BAPU COMPOSITE PU COLLEGE

TRIVENI ROAD, YESHWANTHPUR, BANGALORE 560022

FIRST PUC

ECONOMICS ASSET

(AS PER NCERT NEW SYLLABUS)

PREPARED BY:

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PART- A

STATISTICS FOR ECONOMICS

Chapter-1

Introduction

I.   **Choose the Correct answer: (Each question carries 1 mark)**

1. If you are job, you are working for payment, you are called.
a) Unemployed
b) Leader
c) Employee
d) Trustee

2. Scarcity is the root of
a) All economic problems
b) Social problems
c) Political problems
d) All problems

3. The long queues at railway station, bus-stand, cinema theatres are all manifestations of
a) Publicity
b) Scarcity
c) Plenty
d) Quantity

4. Alternatives uses of resources give rise to the problem of
a) Rights
b) Price
c) Choice
d) Chance

5**)** This subject is mainly around the study of mankind in the ordinary business of life.
a) History
b) Economics
c) Political Science
d) Sociology

II.   **Fill in the blanks: (Each question carries 1 mark)**

1. When you buy goods, you are called a **Consumer**
2. When you produce goods, you are called a **Producer**
3. When you sell goods for profit, you are called a **Seller**
4. Resource are limited, but wants are **Unlimited**
5. Data, numbers, equations are being used in **Statistics**

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III. Answer the following questions :(Each question carries 1 mark)

1. What is economics according to Alfred Marshall?

Economics is a social science which studies man in the **ordinary business of life**.

2. What are economic data?
Information or facts which are capable of numerical expression is called data.

3. The National Income divided into wages, profit, rent, and interest. What it is called?
It is called **Distribution**.

4. What is Statistics?
Statistics means numerical facts systematically collected as described by Oxford Dictionary.

IV. Answer the following questions: (Each question carries 2 marks)

1. Generally, in which three parts economics is discussed?
1. Consumption
2. Production
3. Distribution

2. Mention the differences between employee and employer.

Employee	Employer
When you are in a job, working for some other person, and you get paid for it.(you may be employed by somebody who pays you wages or a salary) you called a employee.	When you provide some kind of service to others for a payment (you are may be a lawyer or a doctor or a banker or a taxi driver or a transporter of goods) you are called a employer.

3. Mention any two scarcities in your daily life.
1. Scarcity of money
2. Scarcity of food
3. Scarcity of water
4. Scarcity of electricity

4. Write any two resources which have alternative uses.
1. Water
2. Land
3. Electricity
4. Sugar

V. Answer the following questions: (Each question carries 4 marks)

1. "We are not as luckay as Aladdin in real life" Eluisdate this statement.

Human wants are unlimited; we cannot fulfil all our wants because available resources are very limited.
If you ever heard the story of Aladdin and his magic lamp, you would agree that Aladdin was a lucky guy. Whenever and whatever he wanted, he just had to rub his magic lamp on when a genie appeared to fulfil his wish or wants.

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In real life we cannot be as lucky as Aladdin. Though, like him we have unlimited wants, we do not have a magic lamp.

2. 'Scarcity is the root of all economic problems. Explain the statement.

Human wants are unlimited in number, whereas resources with which he can satisfy his wants are limited. The problem of choice would not have cropped up, if our wants are also limited like our resources. Thus, scarcity of resources and multiplicity of wants are the two important factors in economics.

The following points explain the scarcity of resources and problem of choice.

1. Unlimited wants: Human wants are unlimited. They are innumerable and countless. When one wants gets satisfied another want crops up. It is very difficult to satisfy them all.

2. Limited resources: Resources to satisfy human wants are scare or limited. They supply of resources cannot be increased easily and quickly. The scarcity of resources also creates economic problems and makes people choose between different wants.

3. Alternatives uses: The scare resources are capable of alternative uses. This means most of the resources can be used for different purposes. For example: Electricity can be used for cooking, water heating, lighting, and Agriculture and industrial purposes.

4. Problem of choice: All wants cannot be satisfied as there are limited resources. Therefore, people have to select some wants out of large number of wants. Usually people select wants in order to preference. The most urgent and important wants will be selected first and less important and urgent wants will be selected later.

3. Briefly explain how Statistics helps to study economics.

Statistics has become so important today. Statistics is part and parcel of Economics, Commerce and Business management. In modern days statistical information and methods are widely used in many fields like business, engineering, social, physical and natural sciences. The following points explain the impotence of statistics.

1. Statistics helps in simplifies complex data: With the help of statistical methods a mass of data can be presented in such a manner that they become easy to understand.

2. Statistics helps in formulating policies: Planning and policy making by the Government is based on statistics. Many policies such as that of import, export, wages, production etc are formed on the basis of statistics.

3. Statistics helps in forecasting: Statistics helps to predict the future behaviour of phenomena such as market situation for the future is predicted on the basis of available statistics of past and present.

4. Statistics studies relationship: Statistical method helps for studying the relationship between different variables.

4. "Statistical methods are no substitute for common sense" Explain with the example.

Sometimes, Statistics give such results which do not sound sensible as per common sense. In fact, there is no substitute of common sense not statistics as well.

For example: There is an interesting story which is told to make fun of statistics. It is said that a family of four persons (husband, wife and two children) once set out to cross

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a river. The father knew the average depth of the river. So he calculated the average height of his family members. Since the average height of his family members was greater than the average depth of the river, he thought they could cross safely. Consequently some members of the family (children) drowned while crossing the river. Therefore, we say that statistics are not substitute for common sense.

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Chapter - 2
Collection of Data

I. Choose the correct answer: (Each question carries 1 mark)

1. Which method of data collection of data gives better results?
a) Census
b) Sample Survey
c) Innovation
d) Distribution

2. Which of the following error is more serious?
a) Sampling error
b) Non-sampling error
c) Data error
d) Calculation error

3. The method of collection of data in which reactions can be watched is
a) Telephone interview
b) Mailing questionnaire
c) Personal interview
d) E-mail

II. Fill in the blanks: (Each question carries 1 mark)

1. Data collected by the investigator is called **Primary data**
2. The method of interview in obtaining information at a shorter time is **Telephone interview method**
3. Most expensive method of interview is **Personal interview method**
4. The method of data collection which cannot be used by illiterates are **Mailing Questionnaire**
5. Census of India is carried out once in **10** years

III. Match the following: (Each question carries 1 mark)

A	B
1. Personal interview	a. Pre -testing of questionnaire
2. Mailing Questionnaire	b. Covers every individual
3. Telephone interview	c. Loss of questionnaire
4. Pilot Survey	d. Cheaper or relatively low cost
5. Census	e. More expensive

Solutions:

A	B
1. Personal interview	**More expensive**
2. Mailing Questionnaire	**Loss of questionnaire**
3. Telephone interview	**Cheaper or relative low cost**
4. Pilot Survey	**Pre-testing of questionnaire**
5. Census	**Covers every individual**

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IV. Answer the following in a sentence/ word: (Each question carries 1 mark)

1. **What is a variable?**
   Values of some economic factors change from time to time, such economic factors are called variables.
2. **Write the meaning of Census.**
   The data are collected for each and every unit of the 'universe' or 'population' it is called Census.
3. **What is Sample Survey?**
   The method in which data are collected **about the samples** or a group of items taken from the 'universe' are called Sample Survey.

4. **Give the meaning of sampling error.**
   The difference between a sample result and the census result under the same circumstances is known as a sampling error.
5. **Expand NSSO.**
   National Sample Survey Organization or Office (1950)
6. **Expand CSO.**
   Central Statistical Organization or Office (1951)
7. **Expand DGCIS.**
   Directorate General Commercial Intelligence and Statistics.

V. Answer the following in four sentences: (Each question carries 2 marks)

1. **Mention the two sources of data.**
   1. Primary Data
   2. Secondary Data

2. **Write any two qualities of a good questionnaire.**
   1. The questions should not be too long.
   2. The questions should be precise and clear.
   3. Multiple choice questions.
   4. Personal questions should be avoided.

3. **Mention the methods of collecting data.**
   1. Census method
   2. Sampling method

4. **Write the differences between Census and Sample survey.**

Census	Sample Survey
The data collected each and every unit of the universe or population through census enumeration method is called census.	Sample survey refers to the method in which data are collected about the samples or a group of items from the universe.

5. **Name the two methods of selecting sample in Random Sampling.**
   1. Lottery method
   2. Use of Random number table

6. **Give the meaning of Pilot Survey.**

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Pre-testing of the questionnaire with a small group is known as Pilot Survey. Pilot survey of the questionnaire helps to know the short-comings or drawbacks of the questionnaire.

VI. Answer the following in four sentences: (Each question carries 4 marks)

1. Does the lottery always give you a random sample? Explain.

Yes, lottery method always gives a random sample, because in this method every item has a chance of being selected like random sampling.

Under this method, all the units of the population are allotted separate numbers and they are written on separate slips of identical shapes and sizes. Now, these slips are put in a box or container and thoroughly mixed. Then, the selection is made randomly from the box. The slips drawn or selected will constitute the random sample.

