Code No: A109210302 **Set No. 1**

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
II B.Tech. I Sem., II Mid-Term Examinations, November – 2010
PROBABILITY AND STATISTICS
Objective Exam

Name: _____ Hall Ticket No. | | | | | | A | | | | |

Answer All Questions. All Questions Carry Equal Marks.Time: 20 Min. Marks: 10.

I Choose the correct alternative:

1. The variance of two samples were 25 and 225 sample size are 9 and 15 then error of [ ]
   a) 1.2 b) 3.6 c) 4.2 d) 6.4

2. The two lines of regression pass through the point [ ]
   a) (x, y) b) (0, 0) c) $(\bar{x}, \bar{y})$ d) (1, 1)

3. If $\sum d_i^2$ = 45, n= 10, In x series two values are repeated and in y series one value is repeated, then the rank correlation coefficient is [ ]
   a) .71 b) .61 c) .91 d) .81

4. The manner in which the customers chosen for service is [ ]
   a) Service mechanism b) Discipline of the service c) Service rate d) Arrival rate.

5. If the traffic intensity $\frac{1}{3}$ is and the service rate is $\frac{1}{3}$, then the probability that a customer has to wait for more than 10 minutes is [ ]
   a) .1 b) .2 c) .3 d) .4

6. If standard deviations of two samples, whose samples sizes were 9 and 10 are 18 and 24 then F ..... [ ]
   a) 1.2 b) 1.4 c) 1.36 d) 1.8

7.

Superconductors	31	42	22	25
Failures	19	8	28	25

e_{12} = [ ]
   a) 30 b) 40 c) 50 d) 75

8. If the variables x and y are independent, then the angle between the two lines of regression is[ ]
   a) $\frac{\pi}{2}$ b) $\frac{\pi}{4}$ c) $\frac{\pi}{3}$ d) $\frac{\pi}{6}$

9. The pattern according to which the customers are served is [ ]
   a) The service discipline b) Service rate c) The service mechanism d) Service

10. Variance of queue length is [ ]
    a) $\frac{1}{(1-\rho)^2}$ b) $\frac{\rho}{(1-\rho)}$ c) $\frac{\rho}{(1-\rho)^2}$ d) $\frac{\rho^2}{(1-\rho)}$

Cont.....2

II Fill in the blanks:

11. To test the goodness of fit poisson distribution was fitted. If the μ = .5 and expected frequency when x = 1 is 11.8 Then f(2) = ……

12. If $\bar{x}$ = 4, $\bar{y}$ = 8, σ_x = 2, σ_y = 3 and r= .3 then the regression of y on x is……

13. The differential equation of the probability that there is 0 Unit arrives in time *t* is…….

14. If the probability transition, matrix is $\begin{bmatrix} .6 & .4 \\ .2 & .8 \end{bmatrix}$ then P(2) = …….

15. If the probability transition, matrix is $\begin{bmatrix} .1 & .6 & .3 \\ .5 & .1 & .4 \\ .1 & .2 & .7 \end{bmatrix}$, then P(2) =……..

16. If expected frequencies E_i and $(O_i - E_i)^2$ are given by

$(O_i - E_i)^2$	324	729	82
E_i	30	36	34

Then χ^2 = ……

17. The variance of the difference between the small samples is……..

18. If the service rate is $\frac{1}{3}$ per minute and the arrivals rate is $\frac{1}{10}$ /minute, then the probability that there the queue length exceeds 5 is…….

19. The probability that one unit arrives in the time interval Δt is……..

20. The time taken by a radio repairman to repair is 20 minutes .15 arrive per 8 hours day. The idle time of the repair man is……..

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Code No: A109210302 **Set No. 2**

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
II B.Tech. I Sem., II Mid-Term Examinations, November – 2010
PROBABILITY AND STATISTICS
Objective Exam

Name: _____ Hall Ticket No. | | | | | | A | | | | |

Answer All Questions. All Questions Carry Equal Marks.Time: 20 Min. Marks: 10.

I Choose the correct alternative:

1. The manner in which the customers chosen for service is [ ]
   a) Service mechanism b) Discipline of the service c) Service rate d) Arrival rate.

2. If the traffic intensity $\frac{1}{3}$ is and the service rate is $\frac{1}{3}$, then the probability that a customer has to wait for more than 10 minutes is [ ]
   a) .1 b) .2 c) .3 d) .4

3. If standard deviations of two samples, whose samples sizes were 9 and 10 are 18 and 24 then F ..... [ ]
   a) 1.2 b) 1.4 c) 1.36 d) 1.8

4.

