**Code No: MA313BS Set No. 1**

**BVRIT HYDERABAD College of Engineering for Women**

**II B.Tech. - I Sem., II Mid-Term Examinations, MAY - 2023**

**(Mathematical and Statistical Foundations)**

**Objective Exam**

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**Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Hall Ticket No.**

**Time: 20 Min. Marks: 10**

**Answer All Questions. All Questions Carry Equal Marks.**

1. **Choose the correct alternative:**
2. Which of the following is stochastic process [ B ]
3. (b) (c) (d)

1. If P= then the value of =A | =B)=\_\_\_\_\_\_\_\_\_\_\_\_\_\_ [ D ] (a) 1 (b)0 (c) 3/4 (d) 1/4
2. kdkdk
3. If X is a random variable then = [ ]

(a) (b) 2 (c) (d)

1. Cumulative Distribution Function of a Continuous Random Variable

[ ]

(a) (b) (c)

1. Which of the following is wrong [ ]
2. (b)

(c) (d)

1. If then mean of the Poisson distribution is ---------- [ ]
2. (b)2 (c)1 (d) 4
3. The variance of a probability distribution is [ ]

(a) (b) (c) (d)

1. In a Binomial Distribution, if p = q then P(X = x) is given by [ ]

(a)  (0.5)n  (b) (0.5)n (c) p(n – x) (d) q(n – x)

1. The value of Z for X=3 in a normal distribution with mean 5 and variance 4 is [ ]

(a) 1 (b) 0.5 (c)-1 (d)-0.5

**Code No: MA313BS :2: Set No. 1**

**II Fill in the Blanks:**

1. Bezout’s coefficients of 9, 12 are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. 32 mod 7= \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. Mean and Variance of binomial distribution are 4 and 4/3 then *n* = \_\_\_\_\_\_\_\_\_\_\_\_\_
4. If probability density function is then the value of k is \_\_\_\_\_\_\_\_\_\_\_\_\_
5. The area under the whole normal curve is\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
6. The mean of the standard normal variate Z is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
7. Prime power factorization of 128 is \_\_\_\_\_\_\_\_\_\_\_\_\_
8. The inverse of 7 modulo 5 is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
9. The independent variable which is used for prediction is called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
10. The number of divisors of 12 in set of integers is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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**Code No: MA313BS Set No. 2**

**BVRIT HYDERABAD College of Engineering for Women**

**II B.Tech. - I Sem., I Mid-Term Examinations, JANUARY - 2023**

**(Mathematical and Statistical Foundations)**

**Objective Exam**

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**Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Hall Ticket No.**

**Time: 20 Min. Marks: 10**

**Answer All Questions. All Questions Carry Equal Marks.**

1. **Choose the correct alternative:**
2. Cumulative Distribution Function of a Continuous Random Variable

[ ]

(a) (b) (c)

1. Which of the following is wrong [ ]
2. (b)

(c) (d)

1. If then mean of the Poisson distribution is ---------- [ ]
2. (b)2 (c)1 (d) 4
3. The variance of a probability distribution is [ ]

(a) (b) (c) (d)

1. In a Binomial Distribution, if p = q then P(X = x) is given by [ ]

(a)  (0.5)n  (b) (0.5)n (c) p(n – x) (d) q(n – x)

1. The value of Z for X=3 in a normal distribution with mean 5 and variance 4 is [ ]

(a) 1 (b) 0.5 (c)-1 (d)-0.5

1. Which of the following are relatively prime but not pair-wise relatively prime [ ]
2. 2,4,8 (b) 3,5,7 (c)3,6,7 (d) 2, 3,5
3. If X is a Poisson variable such that P(X=1) = P(X=2) then mean is [ ]
4. 1 (b)2 (c) 3 (d) 4
5. The property with then is called [ ]
6. reflexive (b) symmetric (c) anti-symmetric (d) transitive
7. If X is a random variable then = [ ]

(a) (b) 2 (c) (d)

**Code No: MA313BS :2: Set No. 2**

**II Fill in the Blanks:**

1. The area under the whole normal curve is\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. The mean of the standard normal variate Z is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. Prime power factorization of 128 is \_\_\_\_\_\_\_\_\_\_\_\_\_
4. The inverse of 7 modulo 5 is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
5. The independent variable which is used for prediction is called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
6. The number of divisors of 12 in set of integers is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
7. Bezout’s coefficients of 9, 12 are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
8. 32 mod 7= \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
9. Mean and Variance of binomial distribution are 4 and 4/3 then *n* = \_\_\_\_\_\_\_\_\_\_\_\_\_
10. If probability density function is then the value of k is \_\_\_\_\_\_\_\_\_\_\_\_\_

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**Code No: MA313BS Set No. 3**