2. Briefly explain Sampling errors.

The difference between a sample result and the census result under the same circumstances is known as a sampling error.

1. When sample method is used, we cannot expect to get the same result as we would have got if we would have used census method.
2. There is always a difference in conclusions drawn from sample and conclusions of the universe. This is called sampling error.
3. These errors are minimum when random sampling techniques are used and size of Sample is fairly large.
4. As we increase size of sample, sampling error keeps falling and become zero at 100% i.e. census method.

3. What is Random Sampling? Explain briefly.

If a sample is selected in such a way that each time one unit is selected and each unit has an equal chance of being selected then it is termed as random sampling. There are two different methods for obtaining for random sample. They are:
1. Lottery method
2. Random table method

1. Lottery method: Under this method all the units of the universe are represented at One place in the form of chits and someone is asked to take out the required number of units. Care should be taken to prepare the chits in a manner in which they are presented in the same size, shape, colour, etc.. so impartiality of sample is assured.

2. Random table method: A table prepared by Tippet is used under this method in selecting the samples.

4. Write briefly about the Census and NSSO.

1. Census: If a data are collected for each and every unit of the 'universe' or 'population' it is called Census or 'the method of complete enumeration' If an investigator wants to study the total population in India, he has to obtain information from all households, in rural and urban areas, without leaving even a single household. Census of India is carried out once in **10 years**. A house to house enquiry is carried out throughout the country. The last census of India was held in **2011**. According to **2011** census the total population of India is **121** Corers.

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2. NSSO: **National Sample Survey Organization or Office**. It is an organization under the ministry of Statistics of the Government of India. It is the largest organization in India conducting regular socio-economic surveys. It was established in **1950.** It is a focal agency of the Government of India for collecting of Statistical data in the areas which are vital for developmental planning such as literacy rate, school enrolment, utilization of educational services, employment, unemployment, child care, utilization of PDS etc….

VII. Assignment and project-oriented Question. (5marks)

1. **Suppose you are a research student and you are asked to conduct a sample survey about the 'Mid-day meals program' in schools. Prepare a good questionnaire to support your survey.**

   1. Name of the School _____

   2. Adders of the School _____

   3. Number of the students studying in the school

      a) Boys   b) Girls

   4. Net attendance of the school _____

   5. Quality of rice given by the Government per student _____

   6. Quality of vegetables given per student _____

   7. Expenditure per student for one day _____

   8. Has the 'Mid day meal' scheme given by the Government benefitted the students?

                   Yes/No

   9. Quality of mid day meal given by the Government

      a. Excellent   b. Good   c. Satisfactory   d. Bad

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Chapter - 3
Organization of Data

I. Choose the correct answer: (Each question carries 1 mark)

1. The class midpoint is equal to:
a) **The average of the upper and lower class limit**
b) The product of upper class and lower class limit
c) The ratio of the upper and lower class limit
d) None of the above

2. The frequency distribution of two variables is known as
a) Univariate classification
b) **Bivariate classification**
c) Multivariate classification
d) None of the above

3. Statistical calculations in classified data are based on
a) The actual values of observations
b) The upper class limits
c) The lower class limits
d) **The class midpoints**

4. Under exclusive method,
a) **The upper class limit of a class is excluded in the class interval**
b) The upper class limit of a class is included in the class interval
c) The lower class limit of a class is excluded in the class interval
d) The lower class limit of a class is included in the class interval

5. Range is the
a) **Difference between the largest and smallest valves of a variable**
b) Average of the largest and the smallest observation
c) Ratio of the largest to the smallest valves of a variable
d) None of the above

II. Fill in the blanks: (Each question carries 1 mark)

1. Data classified according to geographical areas is called **Geographical Classification.**
2. Classification of data according to characteristics and attributes is called **Qualitative Classification.**
3. Two ends of a class are called **Class limit**
4.   **Class midpoint** is the average of upper and lower limit of a class.
5. In **Inclusive** method of classification upper limit of a class is included.
6.   Frequency distribution of discrete frequency is called **Frequency array**

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III. Answer the following in a sentence/ word: (Each question carries 1 mark)

1. **What is raw data?**

   The **unclassified data** is called raw data.

2. **What is quantitative classification of data?**

   Classification of data on the basis of a quantitative characteristic like weight, height, income, age, production, marks etc... is called quantitative classification.

3. **What do you mean by qualitative classification of data?**
   Classification of data on the basis of attributes or qualities is called a qualitative classification.

4. **Give the meaning of class limits.**

   Two ends of a class are called class limits. (Upper class limit and Lower class limit)

5. **What is univariate frequency distribution?**

   The frequency distribution of **single variable** is called a univariate distribution.

6. **Give the meaning of time series data.**
   Classification of on the basis of time is called time series data.

7. **What is spatial classification of data?**
   The classification of data basis of geographical location or areas such as countries, states, cities, districts etc… is known as spatial or geographical classification.

IV. Answer the following in four sentences: (Each question carries 2 marks)

1. **Mention the types of variable.**
   1. Continuous variables
   2. Discrete variables

2. **Differentiate between inclusive and exclusive methods of classification.**

Inclusive method	Exclusive method
Both upper class and lower limits of classes are included in respective classes are called inclusive method.	Upper class limits are excluded and lower class are included in respective classes are called exclusive method.
For ex: 0-9, 10-19, 20-29, 30-39 etc….	For ex: 0-10, 10-20, 20-30, 30-40 etc….

3. **Mention the types of classification of data.**

   1. Quantitative classification
   2. Qualitative classification
   3. Geographical or Spatial classification
   4. Chronological or Temporal classification

4. **Give the formula to find out midpoint.**
   Class midpoint = upper class limit+ lower class limit
   $$\overline{}$$
   2

5. **What is frequency?**
    How many times the observation occurs in the raw data is called frequency.

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V. Answer the following questions in about 12 sentences (each question carriers 4 marks)

1. Briefly explain 'loss of information' in classified data.

The classification of data as frequency distribution has some shortcomings.

It does not show the details that are found in the raw data. There is a loss of information in classifying raw data through frequency distribution.

i.e. once the data are grouped into classes, an individual observation has no significance in further statistical calculation.

E.g. the class 20-30 contains 6 observations: 25, 25,20,22,25 and 28. So when this data are grouped as a class 20-30 in the frequency distribution, it only provides frequency it is 6 but not their actual values. i.e. once the data are grouped into classes, an individual observation has no significance in further statistical calculation.

2. Differentiate between continuous and discrete variables.

Continuous Variables	Discrete Variables
1. It is a variable whose value is obtained by measuring.	**1.** It is a variable whose value is obtained by counting.
2. Absence of exact value.	**2.** There is a exact value.
3. It may take integral values.	**3.** It can take only certain values.
4. Fractions are taken by it. E.g.1/2, 2/3, 3/4....	**4.** Fractions are not taken by it.
5. It can take any value between two.	**5.** It cannot take any value between two.

3. Write a note on classification of data.

The classification brings order to raw data. This classification is done in various ways. Such as;

1. Quantitative Classification: Characteristics like weight, height, income, age, production; marks etc… are Quantitative in nature. When these data are classified and grouped into classes, it is called Quantitative Classification.

2. Qualitative Classification: Classification of data on the basis of attributes or qualities is called a Qualitative classification.

3. Chronological Classification: If data is grouped according to time, such as hours, weeks, months, years etc… such classification is known as a Chronological classification.

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4. Geographical Classification: The classification of on the basis of Geographical location such as countries, states, cities, districts etc… is known as Geographical classification.

VI. Answer the following questions in about 20 sentences (each question carriers 6 marks)

1. Prepare a tally marking chart for the marks in economics scored by 70 students in an examination.

28, 17, 15, 22, 29, 21, 23, 27, 18, 12, 7, 2, 9, 4, 1, 8, 3, 10, 5, 20, 16, 12, 8, 4, 33, 27, 21, 15, 3, 36, 27, 21, 15, 3, 37, 16, 2, 8, 9, 2, 4, 6, 32, 31, 29, 18, 14, 13, 15, 11, 9, 7, 1, 5, 37, 32, 23, 24, 20, 19, 25, 19, 25, 19, 25, 19, 20, 6, 9, 30.

Tally marking by Exclusive method taking class interval - 10

Class	Observations	Tally Mark	Frequency	Class midpoint
0-10	7,2,9,4,1,8,3,5,8,4,3,3,2,8,9,2,4,6,9,7,1,5,6,9	IШ IШ IШ IШ IIII	24	5
10-20	17,15,18,12,10,16,12,15,15,16,18,14,13,15,11,19,19,19,19	IШ IШ IШ IIII	19	15
20-30	28,22,29,21,23,27,20,27,21,27,21,29,23,24,20,25,25,25,20	IШ IШ IШ IIII	19	25
30-40	33,36,37,32,31,37,32,30	IШ III	08	35

                                                                        TOTAL=70

2. List the four questions to be addressed while preparing a frequency distribution. Briefly explain any two of them.

While preparing a frequency distribution, the following four questions need to be addressed:

1. Number of classes

2. Size of class intervals

3. Determination of class limits

4. Finding of frequency for each class

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1. Number of class: In the first step we need to find out Range. The Range is the difference between the largest and the smallest values of a variable. i.e. **Range= L-S**

 Where **L** is the largest value and **S** is the smallest value.

