Economics and Statistics

152

Roll No...........................

Time allowed : 3 hours   *Maximum marks : 100*

Total number of questions : 8   *Total number of printed pages : 7*

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 correct or incorrect :

   (i) Positive economics and normative economics are synonyms to each other.

   (ii) There is normally a direct relationship between price and quantity in supply of a commodity.

   (iii) The agriculture sector holds the dominant position in the Indian economy in terms of contribution to India's Gross Domestic Product (GDP).

   (iv) National income is the aggregate money value of all goods and services produced in the country over a period of time, usually one year.

   (v) A surplus in balance of trade necessarily implies a surplus in the current account of balance of payments of an economy.

   (2 marks each)

   (b) Choose the most appropriate answer from the given options in respect of the following :

   (i) Elasticity of demand for a necessity like salt is normally —

   (a) Equal to 1

   (b) Less than 1

   (c) Greater than 1

   (d) Infinite.

   (ii) The demand curve of a firm under perfect competition is —

   (a) Vertical

   (b) Horizontal

   (c) Negatively sloped

   (d) Positively sloped.

   (iii) If all factors of production are increased by 100% and the output increases by 90%, it is a case of —

   (a) Increasing returns to scale

   (b) Decreasing returns to scale

   (c) Constant returns to scale

   (d) None of the above.

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(iv) In the case of a free good, the level of consumption where marginal utility is zero and the total utility is maximum, it is called —

    (a) Consumers equilibrium

    (b) Consumers dissatisfaction

    (c) Negative utility

    (d) Equi-marginal utility.

(v) According to Fisher, total supply of money is —

    (a) $MV + M^1V^1$

    (b) $MV^1 + M^1V$

    (c) $\dfrac{MV + M^1V^1}{T}$

    (d) None of the above.

(vi) The average revenue curve of a firm is also known as its —

    (a) Profit curve

    (b) Demand curve

    (c) Income curve

    (d) None of the above.

(vii) Which one of the following is not a function of RBI —

    (a) To issue currency notes

    (b) To regulate supply of credit

    (c) To act as banker to the government

    (d) To regulate foreign trade.

(viii) Point out the odd one out of the following —

    (a) Delhi Transport Corporation

    (b) Indian Railways

    (c) Hindustan Aeronautics Ltd.

    (d) Reliance Industries Ltd.

(ix) Product differentiation is the basic feature of —

    (a) Monopoly

    (b) Monopolistic competition

    (c) Perfect competition

    (d) All of the above.

(x) Who is the *ex-officio* Chairman of the Planning Commission of India —

(a) The Prime Minister

(b) The Finance Minister

(c) The Planning Minister

(d) The President of India.

(1 mark each)

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

(i) 'Increase in demand' and 'expansion in demand'.

(ii) 'Market economy' and 'planned economy'

(iii) 'Revenue deficit' and 'fiscal deficit'.

(iv) 'Inferior goods' and 'Giffen goods'.

(3 marks each)

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

(i) Internal economies accrue to a firm when it _____ its operation.

(ii) Alfred Marshall's definition of economics is concerned with _____ welfare.

(iii) _____ is additional total cost when an additional unit of production is produced.

(iv) Government policy relating to public revenue, expenditure and borrowings is called_____.

(v) The average number of persons per square kilometre of area is called _____.

(vi) All factors of production are variable in _____ run.

(1 mark each)

3. Comment on **any three** of the following :

(i) Under perfect competition, the problem before a firm is to determine output only.

(ii) The Industrial Policy, 1991 redefined the role of public sector.

(iii) The welfare of people increases with increase in Gross National Product (GNP).

(iv) Selective credit controls regulate the flow of credit in particular directions.

(5 marks each)

4. Attempt **any three** of the following :

(i) "Quantity demanded of a commodity bears an inverse relationship to its price." Elaborate the statement with the help of a diagram.

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(ii) What do you mean by 'economies of scale' ? What are its different sources ?

(iii) Name the methods of computing national income. Describe in detail the product method.

(iv) What do you mean by 'monetary policy' ? Discuss its various objectives.

(5 marks each)

P A R T — 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 correct or incorrect :

    (i) Statistical results are true only on an average.

