## Economics and Statistics

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Foll No. $\qquad$

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) Elasticity of demand for salt is almost zero.
(i) Negative balance of trade also indicates negative balance of payments.
(iii) Product differentiation is an important feature of perfect competition.
(iv) Fixed wage earners suffer both in inflation and deflation.
(v) Increase in GDP at current prices gives a correct picture of economic development of a country.
(2 marks each)
(b) Choose the most appropriate answer from the given options in respect of the following :
(i) From the national point of view, which of the following indicates a micro approach -
(a) Educated unemployment in India
(b) Per capita income in India
(d) Inflation in India
(d) Study of sales of TISCO.
(ii) The term 'mixed economy' denotes -
(a) Co-existence of both rural and urban sectors in the economy
(b) Co-existence of both private and public sectors in the economy
(d) Co-existence of both heavy and small industries in the economy
(d) Co-existence of both developed and under-developed regions in the economy.
(iii) Which of the following leads to credit expansion -
(a) Increase in CRR
(b) Increase in SLR
(d) Increase in bank rate
(d) Increase in purchase of government securities by central bank.
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(iv) Invisible items are included in -
(a) National income accounts
(b) Balance of payments accounts
(d) International accounts
(d) World Bank accounts.
(t) Expansion in demand is the result of -
(a) Decrease in the price of the goods concerned
(b) Increase in the number of consumers
(d) Decrease in the prices of other related goods
(d) Increase in the income of consumers.
(vi) For price discrimination to be successful, the elasticity of demand for the product in the two markets should be -
(a) Same
(b) Different
(d) Constant
(d) Zero.
(vii) Value of money changes -
(a) In direct proportion to money supply
(b) In inverse proportion to money supply
(d) In proportion to savings and investments
(d) According to changes in bank rate.
(viii) The duration of the $11^{\text {th }}$ Five Year Plan is -
(a) 2007-2012
(b) 2008-2013
(d) 2009-2014
(d) 2006-2011.
(ix) Which of the following activity is considered production in economics -
(a) Output of crops
(b) Singing a song before friends
(d) Painting a picture for pleasure
(d) Run for fun.
( $\times$ ) Globalisation means -
(a) Creation of global trading blocks
(b) Dismantling barriers to international trade
(d) Introduction of one currency in the world
(d) None of the above.
2. (a) Distinguish between any three of the following :
(f) 'Price competition' and 'non-price competition'.
(ii) 'Returns to a factor' and 'returns to scale'.
(iii) 'Income effect' and 'substitution effect'.
(iv) 'Pure monopoly' and 'discriminating monopoly'.
(3 marks each)
(b) Re-write the following sentences after filling-in the blank spaces with appropriate word(s)/figure (s) :
(i) Cross elasticity of demand is the change in the demand for one good in response to a change in the $\qquad$ of another good.
(ii) National income estimates in India are prepared by $\qquad$ .
(iii) Consumer equilibrium is a situation where a consumer secures $\qquad$ satisfaction out of his expenditure.
(in) All economic activities are guided by market forces in $\qquad$ .
( $*$ ) The relationship between inputs and outputs of a good may be expressed in the form of a $\qquad$ .
(vi) Between 1991-2001, the decadal growth of population was $\qquad$ .
3. Briefly comment on any five of the following :
(i) Selling costs are an essential feature of monopolistic competition.
(ii) Frictional unemployment is an inevitable result of technological progress.
(iii) Demand curve can be drawn from the marginal utility curve.
(iv) Equilibrium level of output is one where $\operatorname{MR}=M C$.
(v) External sector reforms introduced in India since 1991 have been successful.
(vi) Money does nothing.