2. Size of class interval: When the range of the variable is given, we can determine the number of classes once we decide the class interval. Similarly we can determine the class interval, once we decide the number of classes.

We can use the following formula to obtain class interval. i.e. **i= L-S/K**

Where **i** is the class interval, **L** is the largest value

S is the smallest value; **K** is the number of class.

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Chapter - 4
Presentation of Data

I. Choose the correct answer: (Each question carries 1 mark)

1. Data are presented in sentences is called
a) Tabular Presentation
b) Diagrammatic Presentation
c) Textual Presentation
d) None of the above

2. A histogram is a
a) One dimensional diagram
b) Two dimensional diagram
c) Three dimensional diagram
d) Four dimensional diagram

3. Frequency polygon is used in the presentation of
a) Ungrouped data
b) Grouped data
c) Both types of data
d) None of these

4. Data are expressed in rows and columns is called
a) Pie-chart
b) Bar diagram
c) Linear diagram
d) Table

5. Ogives can be helpful in locating graphically the
a) Mode
b) Mean
c) Median
d) None of the above

II. Fill in the blanks: (Each question carries 1 mark)

1. Arithmetic line graph is also called **Time series graph**
2. Component bar diagrams are also called **Subdivided bar diagram**
3. **Body** of the table contains actual data.

III. Answer the following in a sentence/ word: (Each question carries 1 mark)

1. **What is pie-chart?**
   Pie diagram is a chart used to represent the total into the breakup of various components.
2. **What do you mean by frequency polygon?**
   A frequency polygon is a line graph having more than four (4) sides.

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3. **What is multiple Bar diagram?**
   Multiple bar diagrams are used for comparing two or more sets of data.
4. **What is table?**
   Data are expressed in rows and columns is called table.

IV. Answer the following in four sentences: (Each question carries 2 marks)

1. **Name any four parts of tabulation.**
   1. Quantitative Classification
   2. Qualitative Classification
   3. Temporal or Chronological Classification
   4. Spatial or Geographical Classification
2. **What are the types of bar diagram?**
   1. Simple bar diagram
   2. Component bar diagram
   3. Multiple bar diagram
   4. Percentage bar diagram
   5. Bilateral bar diagram
3. **What is component bar diagram? Give the example.**

   A component bar diagram shows the bar and its sub-divisions into two or more components. For example, the bar might show the total population of children in the age of 6-14 years.

4. **How can you obtain a frequency curve?**
   This is drawn through the points of frequency polygon. The frequency curve here will not pass through all the points of the frequency polygon.
5. **What kind of diagrams is more effective in presenting the following?**

   a) Monthly rainfall in a year ---- Arithmetic Line Graph

   b) Composition of the population of Delhi by religion ----- Pie diagram

V. Answer the following in 12 sentences: (Each question carries 4 marks)

1. Draw the format of a table and identify its components.

Table 4.5 Population of India according to workers and non-workers by gender and location
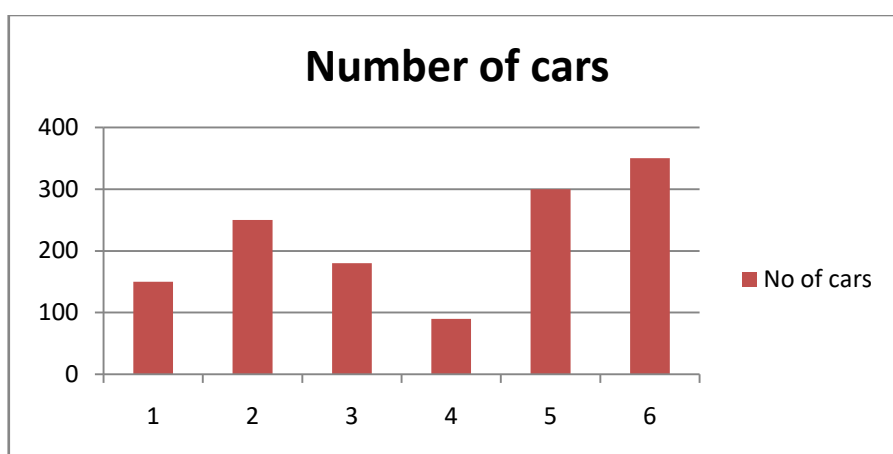
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2. Draw a bar diagram with the help of the following data.

Production of cars of a company in different years.

Years	Number of cars
2011	150
2012	250
2013	180
2014	90
2015	300
2016	350

V. Answer the following in 20 sentences: (Each question carries 6 marks)

1. Explain the components of the table.

Presenting the data in rows and columns along with some explanatory notes is called tabulation. Rows are horizontal and columns are vertical arrangements.

A good table should have the following **parts or components.**

1. Table number: An appropriate number should be assigned to a table for the identification and easy reference in future. It should be written on the top of the table.

2. Title: Title explains the nature of data. It should short and simple.

3. Head note: Just below the title of table on the right side, there must be head note if away (for example, Rs. in cores)

4. Captions or column headings: Captions are the headings for vertical columns. They are usually written in the middle of the columns.

5. Stubs or row headings: Stubs are the headings for horizontal rows. Stubs will be in the extreme left part of the table.

6. Body of a table: The body of the table in the main component of the table, which contains numerical information.

7. Source note: It is a brief note indicating the source of information presented in the table. Usually it is written at the bottom of the table.

8. Foot note: It is the last part of the table. It explains the features of data, content of the table etc…

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2. The following table shows the Enrollment by gender at schools (%) of children aged 6-14 years in a district of Bihar. Draw a component bar diagram by using these data.

Gender	Enrolled (in %)	Drop outs (in %)
Boy	91.5	8.5
Girl	58.6	41.4
All	78.0	22.0
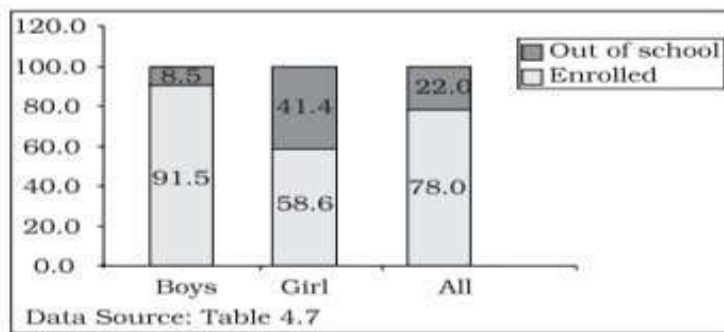
Fig. 4.3: *Enrolment at primary level in a district of Bihar (Component Bar Diagram)*

3. Construct ogive by using the following data.

Marks (x)	Number of Students (f)
0-20	6
20-40	5
40-60	33
60-80	14
80-100	6
Total	**64**

A graphic presentation of cumulative frequency curve. Such a curve may show a falling or rising trend on the graph paper is called ogive.

Ogives are constructed from cumulative frequency table, which are generally made in 'less than' or 'more than' from, therefore, there are following two types of Ogives;

1. Less than Ogives

2. More than Ogives

Marks	Number of Students	Less than cumulative frequency	More than cumulative frequency
0-20	06	06	64
20-40	05	11	58
40-60	33	44	53
60-80	14	58	20
80-100	06	64	06

Less than and more than ogive curve can explained with the following diagram

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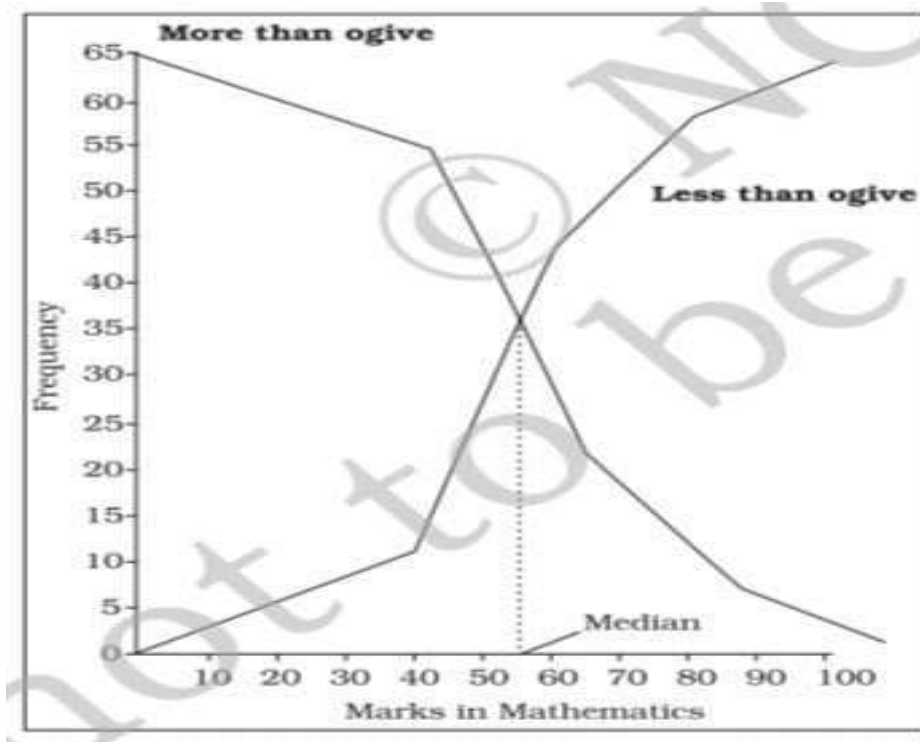
4. Draw an arithmetic line graph using following data.

