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B.Com. DEGREE (C.B.C.S.S.) EXAMINATION, JANUARY 2021

Second Semester

Core Course IV—QUANTITATIVE TECHNIQUES FOR BUSINESS RESEARCH

(Common for Model I, Model II and U.G.C. Sponsored B.Com. Degree Programmes)

[2013—2016 Admissions]

Time : Three Hours

Maximum Marks : 80

Answers may be written either in English or in Malayalam.

Part A (Very Short Answer Type Questions)

Answer all questions.

Each question carries 1 mark.

1. What is a Social Research ?

2. What is Action Research ?

3. Define Hypothesis.

4. What is Systematic Sampling ?

5. Define the term random experiment.

6. What do you understand by dependent variables.

7. What is a Scatter diagram ?

8. What do you mean by rank correlation ?

9. Write a note on additive property of Chi-square.

10. Distinguish between one tailed and two tailed tests.

(10 × 1 = 10)

Part B (Short Answer Type Questions)

Answer any eight questions.

Each question carries 2 marks.

11. What are the objectives of management research ?

12. Write a note on exploratory research.

Turn over

13. What are the characteristics of a good hypothesis ?

14. What are the essential qualities of good sampling ?

15. Distinguish between objective and subjective probabilities.

16. Write a notes on Baye's theorem.

17. What are the uses of correlation ?

18. Explain the concept of regression.

19. What are the important characteristics of Chi-square test ?

20. A coin is tossed 10000 times and head turns up 5195 times ? Is the coin unbiased ?

21. What is a pilot survey ?

22. Distinguish between oral and written report.

$(8 \times 2 = 16)$

Part C (Short Essay Type Questions)

Answer any six questions.

Each question carries 4 marks.

23. Explain the various fields in which research is applied.

24. Discuss the values and limitations of case study.

25. What are the merits and demerits of a schedule method ?

26. Write notes on addition rule and multiplication rule of probability.

27. Explain the various methods of studying correlation.

28. From the data given below obtain the regression equation of X on Y :

X	:	2	3	7	8	10
Y	:	10	9	11	8	12

29. A Committee of 6 members is to be formed out of a group consisting 7 men and 4 ladies. Obtain the Probability that the sub-Committee will consist of : (a) Exactly 2 ladies ; and (b) At least 2 ladies.

30. The ranking of 10 students in two subjects A and B are as follows :

A   :   3   5   8   4   7   10   2   1   6   9

B   :   6   4   9   8   1   2   3   10   5   7

Find the rank correlation Co-efficient.

31. There are two bags, one of which contains 6 green and 5 red balls and the other 4 green and 10 red balls. A ball is to be drawn from one or the other of the bags. Find the chance of drawing a red ball.

(6 × 4 = 24)

Part D (Long Essay Type Questions)

Answer any two questions.
Each question carries 15 marks.

32. Explain the structure of the main text of a report.

33. Define the concepts of sample space, sample points and events in context of probability.

34. Is there any correlation between X and Y ?

X   :   200   270   340   310   400

Y   :   150   162   170   180   180

35. On the basis of information given below about the treatment of 200 patients suffering from a disease, state whether the new treatment is comparatively superior to the conventional treatment :

Treatment	No. of Patients	
	Favourable Response	No. Response
New	60	20
Conventional	70	50

For drawing your inference use the value of Chi-square for one degree of freedom at 5 % level of significance, viz 3.84.

(2 × 15 = 30)