    (ii) Geometric mean gives higher weight to large items and less weight to small items.

    (iii) Same weight is given to all commodities in a weighted index number.

    (iv) Lorenz curve furnishes a quantitative measure of dispersion.

    (v) There is an inverse relationship between the size of the sample and accuracy of the result.

(2 marks each)

  (b) Choose the most appropriate answer from the given options in respect of the following :

    (i) The arranging of related facts into classes is called —

      (a) Diagram

      (b) Graph

      (c) Classification

      (d) Tabulation.

    (ii) Ogive curve is drawn with the help of —

      (a) Tallies

      (b) Median

      (c) Cumulative frequency distribution

      (d) None of the above.

    (iii) The index number which adopts base year quantities as weights is a method of —

      (a) Laspeyre

      (b) Bowley

      (c) Fisher

      (d) Paasche.

(iv) Co-efficient of variation is a —

    (a) Absolute measure

    (b) Relative measure

    (c) Both (a) and (b)

    (d) Neither (a) nor (b).

(v) Which of the following averages would be more suitable for ascertaining average size of shoes —

    (a) Arithmetic mean

    (b) Mode

    (c) Geometric mean

    (d) Median.

(vi) Which average is affected most by extreme observations —

    (a) Mode

    (b) Median

    (c) Geometric mean

    (d) Arithmetic mean.

(vii) While drawing a scatter diagram, if all the points appear to form a straight line going downward from left to right, then it is inferred that there is a —

    (a) Perfect positive correlation

    (b) Simple positive correlation

    (c) Perfect negative correlation

    (d) No correlation.

(viii) Which graphical representation is suitable for determining mode —

    (a) Histogram

    (b) Ogive curve

    (c) Frequency curve

    (d) Z-curve.

(ix) A distribution in which the values of mean, mode and median coincide is known as --

    (a) Asymmetrical distribution

    (b) Skewed distribution

    (c) Symmetrical distribution

    (d) Non-normal distribution.

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   (x) The square root of co-efficient of non-determination is called —

     (a) Co-efficient of alienation

     (b) Co-efficient of determination

     (c) Co-efficient of correlation

     (d) Co-efficient of regression.

(1 mark each)

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

   (i) 'Primary data' and 'secondary data'.

   (ii) 'Mean deviation' and 'standard deviation'.

   (iii) 'Karl Pearson's co-efficient' and 'rank correlation co-efficient'.

   (iv) 'Wholesale price index number' and 'cost of living index number'.

(3 marks each)

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

   (i) The law of inertia of large numbers is _____ of the law of statistical regularity.

   (ii) Co-efficient of variation is usually expressed in _____.

   (iii) 'r' is significant if it is _____ of probable error.

   (iv) _____ is the ratio of explained variation to the total variation.

   (v) _____ requires that the product of price index and the corresponding quantity index numbers should be equal to the value index number.

   (vi) 'Trend line' obtained by method of least squares is called _____.

(1 mark each)

7. (a) State the characteristics which the numerical data should possess to be known as statistics.

(5 marks)

  (b) Explain laws of statistics.

(5 marks)

  (c) Explain the 'census investigation method'. What are its merits ?

(5 marks)

O R

Calculate Karl Pearson's co-efficient of correlation for the data given below :

Roll No.	1	2	3	4	5
Marks 1	48	35	17	23	47
Marks 2	45	20	40	25	45

(5 marks)

8. (a) Compute mean and median from the following data :

Age *(Years)*	10-20	20-30	30-40	40-50	50-60
No. of Workers	15	18	30	20	17

(5 marks)

(b) Calculate Fisher's index number for the year 2008 from the data given below :

	2007		*2008*	
Item	*Price*	*Quantity*	*Price*	*Quantity*
	(Rs.)	*(Kgs.)*	*(Rs.)*	*(Kgs.)*
A	5	10	4	12
B	8	6	7	7
C	6	3	5	4

(5 marks)

(c) Compute standard deviation and co-efficient of variation from the following data :

Size	1	2	3	4	5	6	7
Frequency	6	12	18	26	16	10	8

(5 marks)

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