06 MAY 2016

Subject Code : ECO/VI/10

Booklet No. A

523

06 MAY 2016

ECO/VI/10

2016

(6th Semester)

ECONOMICS

TENTH PAPER

(Quantitative Techniques—II)

Full Marks : 75

Time : 3 hours

(PART : B—DESCRIPTIVE)

(*Marks* : 50)

The figures in the margin indicate full marks for the questions

Answer **one** question from each Unit

UNIT—I

1. *(a)* Compute the median for the following distribution : 6

No. of absent days	*No. of students*
More than 0	655
More than 5	625
More than 10	431
More than 15	190
More than 20	73
More than 25	21
More than 30	11
More than 35	5
More than 40	2

(b) Define skewness and kurtosis. 2+2=4

2. The daily wages of workers in two cities, Aizawl and Shillong, are given as follows :

Measure	*Aizawl*	*Shillong*
Average Wages (₹)	210	320
Standard Deviation (₹)	8	9

(a) Find combined mean. 4

(b) Find combined standard deviation. 4

(c) Which city is having more variations in wages? 2

UNIT—II

3. (a) State and prove the addition theorem of probability. 6

(b) A bag contains 8 white and 4 red balls. 5 balls are drawn at random. What is the probability that 2 of them are red and 3 are white? 4

4. Discuss the properties of normal distribution. 10

UNIT—III

5. Calculate Karl Pearson's coefficient of correlation between X and Y using the following data :

$N = 13$, $\Sigma X = 117$, $\Sigma Y = 260$,
$\Sigma X^2 = 1313$, $\Sigma Y^2 = 6580$, $\Sigma XY = 2827$

Also give your comment. 8+2=10

6. Construct the two regression equations and estimate the value of Y when $X = 12$ using the following data : 8+2=10

X :	6	3	10	5	9
Y :	9	11	6	8	7

UNIT—IV

7. What is time series? Discuss the various components of time series. 2+8=10

8. What is price relative? Construct index number of prices by applying Fisher's method from the following data : 3+7=10

Commodity	*2014*		*2015*	
	Price	*Quantity*	*Price*	*Quantity*
A	5	9	7	5
B	7	6	4	10
C	2	12	4	11
D	10	8	9	4

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To be filled in by the Candi

DEGREE 6th Semester
(Arts / Science / Commerce
) Exam., 201
Subject .....
Paper .....

INSTRUCTIONS TO CANDIDAT

1. The Booklet No. of this script sh quoted in the answer script me descriptive type questions an versa.
2. This paper should be ANSWERE and submitted within 1 (one of the commencement o Examination.
3. While answering the questions booklet, any cutting, erasing writing or furnishing more th answer is prohibited. Any roug if required, should be done the main Answer Book. Inst given in each question sh followed for answering that only.

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UNIT—V

9. From the data given below, calculate gross and net reproduction rates : 5+5=10

Age Group	*No. of children born to 1000 women passing through the age group*	*Mortality Rate*
16–20	150	120
21–25	1500	180
26–30	2000	150
31–35	800	200
36–40	500	220
41–45	200	230
46–50	100	250

(It is assumed that sex ratio, i.e., Male : Female is 52 : 48)

10. Explain the following : 5+5=10

(a) Crude death rate (CDR) and Specific death rate (SDR)

(b) Crude birthrate (CBR) and Net reproduction rate (NRR)

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2016

(6th Semester)

ECONOMICS

TENTH PAPER

(Quantitative Techniques—II)

(PART : A—OBJECTIVE)

(*Marks* : 25)

The figures in the margin indicate full marks for the questions

SECTION—A

(*Marks* : 10)

Put a Tick (✓) mark against the correct answer in the brackets provided : 1×10=10

1. The empirical mode is given by

(a) Mode = 3 Mean – 2 Median ( )

(b) Mode = 3 Median – 2 Mean ( )

(c) Mode = 2 Median – Mean ( )

(d) Mode > Mean > Median ( )

2. Which of the following is a unit free measure of dispersion?

   (a) Standard deviation ( )

   (b) Mean deviation ( )

   (c) Quartile deviation ( )

   (d) Coefficient of variation ( )

3. What is the probability of getting Red Queen from a standard pack of 52 cards?

   (a) 1/52 ( )

   (b) 2/52 ( )

   (c) 3/52 ( )

   (d) 4/52 ( )

4. Which of the following is a continuous distribution?

   (a) Binomial distribution ( )

   (b) Poisson distribution ( )

   (c) Normal distribution ( )

   (d) None of the above ( )

5. In the regression line $Y = \alpha + \beta X$, β is called the

   (a) intercept of the line ( )

   (b) slope of the line ( )

   (c) correlation between X and Y ( )

   (d) None of the above ( )

6. If the value of correlation coefficient between X and Y is zero, it shows

   (a) perfect positive correlation ( )

   (b) perfect negative correlation ( )

   (c) absence of correlation ( )

   (d) None of the above ( )

7. Laspeyres' index number may be said to give

   (a) upper limit to the price change ( )

   (b) lower limit to the price change ( )

   (c) demand limit to the price change ( )

   (d) supply limit to the price change ( )

8. In the measurement of trend, semi-average method is desired to be applied only when the trend is

(a) linear or approximately linear ( )

(b) non-linear ( )

(c) quadratic and concave ( )

(d) cubic and circle ( )

9. If maternal mortality rate (MMR) is 16 per 1000 and total number of live birth is 250 in a year, then the number of mother die at the birth of child is

(a) 3 ( )

(b) 4 ( )

(c) 5 ( )

(d) 6 ( )

10. Infant mortality rate (IMR) is defined as

(a) $\frac{\text{No. of mother death}}{\text{Total live birth}} \times 1000$ ( )

(b) $\frac{\text{No. of mother}}{\text{No. of child death at birth}} \times 1000$ ( )

(c) $\frac{\text{Death of infants within one year of birth}}{\text{Total number of mother}} \times 1000$ ( )

(d) $\frac{\text{Death of infants within one year of birth}}{\text{Total number of live birth}} \times 1000$ ( )

SECTION—B

(*Marks* : 15)

Answer the following questions : 3×5=15

1. Define sample and population.

2. What are independent events?

3. Define partial correlation.

4. Explain the meaning of consumer price index.

5. Explain the meaning of standardised death rate (SDR).

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