

Economics and Statistics

152

Roll No.

Time allowed : 3 hours

Maximum marks : 100

Total number of questions : 8

Total number of printed pages : 8

PART—A

*(Answer Question No.1 which is compulsory
and any two of the rest from this part.)*

1. (a) State, with reasons in brief, whether the following statements are true or false :
- (i) Price elasticity of demand of a commodity is affected by the number of its substitutes.
 - (ii) The law of variable proportions is a long-term phenomenon.
 - (iii) Price discrimination is possible in monopoly only.
 - (iv) Primary sector in India no longer provides employment to majority of the work force.
 - (v) Monetary policy is formulated and implemented by Government of India.
- (2 marks each)*
- (b) Write the most appropriate answer from the given options in respect of the following :
- (i) Which of the following is not one of the basic micro economics questions —
 - (a) What to produce
 - (b) For whom to produce for
 - (c) How to make use of labour or machinery
 - (d) How to maximise social welfare.
 - (ii) Utility means —
 - (a) Power to satisfy a want
 - (b) Quality of a service
 - (c) Willingness of a person to purchase
 - (d) Desire to have a good.

- (iii) In which market an individual firm cannot influence price —
- (a) Perfect competition
 - (b) Monopoly
 - (c) Monopolistic competition
 - (d) Oligopoly.
- (iv) The biggest source of domestic savings in India has been —
- (a) Household savings
 - (b) Public sector savings
 - (c) Government revenue surpluses
 - (d) Corporate savings.
- (v) Fiscal policy is connected with —
- (a) Issue of currency
 - (b) Exports and imports
 - (c) Public revenue and expenditure
 - (d) All of the above.
- (vi) Bank rate means —
- (a) Interest rate payable by RBI on deposits of commercial banks
 - (b) Interest rate charged by banks on loans and advances
 - (c) Interest rate payable on bonds
 - (d) The rate at which RBI discounts the bills of exchange.
- (vii) If marginal utility derived from the consumption of a commodity by the consumer is zero, the total utility will be —
- (a) Minimum
 - (b) Maximum
 - (c) Zero
 - (d) None of the above.
- (viii) Which one of the following cost curves always slopes downwards —
- (a) Total fixed cost curve
 - (b) Short-run average cost curve
 - (c) Average variable cost curve
 - (d) Average fixed cost curve.

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- (ix) Which theory is generally studied in micro economics —
- (a) Price theory
 - (b) Income theory
 - (c) Employment theory
 - (d) None of the above.
- (x) The headquarters of World Trade Organisation (WTO) is located at —
- (a) New York
 - (b) Doha
 - (c) New Delhi
 - (d) Geneva.

(1 mark each)

2. (a) Distinguish between **any three** of the following :

- (i) 'Change in supply' and 'change in quantity supplied' with the help of diagram(s).
- (ii) 'Internal economies of scale' and 'external economies of scale'.
- (iii) 'Balance of trade' and 'balance of payments'.
- (iv) 'Monopoly' and 'monopolistic competition'.

(3 marks each)

(b) Re-write the following sentences after filling-in the blank spaces with appropriate word(s)/figure(s) :

- (i) Production function is defined as the _____ relationship between input and output.
- (ii) A firm is a _____ unit engaged in the task of producing or selling of some specified goods or services.
- (iii) The concept of socialist economy has its origin in the drawbacks of _____ .
- (iv) India has _____ reserves of high quality iron ore.
- (v) The National Rural Employment Guarantee Scheme was implemented from February, 2006 in _____ identified districts of the country.
- (vi) _____ is the apex institution of Indian financial system.

(1 mark each)

3. Attempt *any three* of the following :

- (i) “Economics is not an exact science.” Comment.
- (ii) “Rapid industrialisation is necessary for fast economic development.” Comment.
- (iii) “Urbanisation is a resource costly phenomenon for an economy like ours.” Comment.
- (iv) What is ‘World Trade Organisation’ (WTO) ? Discuss its objectives.

(5 marks each)

4. Attempt *any three* of the following :

- (i) Examine the factors which influence the quality of the labour force.
- (ii) Explain the basic concepts of costs which a firm considers in short-run.
- (iii) Explain the different components of money supply in India.
- (iv) What are the major components of receipts and expenditure that are included in the preparation of budget of Government of India ?