Vales of import and export of India (in 100 crores)

Year	Exports	Imports
2009-10	8455	13637
2010-11	11370	16835
2011-12	14660	23455
2012-13	16343	26692
2013-14	19050	27154

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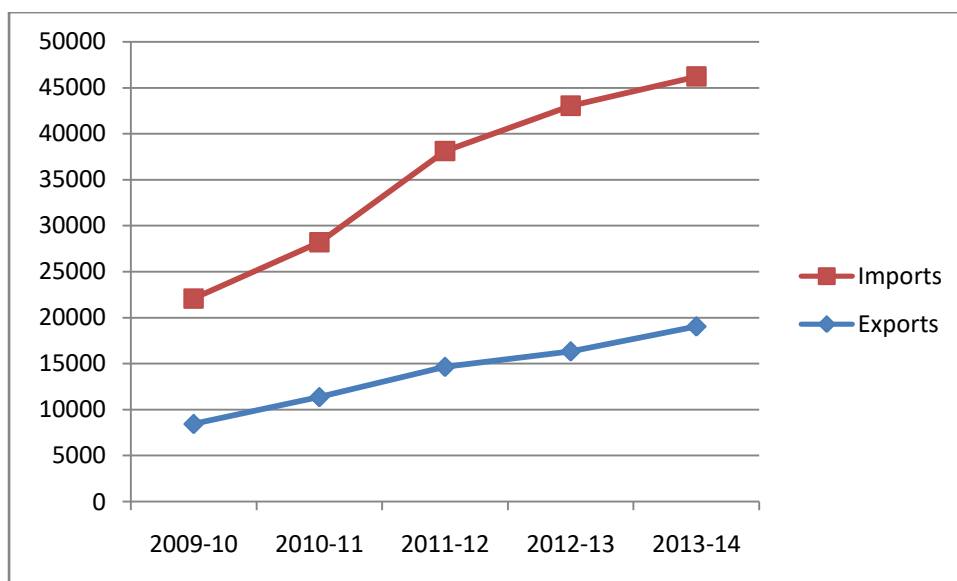
V. Assignment and project-oriented Question. (5marks)

1. **On the basis of data you have collected regarding participation of women in your locality in the below mentioned categories construct a pie chart.**

Status	Population (%)
a) Marginal worker	12
b) Main worker	36
c) Non-worker	73

Solutions:

Status	Population Percent	Angular Component
a) Marginal worker	12	12/121x 360= 35.70
b) Main worker	36	36/121x360= 107.10
c) Non-worker	73	73/121x360=217.19
	121	360^0

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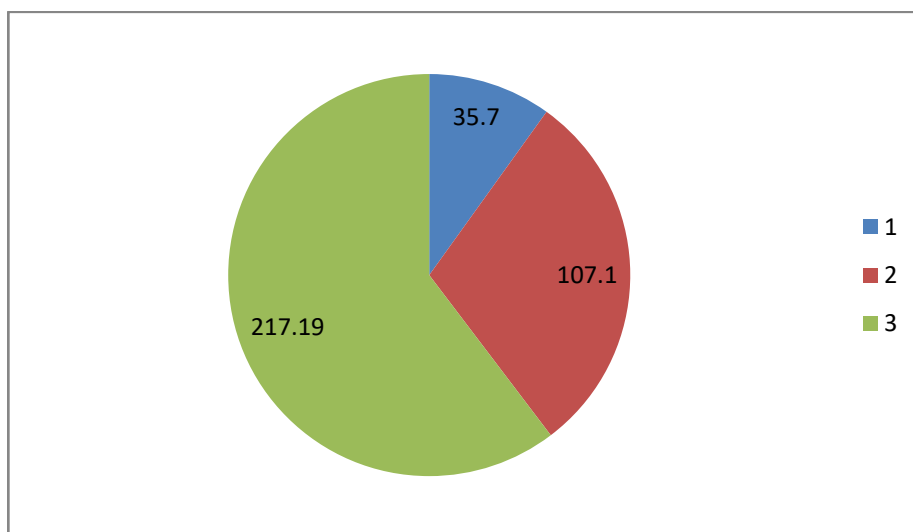
Chapter - 5
Measures of Central Tendency

I. Choose the correct answer: (Each question carries 1 mark)

1. Five students obtained 10,20,30,40 and 50 marks respectively. What would be the mean?
a) 35
b) 30
c) 25
d) 40

2. $\overline{X} = \dfrac{\sum x}{N}$ is concerned with
a) **Arithmetic Mean**
b) Mode
c) Median
d) Geometric Mean

3. The most commonly used of central tendency is
a) Mode
b) Median
c) Arithmetic Mean
d) Percentile

4. Which of the following represent Median?
a) Q_1
b) Q_2
c) Q_3
d) Q_4

5. Percentiles divided the distribution equal to
a) 100 parts
b) 75 parts
c) 25 parts
d) 50 parts

6. Quartiles are measures which divided equal into
a) 2 equal parts
b) 4 equal parts
c) 1 equal parts
d) 3 equal parts

7. Assign weights to various item according to their importance is called
a) Arithmetic a mean
b) Median
c) Weighed Arithmetic mean
d) Mode

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8. What would be the median wage for the following wages of 5 labourers 10, 20, 30, 35, 38.
a) Rs 20
b) Rs 10
c) Rs 35
d) Rs 30

II. Fill in the blanks: (Each question carries 1 mark)

1. **Simple Arithmetic Mean** Arithmetic mean gives relative importance to each item.
2. 3rd quartile and **P_{75}** percentile are the same.
3. There are **4** Quartiles in a series.
4. **Mode** is not affected by the extreme valves.
5. Most frequency observed value in a series is called **Mode**
6. A distribution with more than two modes is called **Multi mode**

III. Match the followings: (Each question carries 1 mark)

A	B
1.Arithmetic mean	a. Positional value
	b. $\overline{X}$
2. Median	c. Q_3
3.ΣN	d. Total number of observations
4.Q_1,Q_2, P_{25},P_{50}	e. Divisional valves
5.$3\ \dfrac{(N+1)}{1}$	

Solutions:

A	B
1. Arithmetic mean	**$\overline{X}$**
	Positional value
2. Median	**Total number of observations**
3. ΣN	**Division values**
4. Q_1, Q_2, P_{25}, P_{50}	**Q_3**
5. $3\ \dfrac{(N+1)}{4}$	

IV. Answer the following in a sentence/ word: (Each question carries 1 mark)

1. **What is meant by central tendency?**
   The statistical tool which is used to obtain a single value which describes the characteristic of the entre data is called measure of central tendency.
2. **What is the meaning of Arithmetic mean?**
   The sum of the values of all observations divided by the number of observations is called Arithmetic mean.
3. **Define Median.**
   The value of the middle item of a series arranged in ascending or descending order of magnitude is called median.
4. **Pocket of money 8 students is Rs 6, 12, 18, 24, 30, 36, 42 and 48 calculate arithmetic mean.**

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$\overline{X} = \dfrac{\Sigma x}{N}$

$\overline{X} = \dfrac{6+12+18+24+30+36+42+48}{8}$

$\overline{X} = \dfrac{216}{8}$ $\boxed{\overline{X} = 27}$

5. **Write the formula for weighted mean.**

$\overline{X} = \Sigma wx / \Sigma w$

6. **What do you mean by percentiles?**
The division of the series into **hundred parts (100)** is called percentiles.

7. **What is Bi-model?**
A distribution contains two modes then the distribution is called bimodal.

8. **Calculate mode from the following data.**
X: 10, 8, 10, 6, 4, 12, 10, 8, 10, 18, 16, 10, 18, 16
Since variable **10** occurs more frequency than other variables the mode is **10.**

V. Answer the following in four sentences: (Each question carries 2 marks)

1. **What are the types of measures of central tendency?**

1. Arithmetic Mean $(\overline{X})$
2. Median (M)
3. Mode (Z)

2. **Calculate arithmetic mean from the following data.**
Marks obtained by 10 students 30, 62, 47, 25, 52, 39, 56, 66, 12 and 24.

