E 5662 (Pages : 3) Reg. No.....

Name.....

B.Com. DEGREE (C.B.C.S.S.) EXAMINATION, MAY 2013

Second Semester

Core Course IV—QUANTITATIVE TECHNIQUES FOR BUSINESS RESEARCH

(For 2012 Admission onwards)

[Common for Model I, II and UGC sponsored B.Com. Degree Programmes]

Time : Three Hours Maximum Weight : 25

Answers may be written **either** *in English* **or** *in Malayalam.*

Section A

Answer **all** *questions.*
Each bunch of **four** *question carries a weight of* 1.

I. Choose the correct answer from the choices given below :

1. A research based on analytical and scientific examination of the relationship between independent and dependent variables is called :
   (a) Case study. (b) Export facto research.
   (c) Action research. (d) Applied Research.
2. Correlation in which both the variables charge at a constant ratio irrespective of the direction.
   (a) Linear. (b) Non-linear.
   (c) Perfect. (d) Imperfect.
3. The variable predicted on the basis of the other variable is known as :
   (a) Dependent variable. (b) Independent variable.
   (c) Inter-dependent variable. (d) None of these.
4. ———— is a printed list of questions sent by post to respondents.
   (a) Schedule method. (b) Pilot survey method.
   (c) Questionnaire method. (d) Warranty card.

II. Fill in the blanks :

5. The value of perfect correlation will be either +1 or ————.
6. Regression analysis consists of ———— coefficient.
7. A sample space may be discrete or ————.
8. ———— is a method of collecting data from every individual of the population.

III. State whether the following statements are True *or* False :

9. Purpose sampling is a non-probability sampling.
10. The primary data are useful for knowing opinion and attitudes of respondents.
11. The mean deviation of a sampling distribution is called standard error.
12. The probability of selecting a boy from a class containing 4 boys and 3 girls is 7/4.

IV. Match the following :

13. Degree of relationship between two variables	(a) Research in Physics.
14. Experimental research	(b) Probability sampling.
15. Random sampling.	(c) Correlation.
16. Blue print of the study	(d) Non probability sampling.
	(e) Research design.
	(f) Regression analysis.

(4 × 1 = 4)

Section B

Answer any **five** *questions.*
Each question carries a weight of 1.

17. What do you mean by research ?
18. What is an action research ?
19. Define hypothesis.
20. What is non-sampling error ?
21. What is meant by cluster sampling ?
22. Define 'degree of freedom'.
23. Define sample point.
24. What are axioms of probability ?

(5 × 1 = 5)

Section C

Answer any **four** *questions.*
Each question carries a weight of 2.

25. What are the different schools of thought on probability ?
26. What are the requisites of a good report ?
27. Distinguish between one tailed and two tailed tests.

28. A bag contains 7 red, 12 white and 4 green balls. What is the probability that :

    (a) 3 balls drawn are all white and

    (b) 3 balls drawn are one of each colour ?

29. Five mean in a company of 20 are graduates of three men are picked out of 20 at random. What is the probability that they are all graduates ? What is the probability of at least one graduate.

30. Find a suitable co-efficient of correlation for the following data :

Fertilisers used (tonnes)		*Productivity (tonnes)*
15	...	85
18	...	93
20	...	95
24	...	105
30	...	120
35	...	130
40	...	150
50	...	160

(4 × 2 = 8)

Section D

Answer any **two** *questions.*
Each question carries a weight of 4.

31. Calculate the two regression equations of X on Y and Y on X from the data given below, taking deviations from actual means of X and Y.

Price (Rs)	: 10	12	13	12	16	15
Quantity Demanded	: 40	38	43	45	37	43

Estimate the likely demand when the price is Rs. 20.

32. Distinguish between questionnaire and schedules.

33. Out of 8,000 graduates in a town, 800 are females ; out of 1,600 graduates employees 120 are female. Use chi-square test to determine if any distinction is made in appointment on the basis of sex. Value of chi-square for 5% level for one degree of freedom is 3.84.

(2 × 4 = 8)