24. Discuss the various probability distributions with their characteristics.

25. From the following data apply one way ANOVA.

Treatment level		
(1)	(2)	(3)
22	21	22
21	17	24
18	16	22
19	18	21

APRIL 2017 **65159/KDA2B/KDF2C**

Time : Three hours Maximum : 75 marks

SECTION A — (10 × 1 = 10 marks)

Answer any TEN questions.

1. Discuss the role of statistics in business decisions.
2. $(2/3+1/3)^9$ refer the binomial distribution and its standard deviation is what?
3. Standard error of observed sample proportion "p" is?
4. What is meant by Random Sampling?
5. Give classification of index numbers.
6. Define standard error.
7. What is probability error?
8. Explain correlation.
9. What is the formula of CORRELATION?
10. If in a Poisson distribution $P(1)=P(2)$. Find value of $P(4)$.

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11. Two kinds of errors in test of significance.

12. Explain one tailed test.

SECTION B — (5 × 5 = 25 marks)

Answer any FIVE questions.

13. Evaluation $8C_3$ in different ways.

14. Describe the characteristics of samplings.

15. Find Correlation Coefficient for the following :

$N = 5$, $\Sigma dx = 20$; $\Sigma dy = 20$; $\Sigma dx^2 = 120$ $\Sigma dy^2 = 120$; $\Sigma dxdy = 120$.

16. What are the errors in Hypothesis testing?

17. In a sample of 8 observations, the sum of squared deviation of items from the mean was 84.4. In another sample of 10 observations, the value was found to be 102.6. Test whether the difference is significant at 5% level.

You are given that at 5% level, critical value of F for $V_1 = 7$ and $V_2 = 9$ degrees of freedom is 3.29 and for $V_1 = 8$ and $V_2 = 10$ degrees of freedom, its value is 3.07.

18. Explain about decision Tree analysis.

19. What are the testing differences between mean and proportions?

SECTION C — (4 × 10 = 40 marks)

Answer any FOUR questions.

20. Calculate theoretical frequencies using Poisson's distribution.

Deaths :	0	1	2	3	4
Frequencies :	122	60	15	2	1

21. What is Correlation? How it differ from Regression?

22. Discuss the properties of Regression Co-efficient.

23. Solve the following L.P.P. using Simplex Method.

Maximum $Z = 10x + 20y$

Subject to

$3x + 5y \leq 90$
$6x + 3y \leq 72$
$x_1 y \geq 0$.