$\overline{X} = \dfrac{\Sigma x}{N}$ $\overline{X} = \dfrac{30+62+47+25+52+39+56+66+12+24}{10}$

$\overline{X} = \dfrac{413}{10}$ $\boxed{\overline{X} = 41.3}$

3. **Calculate the value of median from the following figures.**
X: 5, 7, 9, 12, 11, 8, 7, 15, 25

Arrange the data in the ascending order of magnitude.
5, 7, 7, 8, 9, 11, 12, 15, 25

$M = \dfrac{(N+1)}{2} = \dfrac{(9+1)}{2} = \dfrac{10}{2} = 5^{th}$ item

5th item 9 is the median.

4. **How do you classify modal series?**
1. Uni- model
2. Bi-model
3. Multi -model

5. **What is mode? Give formula to find out mode in continuous series.**
Mode is the value of observations which occurs that greatest number or with the greatest frequency.

Mode$= l_1 = \dfrac{f_1 - f_0}{2(f_1) - f_0 - f_2} \times i$

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VI. Answer the following in 12 sentences: (Each question carries 4 marks)

1. Calculate the arithmetic mean from the following data.

X	5	10	15	20	25	30	35	40
f	5	7	9	10	8	6	5	2

Answer:

X	f	fx
5	5	25
10	7	70
15	9	135
20	10	200
25	8	200
30	6	180
35	5	175
40	2	80
	N=52	**Σfx= 1065**

$\overline{X} = \dfrac{\Sigma fx}{N}$

$\overline{X} = \dfrac{1065}{52}$

$\boxed{\overline{X} = 20.48}$

2. Define weighted mean? How do you calculate it? Explain.

When weights are assigned different values according to the relative importance and then mean is calculated it known as weighted mean.

$\overline{X}w = \dfrac{\Sigma wx}{\Sigma w}$

Steeps needed to calculate weighted arithmetic mean.

1. Multiply weights by the variable **x** and add up the product **Σwx**
2. Divided the total by sum of the weights.

3. Name and define any three statistical averages.

There are several statistical measurements or averages. The 3 most commonly used averages are;
1. Arithmetic Mean
2. Median
3. Mode

1. Arithmetic Mean: The sum of the values of all observations divided by the number of observations is called arithmetic mean. It is denoted by $\overline{X}$.

2. Median: The middle item of a series arranged in ascending or descending order of magnitude is called median. It is denoted by **M.**

3. Mode: Mode is that value of observations which occurs that greatest number or with the greatest frequency. It is denoted by **Z.**

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4. Calculate median from the following data.

Weight	40	50	60	70	80	90
No of persons	3	17	24	16	8	2

Answer:

Weight	No of persons	cf
40	3	3
50	17	20
60	**24**	**44**
70	16	60
80	8	68
90	2	70
	N= 70	

M= $\frac{(N+1)}{2}$ th item

M= $\frac{70+1}{2}$

M= $\frac{71}{2}$

M= 35.5   The value 35.5 is lies in the cumulative frequency 44 and their respective median number is **60.**

5. Calculate the lower quartile from the following data.

X: 22, 26, 14, 30, 18, 11, 35, 41, 12, 32

Arrange the data in a ascending order

11, 12, 14, 18, 25, 26, 30, 32, 35, 41

For the calculation valve of Q_1 following formula is used.

q_1= $\frac{(n+1)}{4}$ th item

q_1= $\frac{(10+1)}{4}$ = $\frac{11}{4}$ = 2.75

= 2nd observation +0.75

                (3rd observation – 2nd observation)

= 12 + 0.75 (14-12)

= 12 + 0.75 (2)

= 12 + 1.5

q_1=13.5

VI. Answer the following in 20 sentences: (Each question carries 6 marks)

1. Calculate arithmetic mean by direct, assumed mean and steep deviation methods for the following data.

X: 40, 50, 55, 78, 58

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Answer:

Weight (x)	d= x-A d= x-55	d ^{1}= d/c d ^{1}= d/1
40	-15	-15
50	-5	-5
55 A	0	0
78	23	23
58	3	3
Σx=281	Σd=6	Σd^1=6

1. Direct Method

$$\overline{X}= \frac{\Sigma x}{N}$$

$$\overline{X}= \frac{281}{5}$$

$$\boxed{\overline{X}= 56.2}$$

2. Assumed Mean Method

$$\overline{X}= A + \frac{\Sigma d}{N}$$

$$\overline{X}= 55 + \frac{6}{5}$$

$$\overline{X} = 55 + 1.2$$

$$\boxed{\overline{X}=56.2}$$

3. Steep Deviation Method

$$\overline{X}= A + \frac{\Sigma d^1}{N} \times C$$

$$\overline{X}= 55 + \frac{6}{5} \times 1$$

$$\overline{X}= 55 + \frac{6}{5}$$

$$\overline{X}= 55 + 1.2$$

$$\boxed{\overline{X}= 56.2}$$

2. Calculate average marks of the following students using.
a) Direct method   b) Steep deviation method.

Marks	0-10	10-20	20-30	30-40	40-50	50-60	60-70
No of students	5	12	15	25	8	3	2

Answer:

Marks (x)	No of Students	Mid point (m)	fm	d=m-A d=m-35	d^1=d/c d^1= d/10	fd^1
0-10	5	5	25	-30	-3	-15
10-20	12	15	180	-20	-2	-24
20-30	15	25	375	-10	-1	-15
30-40	25	**35** A	875	0	0	0
40-50	8	45	360	10	1	8
50-60	3	55	165	20	2	6
60-70	2	65	130	30	3	6
	Σf=70		Σfm=2110			Σfd^1=-34

1. Direct Method

$$\overline{X}= \frac{\Sigma fm}{N}$$

$$\overline{X}= \frac{2110}{70}$$

$$\boxed{\overline{X}= 30.14}$$

2. Steep Deviation Method

$$\overline{X}= A + \frac{\Sigma fd^1}{\Sigma f} \times C$$

$$\overline{X}= 35 + \frac{(-) 34}{70} \times 10$$

$$\overline{X}= 35 + \frac{(-) 340}{70}$$

$$\overline{X}= 35 - 4.86 \qquad \boxed{\overline{X}= 30.14}$$

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3. Find median of the following data.

Wages	60-70	50-60	40-50	30-40	20-30
No of workers	7	21	11	6	5

Answer:

Wages	No of workers	Cf
20-30	5	5
30-40	6	11
40-50	11	22
50-60	**21**	**43**
60-70	7	50
	N = 50	

In this case first we have to determine the median class and then median which lies in the median class by interpretation formula i.e.

Median Class = size of N/2 item.

M= N/2

M= 50/2

M= 25

The number 25 is lies in the cumulative frequency of 28. Their Respective class of cumulative frequency is 50-60.

M= l_1 + $\frac{N/2 - cf}{f}$ x i

M = Median

l_1 = lower limit of the median class

cf = Cumulative frequency preceding to the cumulative frequency of the Median class.

i = Size of class interval

N = Number of observation in the distribution.

f = Frequency of the median class.

M= l_1 + $\frac{N/2 - cf}{f}$ x i

M = 50 + $\frac{25-22}{21}$ x 10

M = 50 + $\frac{3}{21}$ x 10

M = 50 + $\frac{30}{21}$

M = 50 + 1.428

M = 51.428

4. Calculate Q1, Q2 and Q3 from the following data.
15, 21, 26, 30, 40, 45, 50, 54, 60, 65, 70

Answer:

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Q₁ = (N+1) th item
　　　4

$Q_1 = \frac{(11+1)}{4} = \frac{12}{4} = 3$

It can be that Q1 the value is 26 **Q1** = 26

$Q_2 = \frac{(N+1)}{2} = \frac{(11+1)}{2} = \frac{12}{2} = 6$

The value of the sixth item is 45, therefore **Q2** is 45

Q₃ = 3(N+1) th item
　　　　4

$Q_3 = \frac{3(N+1)}{4} = \frac{3(12)}{4} = \frac{36}{4} = 9$

The value of the ninth item is 60, therefore **Q3** is 60

5. Calculate Q1, Q2 and Q3 from the following data.
22, 26, 14, 30, 18, 11, 35, 41, 12, 32

Arrange the data in the ascending order of magnitude.
11, 12, 14, 18, 22, 26, 30, 32 35, 41

Q₁ = (N+1) th item
　　　4

$Q_1 = \frac{(10+1)}{4} = \frac{11}{4} = 2.75$

2nd observation + 2.75

(3rd observation – 2nd observation)
= 12+ 0.75　(14-12)
= 12+ 0.75　(2)
= 12+1.5　= **q₁= 13.5**

$Q_2 = \frac{(N+1)}{2} = \frac{(10+1)}{2} = \frac{11}{2} = 5.5$

5th value + 6th value
　　　　2

$= \frac{22+26}{2} = \frac{48}{2} = $ **24**

Q3 = 3(N+1) th item
　　　　4

$= \frac{3(10+1)}{4} = \frac{3(11)}{4} = \frac{33}{4} = $ 8.25

8th observation + 0.25

(9th observation – 8th observation)

