

B.B.A. (2010 COURSE) SEM- III : SUMMER - 2018

SUBJECT: BUSINESS STATISTICS-II

Day: Tuesday
Date: 08/05/2018

S-2018-1656

Time: 02.00 PM TO 05.00 PM
Max. Marks: 70

N.B:

- 1) **Q. No. 1 is COMPULSORY.**
- 2) Attempt **ANY FOUR** questions from **Q. No.2 to Q. No.7.**
- 3) Each questions carries **14** marks.

Q.1 Find the coefficient of correlation by Karl Pearson's method between X and Y **(14)**
and interpret it value.

| | | | | | | | | | | | | |
|---|----|----|----|----|----|----|----|----|----|----|----|----|
| X | 57 | 42 | 40 | 33 | 42 | 45 | 42 | 44 | 40 | 56 | 44 | 43 |
| Y | 10 | 60 | 30 | 41 | 29 | 27 | 27 | 19 | 18 | 19 | 31 | 29 |

Q.2 The following data relate to advertising expenditure (in lakhs of rupees) and their corresponding sales (in crores of rupees) **(14)**

| | | | | | |
|-------------------|----|----|----|----|----|
| Adv. Expenditure: | 10 | 12 | 15 | 23 | 20 |
| Sales: | 14 | 17 | 23 | 25 | 21 |

- Estimate: i) The sales corresponding to advertising expenditure of Rs. 30 lakhs.
ii) The advertising expenditure for a sales target of Rs. 35 crores.

Q.3 a) A candidate is selected for interview of management trainees for 3 companies. **(07)**
For the first company there are 12 candidates, for the second there are 15 candidates and for third there are 10 candidates. What are the chances of his getting job at least in one of the companies?

b) State and prove Bayes' Theorem. **(07)**

Q.4 a) The incidence of occupational disease in an industry is such that the workers have 20% chance of suffering from it. What is the probability that out of six workers, 4 or more workers will contract the disease? **(07)**

b) A factory produces blades in packet of 10. The probability of a blade to be defective is 0.2%. Find the number of packets having two defective blades in a consignment of 10,000 packets. **(07)**

Q.5 Explain how Statistics is useful in the decision making process of business and management. Also describe any two methods of decision-making under uncertainty. **(14)**

Q.6 Given $(A) = 490$, $(AB) = 294$, $(\alpha B) = 380$ $(\alpha) = 570$. **(14)**
Test whether the attributes A and B are positively associated, negatively associated or independent.

Q.7 Write short notes on **:(ANY TWO)** **(14)**

- a) Exclusive events
- b) Axioms of Probability
- c) Rank Correlation

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