Superconductors	31	42	22	25
Failures	19	8	28	25

e_{12} = [ ]
   a) 30 b) 40 c) 50 d) 75

5. If the variables x and y are independent, then the angle between the two lines of regression is[ ]
   a) $\frac{\pi}{2}$ b) $\frac{\pi}{4}$ c) $\frac{\pi}{3}$ d) $\frac{\pi}{6}$

6. The pattern according to which the customers are served is [ ]
   a) The service discipline b) Service rate c) The service mechanism d) Service

7. Variance of queue length is [ ]
   a) $\frac{1}{(1-\rho)^2}$ b) $\frac{\rho}{(1-\rho)}$ c) $\frac{\rho}{(1-\rho)^2}$ d) $\frac{\rho^2}{(1-\rho)}$

8. The variance of two samples were 25 and 225 sample size are 9 and 15 then error of [ ]
   a) 1.2 b) 3.6 c) 4.2 d) 6.4

9. The two lines of regression pass through the point [ ]
   a) (x, y) b) (0, 0) c) $(\bar{x}, \bar{y})$ d) (1, 1)

10. If $\sum d_i^2$ = 45, n= 10, In x series two values are repeated and in y series one value is repeated, then the rank correlation coefficient is [ ]
    a) .71 b) .61 c) .91 d) .81

Cont……2

II Fill in the blanks:

11. If the probability transition, matrix is $\begin{bmatrix} .6 & .4 \\ .2 & .8 \end{bmatrix}$ then P(2) = …….

12. If the probability transition, matrix is $\begin{bmatrix} .1 & .6 & .3 \\ .5 & .1 & .4 \\ .1 & .2 & .7 \end{bmatrix}$, then P(2) =……..

13. If expected frequencies E_i and $(O_i - E_i)^2$ are given by

$(O_i - E_i)^2$	324	729	82
E_i	30	36	34

Then χ^2 = ……

14. The variance of the difference between the small samples is……..

15. If the service rate is $\frac{1}{3}$ per minute and the arrivals rate is $\frac{1}{10}$ /minute, then the probability that there the queue length exceeds 5 is…….

16. The probability that one unit arrives in the time interval Δt is……..

17. The time taken by a radio repairman to repair is 20 minutes .15 arrive per 8 hours day. The idle time of the repair man is……..

18. To test the goodness of fit poisson distribution was fitted. If the μ = .5 and expected frequency when x = 1 is 11.8 Then f(2) = ……

19. If $\bar{x}$ = 4, $\bar{y}$ = 8, σ_x = 2, σ_y = 3 and r= .3 then the regression of y on x is……

20. The differential equation of the probability that there is 0 Unit arrives in time *t* is…….

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Code No: A109210302 **Set No. 3**

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
II B.Tech. I Sem., II Mid-Term Examinations, November – 2010
PROBABILITY AND STATISTICS
Objective Exam

Name: _____ Hall Ticket No. | | | | | | A | | | | |

Answer All Questions. All Questions Carry Equal Marks.Time: 20 Min. Marks: 10.

I Choose the correct alternative:

1. If standard deviations of two samples, whose samples sizes were 9 and 10 are 18 and 24 then F ..... [ ]
   a) 1.2 b) 1.4 c) 1.36 d) 1.8

2.

Superconductors	31	42	22	25
Failures	19	8	28	25

e_{12} = [ ]
   a) 30 b) 40 c) 50 d) 75

3. If the variables x and y are independent, then the angle between the two lines of regression is[ ]
   a) $\frac{\pi}{2}$ b) $\frac{\pi}{4}$ c) $\frac{\pi}{3}$ d) $\frac{\pi}{6}$

4. The pattern according to which the customers are served is [ ]
   a) The service discipline b) Service rate c) The service mechanism d) Service

5. Variance of queue length is [ ]
   a) $\frac{1}{(1-\rho)^2}$ b) $\frac{\rho}{(1-\rho)}$ c) $\frac{\rho}{(1-\rho)^2}$ d) $\frac{\rho^2}{(1-\rho)}$

6. The variance of two samples were 25 and 225 sample size are 9 and 15 then error of [ ]
   a) 1.2 b) 3.6 c) 4.2 d) 6.4

7. The two lines of regression pass through the point [ ]
   a) (x, y) b) (0, 0) c) $(\bar{x}, \bar{y})$ d) (1, 1)

8. If $\sum d_i^2$ = 45, n= 10, In x series two values are repeated and in y series one value is repeated, then the rank correlation coefficient is [ ]
   a) .71 b) .61 c) .91 d) .81

9. The manner in which the customers chosen for service is [ ]
   a) Service mechanism b) Discipline of the service c) Service rate d) Arrival rate.