= 32 + 0.25
= 32 + 0.25(3)　(35-32)
= 32+ .075
Q3 = 32.75

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VIII. Assignment and project-oriented Question. (5marks)

1. **As per recorded temperature per two hours in a day from 6 am to 6 pm calculative the range and mean temperature of a day.**

Hour	Temperature
6-8	18
8-10	24
10-12	26
12-14	29
14-16	30
16-18	25

1. Mean

$\overline{X} = \Sigma X / N$

$\overline{X} = 152/6$

$\boxed{\overline{X} = 25.33}$

2. Range

$R = L - S$

$R = 30 - 18$

$\boxed{R = 12}$

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Chapter - 6
Measures of Dispersion

I. Choose the correct answer: (Each question carries 1 mark)

1. Inter – quartile range is based upon middle of this value in a distribution.
a) 30%
b) 20%
c) 50%
d) 25%

2. For Q.D., we need to calculate this value along with Q3
a) Q2
b) Q4
c) Q1
d) Q0

3. Coefficient of Range =
a) $\dfrac{L-S}{L+S}$
b) $\dfrac{R-L}{R+L}$
c) $\dfrac{L+S}{L-S}$
d) None of the above

4. The graphical measure available to measure dispersion is called.
a) Lorenz curve
b) Marshal curve
c) Production curve
d) None of the above

5. The deviation which is calculated by arithmetic mean only
a) Quartile deviation
b) Standard deviation
c) Range
d) None of the above

II. Answer the following in a sentence/ word: (Each question carries 1 mark)

1. **What is Dispersion?**
   The degree to which numerical data tend to spread about an average value is called dispersion.

2. **How does Range and quartile deviation measure the dispersion?**
   If the items in a series are arranged in ascending or descending order then range is the difference between the extreme values. Greater is the value of range.
   Quartile deviation is based on the lower quartile Q1 and the upper quartile Q3.

3. **How do mean and standard deviation measure the dispersion?**
   The difference between all values of variable and mean is called deviations.
   In standard deviation, we get the same results without ignoring signs. In this case deviation from actual mean are squared, and hence every item is positive.

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4. **Give the meaning of standard deviation.**
   The square root of the arithmetic average of the square of the deviations measured from the mean is called standard deviation.
5. **What is mean deviation?**
   The sum of deviations from an average divided by the number of items is called mean deviation.

III. Answer the following in four sentences: (Each question carries 2 marks)

1. **Which quartiles are used to calculate inter quartile range? Give the formula of it.**
   The inter- quartile range is the difference between the third quartile and the first quartile.
   Inter- quartile range – **Q3 –Q1**
2. **What is standard deviation? Write the formula of its assumed mean method.**
   The square root of the arithmetic average of the square of the deviations measured from the mean is called standard deviation.

3. **Mentions the different measures of dispersion.**
   1. Quartile deviation
   2. Mean deviation
   3. Standard deviation

IV. Answer the following in 12 sentences: (Each question carries 4 marks)
   1. The yield of Jower (in Tonnes) per acre for 10 districts of a state is under:
   Calculate Mean Deviation from Mean.

District	A	B	C	D	E	F	G	H	I	J
Jower	22	29	12	23	18	15	12	34	18	12

Answer:
Arrange the data in the ascending order of magnitude.

X	d= x -$\bar{\text{x}}$ d = x – 19.5
12	7.5
12	7.5
12	7.5
15	4.5
18	1.5
22	2.5
23	3.5
29	9.5
34	14.5
∑x =195	**∑(d) = 60**
N = 10	

$\bar{X} = \dfrac{\sum x}{N}$

$X = \dfrac{195}{10}$

19.5

$MD\,\bar{x} = \dfrac{\sum (d)}{N}$

$= \dfrac{60}{10}$

MD $\bar{x}$ =6

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2. **The yield of Jower (in Tonnes) per acre for 10 districts of a state is under:**
   Calculate Mean Deviation from Mean.

District	A	B	C	D	E	F	G	H	I	J
Rice	23	18	12	22	29	12	24	18	12	15

3. **Calculate the Mean Deviation using mean for the following distribution.**

Classes	Frequencies
20 - 40	3
40 - 80	6
80 - 100	**20**
100 - 120	12
120 - 140	9
	N= 50

Answer:

Classes (x)	Frequencies	Mid point (m)	fm	$d=m-\bar{x}$ d=m-94.8	fd
20 - 40	3	30	90	-30	-15
40 -80	6	60	360	-20	-24
80 - 100	20	90	1800	-10	-15
100 - 120	12	110	1320	0	0
120 -140	9	130	1170	10	8
	Σf=50		Σfm=4740		Σf(d)=998.4

$\bar{X}= \dfrac{\Sigma fm}{\Sigma f}$ $MD\,\bar{x} = \dfrac{\Sigma f\,(d)}{\Sigma f}$

$\bar{X}= \dfrac{4740}{50}$ $= \dfrac{998.4}{50}$

$\boxed{\bar{X}= 94.8}$ $\boxed{MD\,\bar{x} = 19.96}$

4. **Calculate Q.D. and its coefficient for the following data.**

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78, 80, 80, 82, 82, 84, 84, 86, 86, 88, 88, 90.

q1= $\underline{N+1}$ th item = $\underline{12+1}$ = $\underline{12+1}$ = $\underline{13}$ = 3.25
　　　4　　　　　　4　　　　4　　　4

= 3rd observation + 0.25

　　　　　　　(4th observation – 3rd observation)

= 80 + 0.25　　(82 -80)

= 80 + 0.25(2)

= 80+ 0.5　Q1 = 80.5

Q3= $\underline{(N +1)}$ = $\underline{3(12+1)}$ = $\underline{3(13)}$ = $\underline{39}$　Q3 = 9.75
　　4　　　　4　　　　4　　　4

　　9th observation + 0.75

　　　　　　　　(10th observation – 9th observation)

= 86+ 0.75　(88 -86)

= 86+0.75(2)

= 86+ 1.5　　　**Q3 = 87.5**

Now value of q1 = 80.5, q3 = 87.5. **Let us calculate quadratic deviation.**

QD = $\underline{q3- q1}$　= $\underline{87.5 – 80.5}$　= $\underline{7}$　qd = 3.5
　　　2　　　　**2**　　　　**2**

Co- efficient = $\underline{q3 – q1}$ = $\underline{87.5 – 80.5}$　= $\underline{7}$　　 = **0.041**
　　　　　　q3 +q1　　87.5 + 80.5　　168

5. Find mean deviation from mean for the following distribution.

Height(Inches)	60	61	62	63	64	65	66	67	68
No. of Persons	2	1	14	29	25	25	12	10	2

Answer:

Height(x)	No. of Persons (f)	fx	d=x - $\overline{x}$ d=x – 63.83	f(d)
60	2	120	3.83	7.66
61	1	61	2.83	2.83
62	14	868	1.83	25.62
63	29	1827	0.83	24.07
64	25	1600	0.17	4.25
65	12	780	1.17	14.04
66	10	660	2.17	21.7
67	4	268	3.17	12.68
68	2	136	4.17	8.34
	N=99	**Σfx=6320**		**Σf(d)=121.19**

$\overline{X}= \underline{\Sigma fx}$　　　MD $\overline{x} = \underline{\Sigma f (d)}$
　　　N　　　　　　　　　N

$\overline{X}= \underline{6320}$　　　　= $\underline{121.19}$
　　99　　　　　　　　　99

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$\overline{X}$= 63.83   MD $\overline{x}$ = 1.224

6. Calculate coefficient of M.D. from Median for the following frequency distribution.

X	5	6	7	8	9	10
f	8	12	18	8	2	1

Answer:

x	f	cf	d=x - m d=x – 7	fd
5	8	8	3.83	16
6	12	20	2.83	12
7	18	38	1.83	0
8	8	46	0.83	8
9	2	48	0.17	4
10	1	49	1.17	3
	N=49			**Σf(d)=43**

$$M = \frac{N+1}{2} \qquad\qquad MDm= \frac{\Sigma f (d)}{N}$$

$$= \frac{49+1}{2} \qquad\qquad = \frac{43}{49}$$

$$= 50/2$$

M= 25   **MDm=0.877**

7. Find the standard deviation for the following data.
   8, 9, 15, 23, 5, 11, 19, 8, 10, 12.

Answer:

X	X²
8	64
9	81
15	225
23	529
5	25
11	121
19	361
8	64
10	100
12	144
ΣX=120	**ΣX²= 1714**

$$\overline{X}=\frac{\Sigma X}{N} = \frac{120}{10} = 12$$

$$SD = \sqrt{\frac{\Sigma x^2}{N} - (\overline{x})^2}$$

$$= \sqrt{\frac{1714}{10} - (12)^2}$$

$$= \sqrt{\frac{1570}{10}}$$

$$= \sqrt{157}$$

SD= 12.52

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V. Answer the following in 20 sentences: (Each question carries 6 marks)

1. The yield of Sugar- cane per acre for 10 districts of a state is as under: Calculate Standard Deviation and Coefficient variation.

