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CMH 455

II Semester M.Com. Degree Examination, September/October 2022
(Choice Based Credit System)
COMMERCE
Business Research Methods

Time : 3 Hours

Max. Marks : 70

SECTION – A

Answer **any four** questions out of seven, **each** question carries **10** marks.

Answer to **each** question should **not** exceed **4** pages.

(4×10=40)

1. What do you mean by business research ? Describe its importance.
2. What is the meaning of measurement in research ? What difference does it make whether we measure in terms of a nominal, ordinal, interval or ratio scale ? Explain giving examples.
3. What is a 'Scatter diagram' ? How does it help in studying correlation between two variables ? Explain.
4. Explain the terms :
 - a) Level of significance
 - b) One-tailed and two tailed tests.
5. The following data give the experience of machine operators and their performance ratings as given by the number of good parts turned out per 100 pieces :

Operator :	1	2	3	4	5	6	7	8
Experience (in years) (x) :	16	12	18	4	3	10	5	12
Performance Ratings (y) :	87	88	89	68	78	80	75	83

Calculate the regression line of performance ratings on experience and estimate the probable performance if an operator has 7 years experience.

6. In a random sample of 400 persons from a large population, 120 are females. Can it be said that males and females are in the ratio 5 : 3 in the population ? Use 1% level of significance.

P.T.O.



7. The demand for a particular spare part in a factory was found to vary from day to day. In a sample study the following information was obtained :

Days : Mon Tues Wed Thurs Fri Sat

No. of parts demanded : 1,124 1,125 1,110 1,120 1,126 1,115

Test the hypothesis that the number of parts demanded does not depend on the day of the week. (The table value of χ^2 for 5 d.f. at 5% level of significance is 11.07).

SECTION – B

Answer **any two** questions out of three, **each** question carries **15** marks.

Answer to **each** question should **not** exceed **7** pages.

(2×15=30)

8. What is linear regression ? Why are there, in general two regression lines ? When do they coincide ? Explain the use of regression equations in economic enquiry.
9. The nicotine content in milligrams of two samples of tobacco were found to be as follows :

Sample A : 24 27 26 21 25

Sample B : 27 30 28 31 22 36

Can it be said that two samples come from normal populations having the same mean.

10. The three samples below have been obtained from normal populations with equal variances.

8 7 12

10 5 9

7 10 13

14 9 12

11 9 14

Use analysis of variance technique and test the hypothesis at 5% level that the population means are equal.