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4. Attempt any three of the following :
(i) Define 'national income'. Explain the significance of national income estimates.
(ii) How is rapid growth of population a hurdle in economic development ?
(iii) Describe the functions of the Reserve Bank of India.
(iv) What is 'World Trade Organisation' (WTO) ? What are its functions ?
(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 correct or incorrect :
(i) Perfect accuracy is unattainable in statistical enquiries.
(ii) A random sample is free from the bias of the investigator.
(iii) Mode divides the series into two equal parts.
(iv) There is no difference between coefficient of variation (CV) and variance.
(v) There are no limits to the co-efficient of correlation ( $x$ ).
(2 marks each)
(b) Choose the most appropriate answer from the given options in respect of the following :
(i) Statistics deals with -
(a) Independent data
(b) Quantitative data
(d) Qualitative data
(d) Both (b) and (c).
(ii) Data originally collected for an enquiry are termed as -
(a) Primary data
(b) Secondary data
(d) Published data
(d) None of the above.
(iii) When both upper and lower limits are considered, such classes are called -
(a) Exclusive
(b) Inclusive
(d) Cumulative
(d) Related.
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(iv) Census investigation is not preferred over sample investigation because -
(a) It is costlier
(b) It is time consuming
(d) It has greater possibilities of error
(d) All the above.
(v) Two variables $X$ and $Y$ are said to be negatively correlated when -
(a) $X$ is increasing and $Y$ is decreasing
(b) Both X and Y are decreasing
(d) Both X and Y are increasing
(d) Both X and Y remain unchanged.
(vi) The $Q_{2}$ is equal to -
(a) Median
(b) $P_{50}$
(d) $Q_{3}-Q_{1}$
(d) All the above.
(vii) Standard deviation is always computed from -
(a) Mean
(b) Median
(d) Mode
(d) None of the above.
(viii) An ideal index number satisfies -
(a) Only time reversal test
(b) Only factor reversal test
(d) Both (a) and (b)
(d) None of the above.
(ix) The geometric mean of two numbers 8 and 18 shall be -
(a) 12
(b) 13
(d) 15
(d) 11.
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$(x)$ Which one of the following cannot be determined by graphic method -
(a) Mean
(b) Median
(d) Quartiles
(d) Mode.
(1 mark each)
6. (a) Distinguish between any three of the following :
(i) 'Lorenz curve' and 'ogive'.
(ii) 'Wholesale price index' and 'consumer price index'.
(iii) 'Seasonal variation' and 'cyclical variation'.
(iv) 'Implicit weighing' and 'explicit weighing'.
(3 marks each)
(b) Re-write the following sentences after filling-in the blank spaces with appropriate word(s) /figure (s) :
(i) Harmonic mean is the reciprocal of the $\qquad$ of the reciprocals of given observations.
(ii) Difference between the largest and smallest items of the series is called
$\qquad$ .
(iii) In a perfectly symmetrical distribution mean, mode and median are $\qquad$ to each other.
(iv) Standard deviation is the square root of the $\qquad$ .
(刃) A chain base index is an index with $\qquad$ year as base.
(vi) Time series consists of data which are arranged $\qquad$ .
7. Attempt any three of the following :
(i) Comment on the statement that 'statistics can prove anything'.
(ii) Explain the 'personal interview method' of collecting primary data.
(iii) Define the term 'average'. What are the requisites of a good statistical average?
(iv) What is 'standard deviation' ? Explain briefly its merits and demerits.
(5 marks each)
8. (a) The mean salary paid to 1,000 employees of an establishment was found to be Rs.180.40. Later on, it was found that the salary of two workers was wrongly entered as Rs. 295 and Rs. 167 while their correct salaries were Rs. 195 and Rs.187. Find the correct mean salary.

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(b) Calculate standard deviation from the following data :

| Size | 9 | 12 | 14 | 16 | 18 | 20 |
| :--- | :--- | :---: | :---: | :---: | :---: | :---: |
| Frequency | 2 | 5 | 9 | 15 | 12 | 7 |

(5 marks)
(d) Compute the co-efficient of correlation between the corresponding values of $A$ and $B$ from the following table :

| $A$ | 2 | 4 | 5 | 6 | 8 | 11 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $B$ | 18 | 12 | 10 | 8 | 7 | 5 |

(5 marks)