District	A	B	C	D	E	F	G	H	I	J
Sugar-cane	12	10	15	19	21	16	18	9	25	10

Answer:

X	X²
9	81
10	100
10	100
12	144
15	225
16	256
18	324
19	361
21	441
25	625
ΣX=155	ΣX²= 2657
N=10	

$$\overline{X}=\frac{\Sigma X}{N} = \frac{155}{10} = 15.5$$

$$SD = \sqrt{\frac{\Sigma x^2}{N} - (\overline{x})^2}$$
$$= \sqrt{\frac{2657}{10} - (15.5)2}$$
$$= \sqrt{265.7 - 240.25}$$
$$= \sqrt{25.45}$$

SD= 5.044

Co-efficient variation = $\frac{SD}{\overline{x}}$ x 100

$$= \frac{5.044}{15.5} \times 100$$
$$= \frac{504.47}{15.5}$$

= 32.54

2. Calculate the Standard Deviation for the following distribution.

Classes	Frequencies
0 - 20	9
20 - 40	12
40 - 60	20
60 – 80	6
80 - 100	3
	N= 50

Answer:

Classes (x)	Frequencies	Mid point (m)	fm	d=m-x̄ d=m-42.8	d²	fd²
0 - 20	9	10	90	-32.8	1075.84	9682.56
20 - 40	12	30	360	-12.8	163.84	1966.08
40 - 60	20	50	1000	7.2	51.84	1036.8
60 – 80	6	70	420	27.2	739.84	4439.04
80 - 100	3	90	270	47.2	2227.84	6683.52
	Σf=50		Σfm=2140			Σ fd²=23754

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$\overline{X} = \dfrac{\Sigma fm}{\Sigma f}$ $SD = \sqrt{\dfrac{\Sigma fd^2}{n}}$

$\overline{X} = \dfrac{2140}{50}$ $= \sqrt{\dfrac{23754}{50}}$

$\boxed{\overline{X} = 42.8}$ $= \sqrt{475.08}$

$$\boxed{SD = 21.79}$$

3. Calculate the Standard deviation and variance for the following distribution by deviation method.

X	8	11	17	20	25	30	35
f	2	3	4	1	5	7	3

Answer:

x	f	fx	d=x - x̄ d=x – 23.08	d²	fd²
8	2	16	-15.08	227.4	454.8
11	3	33	-12.08	145.92	437.76
17	4	68	-6.08	36.96	147.84
20	1	20	-3.08	9.48	9.48
25	5	125	1.92	3.686	18.43
30	7	210	6.92	47.88	335.16
35	**3**	105	11.92	142.08	426.24
	N=25	**Σfx=577**			**Σ fd²= 1829.71**

$\overline{X} = \dfrac{\Sigma fx}{\Sigma n}$ $SD = \sqrt{\dfrac{\Sigma fd^2}{n}}$

$\overline{X} = \dfrac{577}{25}$ $= \sqrt{\dfrac{1829.21}{25}}$

$\boxed{\overline{X} = 23.08}$ $= \sqrt{73.168}$

$$\boxed{SD = 8.55}$$

Co-variance (CV) $= \dfrac{SD \times 100}{X}$

$= \dfrac{8.55 \times 100}{23.08}$

$\boxed{CV = 37.045}$

Chapter - 7
Correlation

I. Answer the following in a sentence/ word: (Each question carries 1 mark)
1. **What is correlation?**
   The degree of relationship between two variables is called correlation.
2. **What is scatter diagram?**
   Visible presentation of correlation through plotting values on graph paper is known as Scatter diagram.
3. **Write the formula for Spearman's rank correlation.**

   $rk = 1 - \dfrac{6\Sigma D^2}{n^3 - n}$

II. Answer the following in four sentences: (Each question carries 2 marks)

1. **Mentions types of correlation.**
   1. Positive correlation
   2. Negative correlation
   3. Perfect positive correlation
   4. Perfect negative correlation
   5. Negative correlation
2. **What is negative correlation? Give an example.**
   When the variables move in opposite direction, correlation between such variables is said to be negative correlation.
   For example: When the price of a commodity rises, its demand falls. There is a negative correlation them.
3. **What is positive correlation? Give an example.**
   When two variables move in the same direction correlation is said to be positive or direct correlation.
   For example: When the income rises, consumption also rises. There is a positive correlation.
4. **Mention which type of correlation is associated with.**
   a. Production and price of vegetables: Negative correlation
   b. Temperature and sale of ice- creams: Positive correlation

5. **Interpret the values of r as 1, -1 and 0.**
   1. r + 1 denotes perfect direct or positive relationship between variables.
   2. r – 1 shows perfect inverse or negative relationship between variables.
   3. r = 0 shows that two variables are in correlated.

III. Answer the following in 12 sentences: (Each question carries 4 marks)
1. Calculate the correlation between the heights of fathers in inches (x) and their sons (Y).

X	65	66	57	67	68	69	70	72
Y	67	56	65	68	72	72	69	71

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Answer:

x	y	$X = x - \bar{x}$ $X = x - 66.75$	$Y = y - \bar{y}$ $Y = y - 67.5$	xy	X^2	Y^2
65	67	1.75	0.5	0.875	3.06	0.25
66	56	0.75	11.5	8.625	0.56	132.25
57	65	9.75	2.5	24.375	95.06	6.25
67	68	0.25	0.5	0.125	0.62	0.25
68	72	1.25	4.5	5.625	1.562	20.25
69	72	2.25	4.5	10.125	5.062	20.25
70	**69**	3.25	1.5	4.875	10.56	2.25
72	71	5.25	3.5	18.375	27.56	12.25
∑x= 534	∑y = 540			∑xy =73	∑x² =143.48	∑y² = 194

$$\bar{X} = \frac{\sum x}{N} \qquad \bar{Y} = \frac{\sum y}{N} \qquad r = \frac{\sum xy}{\sqrt{\sum x^2 \times \sum y^2}}$$

$$\bar{X} = \frac{534}{8} \qquad \bar{Y} = \frac{540}{7} \qquad r = \frac{73}{\sqrt{143.48 \times 194}}$$

$$\bar{X} = 66.75 \qquad \bar{Y} = 67.5 \qquad r = \frac{73}{\sqrt{27835.12}}$$

$$r = \frac{73}{166.83}$$

$$\boxed{r = 0.437}$$

2. Calculate the correlation coefficient between X and Y and comment on their relationship.

X	1	3	4	5	7	8
Y	2	6	8	10	14	16

Answer:

X	Y	X^2	Y^2	XY
1	2	1	4	2
3	6	9	36	18
4	8	16	64	32
5	10	25	100	50
7	14	49	196	98
8	16	64	256	128
		∑x² =164	∑y² =656	∑xy =328

$$r = \frac{\sum xy}{\sqrt{\sum x^2 \times \sum y^2}} \quad r = \frac{328}{\sqrt{164 \times 656}} \qquad r = \frac{328}{\sqrt{107584}} \qquad r = \frac{328}{328} \quad \boxed{r = 1}$$

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3. Mention the properties of correlation coefficient.

   1. A negative value of r indicates an inverse relation.
   2. The value of the correlation coefficient lies between minus one and plus one.
   3. If r = 0 the two variables are uncorrelated.
   4. A high value of r indicates strong linear relationship.

4. Draw scatter diagram and conclude about relation.

X	10	20	30	40	50	60	70	80
Y	25	20	25	35	40	35	50	45

5. Draw scatter diagram and interpret.

X	1	2	3	4	5	6
Y	2	4	6	8	10	12

IV. Answer the following in 20 sentences: (Each question carries 6 marks)

1. Calculate Karl Pearson's coefficient of correlation from the following data using step deviation method and comment on the result.

X	12	14	16	18	20	22	24	28	30
Y	36	33	30	27	24	21	18	15	12

2. Calculate the coefficient of rank correlation.

X	18	28	35	44	35	26	37	48
Y	83	51	34	34	34	28	46	47

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Chapter - 8
Index Numbers

I. Choose the correct answer: (Each question carries 1 mark)

1. The formula $P_{01} = \dfrac{\Sigma P_1 Q_0}{\Sigma P_0 Q_0} \times 100$ is given by

a) **Laspeyre**
b) Paasche
c) Marshall
d) Fisher

2. In index number of which year price is assumed to be 100

a) Current year
b) **Base year**
c) Selection of prices
d) None of these

3. Laspeyer's index is based on

a) **Base year quantity**
b) Current year quantity
c) Both of them
d) Average of current and base

4. Paasche's index is based on

a) **Current year quantity**
b) Base year quantity
c) Both of them
d) None of these

II. Fill in the blanks: (Each question carries 1 mark)

1. Index numbers are expressed in **Percentage**
2. Inflation affects the **Cost of living** of common people.
3. Using current year quantities as weights is known as **Paasche's price index**
4. P_1 and P_0 indicates the price of the commodity in the current **Base** period respectively.

