C. ABDUL HAKEEM COLLEGE (AUTONOMOUS),
MELVISHARAM - 632 509.
SEMESTER EXAMINATIONS, NOVEMBER - 2018

M.COM., COMMERCE **SEMESTER I**

P15MCM104 – ADVANCED BUSINESS STATISTICS

Time: Three Hours Maximum: 75 Marks

SECTION - A (5 X 6 = 30 Marks)

Answer **ALL** Questions.

1. a) What are the difference between Correlation and Regression.

(Or)

b) Explain the types of Correlation.

2. a) What are the types of Probability?

(Or)

b) What is binomial distribution? State the assumptions.

3. a) Pick up a sample of 5 persons out of 60 from the Tippet's random numbers.

(Or)

b) The frequency distribution obtained by tossing 5 coins for 2500 times simultaneously was as follows:

No of heads	5	4	3	2	1	0
Frequency	150	450	1000	400	300	200

Find the observed and the expected values of means of the distribution.

4. a) Two groups of 50 handicaps each were taken to study the association of blindness with deafness and the observations were tabulated as under:

Attributes	Blind	Not blind	Total
Deaf	10	40	50
Not Deaf	30	20	50
Total	40	60	100

Calculation of χ^2 test.

(Or)

b) From the following distribution, determine the degree of freedom and a theoretical distribution to substitute the given series.

No of heads	0	1	2	3	4	5	6	7
Frequency	3	5	12	7	10	40	4	2

5. a) What are the Characteristics of ANOVA?

(Or)

b) State the methods of Computation of ANOVA.

SECTION - B (3 X 15=45 Marks)

Answer **ANY THREE** Questions

6. From the following data obtain the equations of the two lines of regression using the short cut method.

X	43	44	46	40	44	42	45	42	38	40	42	57
Y	29	31	19	18	19	27	27	29	41	30	26	10

Determine the value of Correlation coefficient between X and Y.

7. There are three bags containing some balls as follows.

   Bag (A) = 3 red and 7 black

   Bag (B) = 6 red and 4 black

   Bag (C) = 8 red and 2 black

   A ball is drawn first from the bag (A). Another ball is drawn from the bag (B) if the first was red or from the bag (C) if the first one was black.

   Find the probability

   i. the ball drawn from the bag (A) was red
   ii. the ball drawn from the bag (B) was red
   iii. the ball drawn from the bag (C) was red
   iv. Two red balls were drawn.

8. A die was rolled 50 times and the falling of an odd number (1,3,5) was reckoned as a success. If the odd numbers appear 40 times will you say that the die was fair at 95% level of confidence?

9. Applying the relevant test statistic, verify the hypothesis that σ^2=81when S=12 for a random sample of 41.

10. From the following two samples taken at random from two normal populations, verify whether they have the same variance at 5% level or not.

Sample I	87	85	82	76	74	71	65	60		
Sample II	91	88	86	85	63	78	85	67	66	61

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