

DSE 02 (Probability and Statistics)

F.M: 10 TIME: 30 MIN

* Required

1. Email *

2. NAME *

3. UNIVERSITY REGISTRATION NUMBER *

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Untitled Section

5.

1. 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

Mark only one oval.

a

b

c

d

6.

2. 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) $3/10$ (b) $7/10$ (c) $3/9$ (d) $7/9$

Mark only one oval.

 a b c d

7.

3. Which of the following pairs of events are mutually exclusive?

(a) A : The student reads in a school. B : He studies Philosophy.

(b) A : Raju was born in India. B : He is a fine Engineer.

(c) A : Ruma is 16 years old. B : She is a good singer.

(d) A : Peter is under 15 years of age. B : Peter is a voter of Kolkata.

Mark only one oval.

 a b c d

8.

4. If two events A and B are independent, then

- (a) A and the complement of B are independent
- (b) B and the complement of A are independent
- (c) Complements of A and B are independent
- (d) All of these (a), (b) and (c).

Mark only one oval.

- a
- b
- c
- d

9.

5. A, B and C are three mutually exclusive and exhaustive events such that $P(A) = 2P(B) =$

$3P(C)$. What is $P(B)$?

- (a) $6/11$
- (b) $3/11$
- (c) $1/6$
- (d) $1/3$

Mark only one oval.

- a
- b
- c
- d

10.

6. Poisson distribution approaches a Normal distribution as n
(a) increase infinitely (b) decrease (c) increases moderately (d) none

Mark only one oval.

- a
 b
 c
 d

11.

7. If neither p nor q is very small but n sufficiently large, the Binomial distribution is very closely approximated by _____ distribution
(a) Poisson (b) Normal (c) t (d) none

Mark only one oval.

- a
 b
 c
 d

12.

8. In Normal distribution mean, median and mode are
(a) equal (b) not equal (c) zero (d) none

Mark only one oval.

- a
 b
 c
 d

13.

9. A discrete random variable x follows uniform distribution and takes the values 6, 8, 10,

12, 18

The probability of $P(x < 12)$ is

(a) $1/5$

(b) $4/5$

(c) $3/5$

(d) none

Mark only one oval.

a

b

c

d

14.

10. A continuous random variable x has the probability density function $f(x) = \frac{1}{2} - ax$, $0 \leq x \leq 4$, When 'a' is a constant. The value of 'a' is

(a) $7/8$

(b) $1/8$

(c) $3/16$

(d) none

Mark only one oval.

a

b

c

d

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