

Register Number :

Name of the Candidate :

5 1 9 8

B.B.A. DEGREE EXAMINATION, 2008

(ENGLISH MEDIUM)

(SECOND YEAR)

(PART - III)

(PAPER - VII)

260. QUANTITATIVE METHODS

December]

[Time : 3 Hours

Maximum : 100 Marks

PART - A (10 × 2 = 20)

Answer any TEN questions.

All questions carry equal marks.

1. (a) What is primary data ? Give examples.
- (b) What is cluster sampling ?
- (c) What are the applications of median over mean ?

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- (d) Give an illustration for quartile deviation.
- (e) What are the types of correlation ?
- (f) State the uses of wholesale price index.
- (g) State the multiplication rule of probability.
- (h) What are the properties of Poisson distribution ?
- (i) Give examples of null and unit matrix.
- (j) What do you understand by union of sets ?
- (k) List the measures of dispersion.
- (l) If A and B are two sets such that

$$n(A) = 17, n(B) = 23,$$

$$\text{and } n(A \cup B) = 38,$$

find $n(A \cap B)$.

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- (i) What is the probability that there will be co - education in the college in 2006 ?
- (ii) If there is co - education in the college in 2006, what is the probability that Dr. Ramani is the principal ?

10. Fit a straight line trend by the method of least squares to the following data and also forecast the earnings for the year 2006.

Year	Earnings (in lakhs)
1997	15
1998	14
1999	18
2000	20
2001	17
2002	24
2003	27

11. In 2005, there will be three candidates for the position of principal Dr. Murali, Dr. Venkat and Dr. Ramani, whose chances of getting the appointment are in the proportion of 4 : 2 : 3 respectively. The probability that Dr. Murali if selected would introduce co - education in the college is 0.3. The probabilities of Dr. Venkat and Dr. Ramani doing the same are respectively 0.5 and 0.8.

PART - B (4 × 10 = 40)

Answer any FOUR questions.

All questions carry equal marks.

- Explain the features of graphical representation of data.
- Explain the central limit theorem with the help of a normal distribution curve.
- In a group of athletic teams in a certain school 21 are on the Basket ball team, 26 on the Hockey team and 29 on the Foot ball team. If 14 play Hockey and Basket ball, 12 play Foot ball and Basket ball, 15 play Hockey and Foot ball and 8 play all the three, Find :
 - How many players are there in all ?
 - How many played only foot ball ?
- The table below shows a statistical data :

x :	10	20	30	40	50	60	70	80	90	100
f :	143	133	118	100	75	45	25	9	2	0

Calculate the mean and median.

Turn over

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6. Find the rank correlation co-efficient for the following data :

Pair:	1	2	3	4	5	6	7	8	9	10	11
A :	24	29	19	14	30	19	27	30	20	28	11
B :	37	35	16	26	23	27	19	20	16	11	21

7. Calculate the Fisher's Ideal index from the following data :

Commodity	2004		2005	
	Price	quantity	Price	quantity
A	12	20	14	30
B	14	13	20	15
C	10	12	15	20
D	6	8	4	10
E	8	5	6	5

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PART - C (2 × 20 = 40)

Answer any TWO questions.

All questions carry equal marks.

8. Run scores in 10 innings of two cricket batsmen are as follows :

A :	32	28	47	63	71	39	10	60	96	14
B :	19	31	48	53	67	90	10	62	40	80

Find which batsman is more consistent in scoring.

9. Solve the following system of linear equations by Cramer's rule :

$$x + 2y + 3z = 14.$$

$$3x + y + 2z = 11.$$

$$2x + 3y + z = 11.$$

Turn over