10. If the traffic intensity $\frac{1}{3}$ is and the service rate is $\frac{1}{3}$, then the probability that a customer has to wait for more than 10 minutes is [ ]
    a) .1 b) .2 c) .3 d) .4

Cont.....2

II Fill in the blanks:

11. If expected frequencies E_i and $(O_i - E_i)^2$ are given by

$(O_i - E_i)^2$	324	729	82
E_i	30	36	34

Then χ^2 = ……

12. The variance of the difference between the small samples is……..

13. If the service rate is $\frac{1}{3}$ per minute and the arrivals rate is $\frac{1}{10}$ /minute, then the probability that there the queue length exceeds 5 is…….

14. The probability that one unit arrives in the time interval Δt is……..

15. The time taken by a radio repairman to repair is 20 minutes .15 arrive per 8 hours day. The idle time of the repair man is……..

16. To test the goodness of fit poisson distribution was fitted. If the μ = .5 and expected frequency when x = 1 is 11.8 Then f(2) = ……

17. If $\bar{x}$ = 4, $\bar{y}$ = 8, σ_x = 2, σ_y = 3 and r= .3 then the regression of y on x is……

18. The differential equation of the probability that there is 0 Unit arrives in time *t* is…….

19. If the probability transition ,matrix is $\begin{bmatrix} .6 & .4 \\ .2 & .8 \end{bmatrix}$ then P(2) = …….

20. If the probability transition ,matrix is $\begin{bmatrix} .1 & .6 & .3 \\ .5 & .1 & .4 \\ .1 & .2 & .7 \end{bmatrix}$, then P(2) =……..

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Code No: A109210302 **Set No. 4**

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
II B.Tech. I Sem., II Mid-Term Examinations, November – 2010
PROBABILITY AND STATISTICS
Objective Exam

Name: _____ Hall Ticket No. | | | | | | A | | | | |

Answer All Questions. All Questions Carry Equal Marks.Time: 20 Min. Marks: 10.

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1. If the variables x and y are independent, then the angle between the two lines of regression is[ ]
   a) $\frac{\pi}{2}$ b) $\frac{\pi}{4}$ c) $\frac{\pi}{3}$ d) $\frac{\pi}{6}$
2. The pattern according to which the customers are served is [ ]
   a) The service discipline b) Service rate c) The service mechanism d) Service
3. Variance of queue length is [ ]
   a) $\frac{1}{(1-\rho)^2}$ b) $\frac{\rho}{(1-\rho)}$ c) $\frac{\rho}{(1-\rho)^2}$ d) $\frac{\rho^2}{(1-\rho)}$
4. The variance of two samples were 25 and 225 sample size are 9 and 15 then error of [ ]
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5. The two lines of regression pass through the point [ ]
   a) (x, y) b) (0, 0) c) $(\bar{x}, \bar{y})$ d) (1, 1)
6. If $\sum d_i^2$ = 45, n= 10, In x series two values are repeated and in y series one value is repeated, then the rank correlation coefficient is [ ]
   a) .71 b) .61 c) .91 d) .81
7. The manner in which the customers chosen for service is [ ]
   a) Service mechanism b) Discipline of the service c) Service rate d) Arrival rate.
8. If the traffic intensity $\frac{1}{3}$ is and the service rate is $\frac{1}{3}$, then the probability that a customer has to wait for more than 10 minutes is [ ]
   a) .1 b) .2 c) .3 d) .4
9. If standard deviations of two samples, whose samples sizes were 9 and 10 are 18 and 24 then F ..... [ ]
   a) 1.2 b) 1.4 c) 1.36 d) 1.8
10.

Superconductors	31	42	22	25
Failures	19	8	28	25

e_{12} = [ ]
   a) 30 b) 40 c) 50 d) 75

Cont.....2

II Fill in the blanks:

11. If the service rate is $\frac{1}{3}$ per minute and the arrivals rate is $\frac{1}{10}$ /minute, then the probability that there the queue length exceeds 5 is…….

12. The probability that one unit arrives in the time interval Δt is……..

13. The time taken by a radio repairman to repair is 20 minutes .15 arrive per 8 hours day. The idle time of the repair man is……..

14. To test the goodness of fit poisson distribution was fitted. If the μ = .5 and expected frequency when x = 1 is 11.8 Then f(2) = ……

15. If $\bar{x}$ = 4, $\bar{y}$ = 8, σ_x = 2, σ_y = 3 and r= .3 then the regression of y on x is……

16. The differential equation of the probability that there is 0 Unit arrives in time *t* is…….

17. If the probability transition ,matrix is $\begin{bmatrix} .6 & .4 \\ .2 & .8 \end{bmatrix}$ then P(2) = …….

18. If the probability transition ,matrix is $\begin{bmatrix} .1 & .6 & .3 \\ .5 & .1 & .4 \\ .1 & .2 & .7 \end{bmatrix}$, then P(2) =……..

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E_i	30	36	34

Then χ^2 = ……

20. The variance of the difference between the small samples is……..

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