Candidates are allowed additional 15 minutes for only reading the paper.
They must NOT start writing during this time.
Answer all questions in Section A, Section B and Section C.
Section A consists of objective/ very short answer questions.
Section B consists of short answer questions.
Section C consists of long answer questions.
The intended marks for questions or parts of questions are given in brackets [ ].

SECTION A – 16 MARKS

Question 1

(i) A TV channel collects data about a forest fire from local residents through a reporter. **[1]** Which of the following statements is false according to the above statement?

(a) The TV channel is the investigator and the reporter is the enumerator.

(b) The TV channel is the investigator and the local residents are the respondents.

(c) The TV channel is the enumerator and the reporter is the respondent.

(d) The local residents are the respondents and the reporter is the enumerator.

(ii) Ishan works as a lifeguard at a beach resort. During the monsoon months, the resort **[1]** closes, and Ishan is temporarily laid off. However, he resumes his job when the resort opens again. What type of unemployment is Ishan facing during the monsoon?

(a) Seasonal unemployment   (b) Disguised unemployment

(c) Frictional unemployment   (d) Underemployment

(iii) In which of the following situations, the 'sampling method' is used for collecting data? **[1]**

(a) Total production of cars in India.

(b) Age composition of population in a country.

(c) Estimation of India's population.

(d) Average monthly expenditure of a family.

(iv) Which of the given statements are true about Statistics? **[1]**

(I) Statistics does not analyse qualitative phenomenon.

(II) Statistical generalisations are exactly accurate.

(III) Statistics are helpful in the formulation of economic policies.

(IV) Statistics is concerned with individual values.

(a) (I) & (II)

(b) (I) & (III)

(c) (I), (II) & (III)

(d) (I), (III) & (IV)

(v) Which of the following is not a source of primary data collection: **[1]**

(a) Experiments   (b) Websites   (c) Personal interview   (d) Observations

(vi) Match the Column A with Column B by selecting appropriate options from below: **[1]**

Column A	Column B
I. Primary data	A. Annual reports
II. Secondary data	B. Unorganised
III. Internal data	C. Second-hand data
IV. Raw data	D. Original

(a) I-D, II-C, III-A, IV-B

(b) I-D, II-C, III-B, IV-A

(c) I-B, II-A, III-D, IV-C

(d) I-B, II-D, III-A, IV-B

(vii) Given below are two statements marked as Assertion and Reason. Read the statements **[1]** carefully and choose the correct option.

Assertion: Structural unemployment is not a temporary phenomenon.

Reason: It occurs due to cyclical fluctuations.

(a) Both Assertion and Reason are true, and Reason is the correct explanation of Assertion.

(b) Both Assertion and Reason are true, but Reason is not the correct explanation of Assertion.

(c) Assertion is true and Reason is false.

(d) Both Assertion and Reason are false.

(viii) Which of the following is an example of environmental sustainability? **[1]**

(a) Reducing the carbon footprint by using renewable energy sources.

(b) Reducing government spending.

(c) Increasing the production of consumer goods.

(d) Promoting short-term economic gains.

(ix) If a 10% increase in household income leads to a 10% increase in household **[1]** expenditure, what type of correlation exists between income and expenditure?

(a) Perfect positive correlation   (b) Perfect negative correlation

(c) Multiple correlation   (d) Partial correlation

(x) Which of the following data collection techniques is most clearly depicted in the **[1]** given picture?

(a) Mailed questionnaires

(b) Questionnaires to be filled by the respondents

(c) Direct personal investigation

(d) Indirect investigation

(xi) List two published sources of collecting secondary data. **[1]**

(xii) In a rural village, many people work on the family farm, though not all of them are fully involved in farming tasks. Some workers only help with basic chores like looking after livestock or minor duties, even though fewer workers could still complete the same tasks. **[1]**
What type of unemployment is present in this scenario?

(xiii) If the change in the value of one variable has no particular effect on the value of the other variable, the value of the correlation coefficient (r) is equal to _____. **[1]**

(xiv) A researcher wants to investigate the relationship between the amount of exercise and weight loss. Draw the correlation diagram to analyse this relationship. **[1]**

(xv) The mathematical formula for the slope of a line is _____. **[1]**

(xvi) State two limitations of statistics. **[1]**

SECTION B – 32 MARKS

Question 2

(i) Justify the given statements with valid explanation: **[2]**
(a) Agricultural development is also responsible for depletion of resources and environment degradation.
(b) There is an urgent need of modifying the existing techniques so as to develop eco-friendly technologies.

