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Name...

Reg. No..

FIRST SEMESTER M.B.A. DEGREE (REGULAR/SUPPLEMENTARY) EXAMINATION, DECEMBER 2016

(CUCSS)

BUS IC 08—QUANTITATIVE TECHNIQUES

(2013 Admissions)

Time : Three Hours

Maximum : 36 Weightage

Part A

Answer all questions.
Each question carries 1 weightage.

1. What is 'Axiomatic approach to probability' ?

2. Distinguish between simple and compound event.

3. Define Binomial Distribution.

4. What is meant by Sampling ?

5. Define 'Degree of freedom'.

6. What is Regression line ?

(6 × 1 = 6 weightage)

Part B

Answer any six questions.
Each question carries 3 weightage.

7. Explain the method of calculating correlation using SPSS.

8. What is Poisson distribution ? Explain its usefulness in statistics.

9. In a sample of 120 workers in a factory the Mean and Standard Deviations of wages were Rs. 11.35 and Rs. 3.03 respectively. Find the percentage of workers getting wages between Rs. 9 and Rs. 17 in the whole factory, assuming that the wages are normally distributed.

10. What is Standard error ? What are its uses ?

11. Two laboratories are independently producing drugs that provide relief to arthrities sufferers. The first drug is tested on 200 arthritis victims and 120 got relief. The second drug is tested on 150 victims and 80 got relief. Test that the effectiveness of two drugs at 5 % level of significance does not differ significantly.

Turn over

12. A box contains 3 red and 7 white balls. One ball is drawn at random and in its place a ball of the other colour is put in the box. Now one ball is again drawn at random from the box. Find the probability that it is red.

13. What is correlation ? Distinguish between correlation and regression.

14. What are the assumptions in student's 't' test ? State the applications of 't' test.

(6 × 3 = 18 weightage)

Part C

*Answer any **two** questions.*
Each question carries 6 weightage.

15. A company appoints four salesmen P, Q, R and S and observes their sales in three seasons—Summer, Winter and Monsoon. The figures (in lakhs) are given below :

Season	Salesmen			
	P	Q	R	S
Summer	13	16	16	14
Winter	17	16	17	16
Monsoon	13	14	15	15

Carry out the analysis of variance. What conclusions do you draw from the analysis ?

16. The following table gives the classification of 200 students according to grades secured in an oral examination and to their year of graduation :

Year	Grade				
	A	B	C	D	Total
I	5	15	15	15	50
II	15	20	25	10	70
III	30	25	20	5	80
Total	50	60	60	30	200

Test the hypothesis that the grades secured by students is independent of their year of graduation.

17. You are given the following data :

x	:	60	62	65	70	72	48	53	73	65	82
y	:	68	60	62	80	85	40	52	62	60	81

Calculate the two regression equations. Find the coefficient of correlation.

(2 × 6 = 12 weightage)