bar{X}} \times 100 \quad \frac{S.D}{4} \times 100$$

$$= \frac{1.2}{4} \times 100$$

$$4.925$$

$$= 0.2436 \times 100$$

$$C.V = 24.36\%$$