

Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1

Question Label : Multiple Choice Question

Hyper means _____.

Options :

6406531890310. ✓ In excess

6406531890311. ✗ lesser

6406531890312. ✗ medium

6406531890313. ✗ crowded

Sem1 Statistics1

Section Id :	64065338387
Section Number :	6
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	14
Number of Questions to be attempted :	14
Section Marks :	40
Display Number Panel :	Yes
Group All Questions :	No
Enable Mark as Answered Mark for Review and Clear Response :	Yes
Maximum Instruction Time :	0
Sub-Section Number :	1
Sub-Section Id :	64065380806
Question Shuffling Allowed :	No
Is Section Default? :	null

Question Number : 162 Question Id : 640653565536 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 0

Question Label : Multiple Choice Question

THIS IS QUESTION PAPER FOR THE SUBJECT "FOUNDATION LEVEL : SEMESTER 1: STATISTICS FOR DATA SCIENCE 1 (COMPUTER BASED EXAM)"

ARE YOU SURE YOU HAVE TO WRITE EXAM FOR THIS SUBJECT?

CROSS CHECK YOUR HALL TICKET TO CONFIRM THE SUBJECTS TO BE WRITTEN.

(IF IT IS NOT THE CORRECT SUBJECT, PLS CHECK THE SECTION AT THE TOP FOR THE SUBJECTS REGISTERED BY YOU)

Options :

6406531890314.  YES

6406531890315.  NO

Sub-Section Number : 2

Sub-Section Id : 64065380807

Question Shuffling Allowed : Yes

Is Section Default? : null

Question Number : 163 Question Id : 640653565537 Question Type : MSQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 3 Selectable Option : 0

Question Label : Multiple Select Question

Rating's feedback as poor, good and excellent of 5 customers is collected in a shop. If feedback of two more customers are recorded, then choose the correct option(s). (Assume initial data was bimodal)

Options :

6406531890316. ✖ New dataset will always be bimodal.

6406531890317. ✔ New dataset may change as unimodal.

6406531890318. ✖ Median of new dataset will always remain same.

6406531890319. ✔ Median of new dataset may change.

Sub-Section Number : 3
Sub-Section Id : 64065380808
Question Shuffling Allowed : Yes
Is Section Default? : null

Question Number : 164 Question Id : 640653565542 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2

Question Label : Multiple Choice Question

If $E[X] = \mu$, what is $\text{Var}(X - \mu)$?

Options :

6406531890330. ✖ μ

6406531890331. ✔ $\text{Var}(X)$

6406531890332. ✖ $-\mu$

6406531890333. ✖ 0

Question Number : 165 Question Id : 640653565551 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2

Question Label : Multiple Choice Question

If X and Y are independent Poisson random variables with expectations 3 and 5 respectively, then find the variance of $2X + Y$.

Options :

6406531890347. ✓ 17

6406531890348. ✖ 11

6406531890349. ✖ 23

6406531890350. ✖ Insufficient information

Sub-Section Number :	4
Sub-Section Id :	64065380809
Question Shuffling Allowed :	Yes
Is Section Default? :	null

Question Number : 166 Question Id : 640653565548 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 3

Question Label : Multiple Choice Question

Consider the dataset $-5, -2, -4, -6$ and -8 . If we add 4 to all observations, then what is the 75th percentile of new dataset?

Options :

6406531890338. ✖ -4

6406531890339. ✖ -2

6406531890340. ✖ -6

6406531890341. ✓ 0

Question Number : 167 Question Id : 640653565550 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 3

Question Label : Multiple Choice Question

Three cards are drawn at random from an ordinary pack of 52 cards. Find the probability that exactly one ace card.

Options :

6406531890343. ✓ $\frac{48C_2 \times 4C_1}{52C_3}$

6406531890344. ✖ $\frac{48P_2 \times 4P_1}{52P_3}$

6406531890345. ✖ $\frac{4C_1}{52C_3}$

6406531890346. ✖ $\frac{4P_1}{52P_3}$

Sub-Section Number :	5
Sub-Section Id :	64065380810
Question Shuffling Allowed :	Yes
Is Section Default? :	null

Question Number : 168 Question Id : 640653565541 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4

Question Label : Multiple Choice Question

Suppose you play for \$3 at a carnival game. A pair of fair six-sided die is rolled. If the sum of the numbers on the uppermost face of the die is 6, you get a prize worth \$5. If the sum of the numbers on the uppermost face of the die is 12, you get a prize worth \$10, otherwise you get 0. Let X denote the profit of the player. Find the probability distribution of X .

