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Total No. of Pages : 02

Total No. of Questions : 09

M.Com. (Professional) (2015 to 2017) (Sem.-1)
STATISTICAL APPLICATIONS IN BUSINESS
Subject Code : MCOP-103
Paper ID : [A2202]

Time : 3 Hrs.

Max. Marks : 80

INSTRUCTION TO CANDIDATES :

1. SECTIONS-A, B, C & D contains TWO questions each carrying FIFTEEN marks each and students has to attempt any ONE question from each SECTION.
2. SECTION-E is COMPULSORY consisting of TEN questions carrying TWENTY marks in all.

SECTION-A

1. What is the purpose of calculating skewness and Kurtosis? How these two are calculated?
2. What are different kinds of problems faced in construction of Index numbers? Explain the importance of Index numbers in managerial decision making.

SECTION-B

3. What do you understand by regression analysis? Explain the relationship between correlation and regression co-efficients.
4. Calculate the trend values by the method of moving average, assuming a four-yearly cycle, from the data relating to sugar production in India :

Year	Sugar Production (lakh tons)	Year	Sugar Production (lakh tons)
1991	37.4	1997	48.4
1992	31.1	1998	64.6
1993	38.7	1999	58.4
1994	39.5	2000	38.6
1995	47.9	2001	51.4
1996	42.6	2002	84.4

SECTION-C

5. What do you understand by a probability distribution? Explain its different types.
6. A brokerage survey reports that 30 % of individual investors have used a discount broker, i.e. one which does not charge the full commission. In a random sample of 9 individuals what is the probability that
 - a) Exactly two of the sampled individuals have used a discount broker.
 - b) Not more than three have used a discount broker
 - c) At least three of them have used a discount broker

SECTION-D

7. Compare the various parametric and non-parametric tests. Illustrate the usage of Chi square test for testing of hypothesis.
8. The following table gives the distribution of students and also of regular players among them, according to age in complete years :

Age in Years:	15	16	17	18	19	20
No. of Students:	250	200	150	120	100	80
Regular Players:	200	150	90	48	30	12

Calculate the coefficient of association between majority and playing habits on the assumption that majority is allowed at the age of 18th year.

SECTION-E

9. **Write short notes on the following :**

- a) Harmonic Mean
- b) Absurd correlation
- c) Goodness of fit
- d) Two lines of regression
- e) Confidence limits
- f) Normal distribution
- g) ANOVA
- h) Time series
- i) Bayes' theorem
- j) Standard error