(5 marks each)

PART—B

*(Answer Question No.5 which is compulsory
and any two of the rest from this part.)*

5. (a) State, with reasons in brief, whether the following statements are true or false :

- (i) A single fact, even though numerically expressed cannot be called statistics.
- (ii) It is safe to take the published statistics at their face value without knowing their meaning and limitations.
- (iii) Median is a positional average.
- (iv) A relative measure of dispersion cannot be used to compare dispersions of two or more distributions.
- (v) The purpose of forecasting is to provide future data with perfect precision.

(2 marks each)

- (b) Write the most appropriate answer from the given options in respect of the following :
- (i) The most acceptable and comprehensive definition of statistics in the sense of numerical data is given by —
 - (a) Bowley
 - (b) Fisher
 - (c) Horace Secrist
 - (d) A.K. Sen.
 - (ii) Which of the following statistical techniques is useful for economic planning —
 - (a) Time series analysis
 - (b) Index numbers
 - (c) Forecasting techniques
 - (d) All of the above.
 - (iii) Which of the following statements is not true about census investigation —
 - (a) It is comprehensive
 - (b) More time is required
 - (c) Accuracy is very low
 - (d) Cost is very high.
 - (iv) Which of the following is a mathematical average —
 - (a) Median
 - (b) Mode
 - (c) Quartiles
 - (d) Harmonic mean.
 - (v) Which of the following measures is suitable to study inequality of income and wealth —
 - (a) Inter-quartile range
 - (b) Mean deviation
 - (c) Range
 - (d) Lorenz curve.
 - (vi) The value of correlation coefficient 'r' is independent of —
 - (a) Point of origin
 - (b) Unit of measurement
 - (c) Both (a) and (b)
 - (d) Neither (a) nor (b).

- (vii) Secular trend is the tendency of data to —
- (a) Increase over a long period of time
 - (b) Decrease over a long period of time
 - (c) Stagnate over a long period of time
 - (d) Either (a) or (b) or (c).
- (viii) Fisher's ideal index number satisfies —
- (a) Unit test
 - (b) Time reversal test
 - (c) Factor reversal test
 - (d) All of the above.
- (ix) Tabulation of data is done —
- (a) Before classification
 - (b) After classification
 - (c) No restrictions
 - (d) None of the above.
- (x) Which of the following measures of central tendency can be used for further algebraic treatment —
- (a) Geometric mean
 - (b) Harmonic mean
 - (c) Arithmetic mean
 - (d) All of the above.

(1 mark each)

6. (a) Distinguish between *any three* of the following :
- (i) 'Continuous variable' and 'discrete variable'.
 - (ii) 'Exclusive series' and 'inclusive series'.
 - (iii) 'Frequency polygon' and 'frequency curve'.
 - (iv) 'Coefficient of variation' and 'variance'.

(3 marks each)

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(b) Re-write the following sentences after filling-in the blank spaces with appropriate word(s)/figure(s) :

- (i) Arrangement of data on the basis of certain characteristics is called _____ of data.
- (ii) In a statistical enquiry, _____ is a person who answers to the set of questions included in the questionnaire.
- (iii) In random sampling, each and every item of universe has _____ probability of being selected.
- (iv) _____ measures the degree and intensity of relationship between two variables.
- (v) Data which have been collected by somebody else are called _____.
- (vi) A diagram having two dimensions is known as _____.

(1 mark each)

7. Attempt *any three* of the following :

- (i) Briefly explain the various stages of statistical enquiry. (5 marks)
- (ii) Differentiate between 'census investigation' and 'sample investigation'. State the conditions in which census investigation is suitable. (5 marks)
- (iii) Define 'average'. What are the characteristics of a good average ? (5 marks)
- (iv) Present the following data in the form of histogram on a graph sheet :

<i>Weekly Wages</i> (₹)	<i>No. of Workers</i>
10-15	7
15-20	10
20-25	27
25-30	15
30-40	12
40-60	12
60-80	8

(5 marks)

8. (a) Calculate the mode from the following distribution :

<i>Wages more than (₹)</i>	80	90	100	110	120	130	140
<i>No. of Workers</i>	160	151	134	104	60	29	10

(5 marks)

- (b) Calculate coefficient of standard deviation from the following data :

<i>Marks Obtained</i>	0-9	10-19	20-29	30-39	40-49
<i>No. of Students</i>	12	15	40	22	11

(5 marks)

- (c) From the information given below, find out the coefficient of correlation :

No. of pairs of observation	10
Assumed mean for X series	82
Assumed mean for Y series	68
Sum of deviations of X from assumed mean	(-) 170
Sum of deviations of Y from assumed mean	(-) 20
Sum of the multiplication of deviations of X and Y	3,044
Total of square of deviations of X	8,288
Total of square of deviations of Y	2,264

(5 marks)