Options :

6406531890326. ✖

X	0	5	10
$P(X)$	$5/6$	$5/36$	$1/36$

6406531890327. ✔

X	-3	2	7
$P(X)$	$5/6$	$5/36$	$1/36$

6406531890328. ✖

X	-3	2	7
$P(X)$	$5/36$	$5/36$	$1/36$

6406531890329. ✖

X	-3	5	10
$P(X)$	$5/36$	$5/36$	$1/36$

Sub-Section Number :

6

Sub-Section Id :

64065380811

Question Shuffling Allowed :

Yes

Is Section Default? :

null

Question Number : 169 Question Id : 640653565540 Question Type : MSQ Is Question

Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Selectable Option : 0

Question Label : Multiple Select Question

There are 5 UG and 6 PG students in an industrial training program. After the successful completion of the training, the students went through an examination and later ranked based on the scores obtained. Define a random variable X as the highest rank achieved by a PG Student. Assume that all the students(including UG and PG students) will get a distinct rank. Which among the following is/are correct? (Note: $X = 2$ means rank 2 is the highest rank achieved by any one of the PG student.)

Options :

6406531890322. ✔ X ranges from 1 to 6.

6406531890323. ✓ $P(X = 3) = 0.121$

6406531890324. ✖ $P(X = 1) = 0.454$

6406531890325. ✖ X ranges from 1 to 9.

Sub-Section Number :	7
Sub-Section Id :	64065380812
Question Shuffling Allowed :	Yes
Is Section Default? :	null

Question Number : 170 Question Id : 640653565543 Question Type : SA Calculator : None

Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2

Question Label : Short Answer Question

From previous experiences, it is known that for every five people interviewed, exactly one person gets shortlisted for the job. Suppose 20 people are interviewed on a particular day, then find the expected number of people who will get shortlisted.

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Equal

Text Areas : PlainText

Possible Answers :

4

Sub-Section Number :	8
Sub-Section Id :	64065380813
Question Shuffling Allowed :	Yes
Is Section Default? :	null

Question Number : 171 Question Id : 640653565539 Question Type : SA Calculator : None

Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 3

Question Label : Short Answer Question

Let X be a random variable which follows a Geometric distribution with parameter p where, $X \in \{1, 2, 3, \dots\}$. If $P(X = 1) = 0.6$, find $P(X \leq 3)$. Enter the answer correct to two decimal places.

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Range

Text Areas : PlainText

Possible Answers :

0.91 to 0.97

Question Number : 172 Question Id : 640653565544 Question Type : SA Calculator : None

Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 3

Question Label : Short Answer Question

Suppose the lifetime of a radio is uniformly distributed between 100 to 120 weeks. What is the conditional probability that the battery will last for more than 115 weeks given that it has already worked for 110 weeks? Enter the answer correct to one decimal place.

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Equal

Text Areas : PlainText

Possible Answers :

0.5

Question Number : 173 Question Id : 640653565549 Question Type : SA Calculator : None

Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 3

Question Label : Short Answer Question

Find the total numbers greater than 6000 that can be formed using the digits 0, 2, 3, 6 and, 9 without repetition.

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Equal

Text Areas : PlainText

Possible Answers :

144

Sub-Section Number : 9

Sub-Section Id : 64065380814

Question Shuffling Allowed : Yes

Is Section Default? : null

Question Number : 174 Question Id : 640653565538 Question Type : SA Calculator : None

Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4

Question Label : Short Answer Question

The number of customers arriving each day at a petrol pump is assumed to follow a Poisson distribution with mean 10. Assume that number of customers arriving at a petrol pump on different days are independent. What is the probability that on a particular day, the number of customers arrived will be more than 3? Enter the answer correct to two decimal places.

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Range

Text Areas : PlainText

Possible Answers :

0.96 to 1

Sub-Section Number : 10
Sub-Section Id : 64065380815
Question Shuffling Allowed : No
Is Section Default? : null

Question Id : 640653565545 Question Type : COMPREHENSION Sub Question Shuffling Allowed : No Group Comprehension Questions : No Question Pattern Type : NonMatrix Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Question Numbers : (175 to 176)

Question Label : Comprehension

Consider a pmf as follows:

$$P(X = x) = \frac{1}{k} \left(\frac{1}{3}\right)^x \quad \text{where } x = 0, 1, 2, \dots$$

Based on the given information, answer the subquestions

Sub questions

Question Number : 175 Question Id : 640653565546 Question Type : SA Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1

Question Label : Short Answer Question

Find the value of k . Enter the answer correct to one decimal place.

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Range

Text Areas : PlainText

Possible Answers :

1.4 to 1.6

Question Number : 176 Question Id : 640653565547 Question Type : SA Calculator : None

Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 3

Question Label : Short Answer Question

Find the $P(X \geq 2)$.Enter the answer correct to two decimal places.

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Range

Text Areas : PlainText

Possible Answers :

0.08 to 0.14

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Section Id :	64065338388
Section Number :	7
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	21
Number of Questions to be attempted :	21
Section Marks :	100
Display Number Panel :	Yes
Group All Questions :	No
Enable Mark as Answered Mark for Review and Clear Response :	Yes
Maximum Instruction Time :	0
Sub-Section Number :	1
Sub-Section Id :	64065380816
Question Shuffling Allowed :	No
Is Section Default? :	null