(ii) Explain any two main effects of economic development on environment degradation. **[2]**

Question 3

(i) Categorize the following examples as primary or secondary data with valid arguments: **[2]**
(a) Data collected by field workers.
(b) Use of census data by a firm.

(ii) Distinguish between positive and negative correlation. **[2]**

OR

(iii) Draw graph of the following functions, where Y indicates the variable on the vertical axis and X indicates the variable on the horizontal axis: **[4]**
(a) $Y = 5X$ (b) $Y = 80 + 0.75X$

Question 4

Briefly review the policies and programmes undertaken by the government to solve the problem of unemployment in India. **[4]**

Question 5

(i) Identify the type of unemployment in the following situations and justify your answer. **[2]**

(a) Construction sites with excess labour.

(b) Employee relocating to a new city.

(ii) What do you mean by economic development? **[2]**

Question 6

(i) Distinguish between mathematical averages and positional averages. **[2]**

(ii) You are conducting a survey to find out the favourite sports of students at a school with 2,000 students. Instead of surveying all 2,000 students, you decide to collect data from a sample of 250 students. What data collection method is being used, and why? **[2]**

OR

(iii) Find the coefficient of correlation between the variables X and Y using Karl Pearson's method: **[4]**

X	12	9	8	10	11	13	7
Y	14	8	6	9	11	12	3

Question 7

Distinguish between economic growth and development. **[4]**

Question 8

Calculate the median marks from the following data: **[4]**

Marks:	0-10	10-20	20-30	30-40	40-50
No. of students:	3	5	9	3	2

Question 9

Explain the importance of Statistics in Economics. **[4]**

SECTION C – 32 MARKS

Question 10

(i) Differentiate between primary data and secondary data. **[2]**

(ii) Explain any four methods of collecting primary data. **[6]**

Question 11

(i) "The word statistics is used in two different senses". Explain. **[2]**

(ii) The following table shows the marks in Economics secured by the students of a class in their mid-term examination: **[6]**

Marks:	0-10	10-20	20-30	30-40	40-50
No. of students:	17	30	28	70	5

Calculate the average marks of students by step deviation method.

OR

(iii) Explain the uses of index numbers. **[2]**

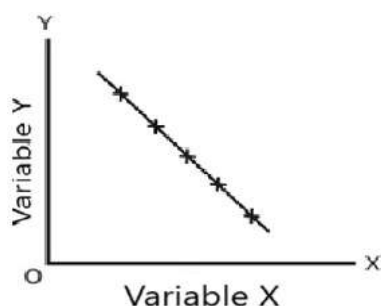**(iv)** Construct price index numbers of the items in the year 2023 from the following data **[6]**

by:

(i) Laspeyre's method, (ii) Paasche's method and (iii) Fisher's method.

Commodity	Base Year		Current Year	
	Price	Quantity	Price	Quantity
A	2	20	5	15
B	4	4	8	5
C	1	10	2	12
D	5	5	10	6

Question 12

(i) Distinguish between simple correlation and multiple correlation using examples. **[2]**

(ii) Refer to the diagram given below and answer the questions that follow: **[6]**

(a) Identify the type of correlation depicted in the figure and define it.

(b) Give an example of this type of correlation.

(c) Write the value of its correlation coefficient (r).

(d) During the summer months, ice cream sales are high, and during the winter months, ice cream sales are low. What type of correlation is likely between temperature and ice cream sales? Explain using a diagram.

OR

(iii) "The Government of India has social welfare and social security schemes for India's citizens funded either by the central government, state government or concurrently." Briefly explain any two welfare schemes of the government to assist the poor people. **[2]**

(iv) How does the nature of unemployment in underdeveloped countries differ from that in the developed countries? **[6]**

Question 13

Read the passage given below and answer the questions that follow:

The outcome of the climate conference in Azerbaijan has been disappointing. While international climate negotiations remain stalemated, nature is moving inexorably towards becoming a hotter planet. The fight against global warming requires reducing emissions. Developed countries have accepted 2050, China 2060, and India 2070 as the deadline for energy transition to net zero emissions by 2070.

Source (Edited): The Hindu- December, 2024.

(1) Which adverse effect of economic development is the concern in this extract? Define it. **[2]**

(2) List any four adverse impacts of this phenomenon. **[4]**

(3) Name any two man-made greenhouse gases. **[2]**

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