**BVRIT HYDERABAD College of Engineering for Women**

**II B.Tech. - I Sem., I Mid-Term Examinations, JANUARY - 2023**

**(Mathematical and Statistical Foundations)**

**Objective Exam**

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**Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Hall Ticket No.**

**Time: 20 Min. Marks: 10**

**Answer All Questions. All Questions Carry Equal Marks.**

1. **Choose the correct alternative:**
2. In a Binomial Distribution, if p = q then P(X = x) is given by [ ]

(a)  (0.5)n  (b) (0.5)n (c) p(n – x) (d) q(n – x)

1. The value of Z for X=3 in a normal distribution with mean 5 and variance 4 is [ ]

(a) 1 (b) 0.5 (c)-1 (d)-0.5

1. Which of the following are relatively prime but not pair-wise relatively prime [ ]
2. 2,4,8 (b) 3,5,7 (c)3,6,7 (d) 2, 3,5
3. If X is a Poisson variable such that P(X=1) = P(X=2) then mean is [ ]
4. 1 (b)2 (c) 3 (d) 4
5. The property with then is called [ ]
6. reflexive (b) symmetric (c) anti-symmetric (d) transitive
7. If X is a random variable then = [ ]

(a) (b) 2 (c) (d)

1. Cumulative Distribution Function of a Continuous Random Variable

[ ]

(a) (b) (c)

1. Which of the following is wrong [ ]
2. (b)

(c) (d)

1. If then mean of the Poisson distribution is ---------- [ ]
2. (b)2 (c)1 (d) 4
3. The variance of a probability distribution is [ ]

(a) (b) (c) (d)

**Code No: MA313BS :2: Set No. 3**

**II Fill in the Blanks:**

1. The independent variable which is used for prediction is called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. The number of divisors of 12 in set of integers is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. Bezout’s coefficients of 9, 12 are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. 32 mod 7= \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
5. Mean and Variance of binomial distribution are 4 and 4/3 then *n* = \_\_\_\_\_\_\_\_\_\_\_\_\_
6. If probability density function is then the value of k is \_\_\_\_\_\_\_\_\_\_\_\_\_
7. The area under the whole normal curve is\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
8. The mean of the standard normal variate Z is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
9. Prime power factorization of 128 is \_\_\_\_\_\_\_\_\_\_\_\_\_
10. The inverse of 7 modulo 5 is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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**Code No: MA313BS Set No. 4**

**BVRIT HYDERABAD College of Engineering for Women**

**II B.Tech. - I Sem., I Mid-Term Examinations, JANUARY - 2023**

**(Mathematical and Statistical Foundations)**

**Objective Exam**

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**Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Hall Ticket No.**

**Time: 20 Min. Marks: 10**

**Answer All Questions. All Questions Carry Equal Marks.**

1. **Choose the correct alternative:**
2. The property with then is called [ ]
3. reflexive (b) symmetric (c) anti-symmetric (d) transitive
4. If X is a random variable then = [ ]

(a) (b) 2 (c) (d)

1. Cumulative Distribution Function of a Continuous Random Variable

[ ]

(a) (b) (c)

1. Which of the following is wrong [ ]
2. (b)

(c) (d)

1. If then mean of the Poisson distribution is ---------- [ ]
2. (b)2 (c)1 (d) 4
3. The variance of a probability distribution is [ ]

(a) (b) (c) (d)

1. In a Binomial Distribution, if p = q then P(X = x) is given by [ ]

(a)  (0.5)n  (b) (0.5)n (c) p(n – x) (d) q(n – x)

1. The value of Z for X=3 in a normal distribution with mean 5 and variance 4 is [ ]

(a) 1 (b) 0.5 (c)-1 (d)-0.5

1. Which of the following are relatively prime but not pair-wise relatively prime [ ]
2. 2,4,8 (b) 3,5,7 (c)3,6,7 (d) 2, 3,5
3. If X is a Poisson variable such that P(X=1) = P(X=2) then mean is [ ]
4. 1 (b)2 (c) 3 (d) 4

**Code No: MA313BS :2: Set No. 4**

**II Fill in the Blanks:**

1. Mean and Variance of binomial distribution are 4 and 4/3 then *n* = \_\_\_\_\_\_\_\_\_\_\_\_\_
2. If probability density function is then the value of k is \_\_\_\_\_\_\_\_\_\_\_\_\_
3. The area under the whole normal curve is\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. The mean of the standard normal variate Z is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
5. Prime power factorization of 128 is \_\_\_\_\_\_\_\_\_\_\_\_\_
6. The inverse of 7 modulo 5 is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
7. The independent variable which is used for prediction is called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
8. The number of divisors of 12 in set of integers is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
9. Bezout’s coefficients of 9, 12 are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
10. 32 mod 7= \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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