III. Match the followings: (Each question carries 1 mark)

A	B
1. CPI	a. Producer Price Index
2. WPI	b. Agriculture Price Index
3. IPI	c. Consumer Price Index
4. API	d. Wholesale Price Index
5. PPI	e. Industrial Price Index

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Solutions:

A	B
1. CPI	**Consumer Price Index**
2. WPI	**Wholesale Price Index**
3. IPI	Industrial Price Index
4. API	**Agricultural Price Index**
5. PPI	**Producer Price Index**

IV. Answer the following in a sentence/ word: (Each question carries 1 mark)

1. **What is an index number?**
   A specialized average designed to measure the changes in a variable with respect to time is called Index number.

2. **What is price relative?**
   The price in the current year expressed as a percentage of prices in the base year is called price relative.

3. **What is Inflation?**
   A sustained increase in the general level of prices for goods and services in an economy over a period of time is called inflation.

4. **Write the formula to calculating index of industrial production.**

   $IIP_{01} = \Sigma q_1 xw / \Sigma W \times 100$

5. **What is SENSEX?**
   A measure is measures the share market trends are called Sensex.

V. Answer the following in four sentences: (Each question carries 2 marks)

1. **Mention some important index numbers.**
   1. Consumer price index
   2. Wholesale price index
   3. Industrial production index
   4. Agricultural production index
   5. Sensex

2. **What is consumer price index number? How do you calculate it?**
   Consumer price index is a statistical device of measuring changes in cost of living due to changes in retail prices of a basket of goods over a period of time. It is also known as **"Cost of living index"**.
   Steps:
   1. The prices of commodities for various groups for the current year is multiplied by the quantities of the base year and their aggeregate expenditure of current year is obtained.
   2. The aggregate expenditure of the current year is divided by the aggregate expenditure of the base year and the quotient is multiplied by 100.

3. **What is wholesale price index? Write its drawbacks.**
   The index number which represents general changes in whole sale prices of commodities is known as wholesale price index.
   1. It does not have any reference consumer category.
   2. It does not include items pertaining to services like barber charges, repairing etc...

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4. **What is industrial production index? Which year as the base for their index on India?**

   Index number that measures changes in the volume of industrial production over a given period of time is known as index industrial production.

   It is currently calculated every month with 2004-05 as the base year.

VI. Answer the following in 12 sentences: (Each question carries 4 marks)

1. Calculate weighted average of price relative index from the following data.

Items	Weight in %	Base year Price (Rs)	Current year Price (Rs)
A	40	2	4
B	30	5	6
C	20	4	5
D	10	2	3

Answer:

Items	Base year price (P_0)	Current year price (P_1)	Price Relative $\frac{P_1}{P_0} \times 100$	Weight in Percentage (W)	W $\left(\frac{P_1 \times 100}{P_0}\right)$ (WP)
A	2	4	4/2 x 100= 200	40	200 x 40= 8000
B	5	6	6/5 x 100=120	30	120 x 30= 3600
C	4	5	5/4 x 100= 125	20	125 x 20= 2500
D	2	3	3/2 x 100= 150	10	150 x 10= 1500
			$\Sigma \frac{P_1}{P_0}$ =595	ΣW =100	$\Sigma W \left(\frac{P_1}{P_0} \times 100\right)$ =15600

$P_{01} = \dfrac{\Sigma W (P_1/P_0 \times 100)}{\Sigma W}$ = $P_{01} = \dfrac{15600}{100}$ = $\boxed{P_{01}= 156}$

2. Compute the cost of living number for the following data.

Commodities	Q_0	P_0	P_1
Wheat	20	10	12
Rice	5	30	35
Ghee	2	20	30
Sugar	4	25	40

Answer:

Commodities	Q_0 (W)	P_0	P_1	R= $\frac{P_1 \times 100}{P_0}$	WR
Wheat	20	10	12	120	2400
Rice	5	30	35	116.67	583.35
Ghee	2	20	30	150	300
Sugar	4	25	40	160	640
	ΣW= 31				ΣWR= 3923.35

CPI= $\Sigma WR / \Sigma W$ = 3923.35/31 = $\boxed{126.56}$

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3. Calculate index numbers from the following data by Laspeyer's method.

Commodity	P_0	Q_0	P_1	Q_1
A	8.0	5	10	11
B	8.5	6	9	9
C	9.0	4	12	6

Answer:

Commodity	P_0	q_0	P_1	Q_1	P_1q_0	P_0q_0
A	8.0	5	10	11	10 x 5= 50	8.0 x 5= 40
B	8.5	6	9	9	9 x 6= 54	8.5 x 6= 51
C	9.0	4	12	6	12 x 4 =48	9 x4=36
					Σp_1q_0= 152	Σp_0q_0= 127

$P_{01} = \Sigma p_1q_0/\Sigma p_0q_0$ x 100
P_{01}= 152/127 x100
$\boxed{P_{01}= 119.69}$

VII. Answer the following in 20 sentences: (Each question carries 6 marks)

1. Explain the difficulties in Construction of consumer price index number.

The various difficulties in construction of consumer price index number, they are mentioned below;
1. Errors may occur in the construction because of inaccurate specification of groups for whom the index is meant.
2. Faculty selection of representative commodities resulting out of unscientific family budget enquiries.
3. Inadequate and unrepresentative nature of price quotations and use of inaccurate weights.
4. Frequent changes in demand and prices of the commodity. They average family might not be always a representative one.

2. Calculate price index number by

a) Laspeyer's method   b) Paasche's method

Commodity	1990		1995	
	Price	quantity	Price	quantity
A	20	15	30	20
B	15	10	20	15
C	30	20	25	10
D	10	5	12	10

Answer:

a) Laspeyer's method

Commodity	P_o	q_o	P_1	q_1	$P_1 q_o$	$P_o q_o$
A	20	15	30	20	30x15= 450	20x15=300
B	15	10	20	15	20x10= 200	15x10=150
C	30	20	25	10	25x20= 500	30x20=600
D	10	5	12	10	12x6= 60	10x5=50
					$\sum p_1 q_o$=1210	$\sum p_o q_o$=1100

p_{o1}= $\sum$p1 qo x 100 p_{o1}= <u>1210</u> x 100   **p_{o1}= 110**

  $\sum$po qo   1100

b) Paasche's method

Commodity	P_o	q_o	P_1	q_1	$P_1 q_1$	$P_o q_1$
A	20	15	30	20	30x20=600	20x20=400
B	15	10	20	15	20x15=300	15x15=225
C	30	20	25	10	25x10=250	30x10=300
D	10	5	12	10	12x10=120	10x10=100
					$\sum p_1 q_1$= 1270	$\sum p_o q_1$= 1025

p_{o1}= $\sum$p1 q1 x 100 p_{o1}= <u>1270</u> x 100   **p_{o1}= 123.90**

  $\sum$po q1   102

VIII. Project oriented question: (5marks)

1. Write a note on SENSEX

Sensex is formed on 1st January 1986. It is the oldest stock index in India. A Sensex is composed of 30 well established and financially sound companies listed on Bombay Stock Exchange. It gives a general idea about weather most of the stocks have gone up or down.

Uses of SENSEX:

1. Sensex is useful guide for investors in the share market.

2. Sensex indicates the changes in the share prices and valve of the wealth of share holders.

3. Sensex is regarded as the pulse of the domestic stock markets in India.

4. Sensex today is widely reported in both domestic and international markets through print media as well as electronic media.

5. A rise in the Sensex indicates rise in the share prices and the valve of wealth of share holders.

Chapter - 9
Use of Statistical Tools

I. Choose the correct answer: (Each question carries 1 mark)

1. Use of statistical tools helps to
a) **Developing a project**
b) Determining a project
c) Marketing
d) Production

2. The first step in making a project
a) Analysis and interpretation
b) Collection data
c) **Identifying a problem**
d) Organization of data

II. Fill in the blanks: (Each question carries 1 mark)

1. Survey helps to determine the method of collection of **Data.**
2. The choice of target groups is very important while preparing the **Project.**

III. Answer the following in a sentence/ word: (Each question carries 1 mark)

1. **Mention the last step in developing a project.**

   Bibliography

2. **What is consumer awareness?**

   The knowledge of the consumers regarding the availability of a product, its price, place, quality etc.... is known as consumer awareness.

IV. Answer the following in four sentences: (Each question carries 2 marks)

1. **Mention the name of any four statistical tools.**
   1. Tables
   2. Bar Diagram
   3. Line Graph
   4. Pie Diagram

2. **Write the first four steps in developing a project.**

   1. Identifying a problem or an area of study.
   2. Collection of data
   3. Choice of Target Group
   4. Organisation and presentation of data.

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PART –B

INDIAN ECONOMIC DEVELOPMENT

Chapter -1
Indian Economy on the Eve of Independence

I. Choose the correct answer: (Each question carries 1 mark)

1. Whose estimate of per capita income of India during colonial period was considered very significant?
a) Dadabai Naoroji
b) <u>V.K.R.V Rao</u>
c) William Digby
d) R.C. Desai.

2. Railway transport introduced in India in the year.
a) 1835
b) 1776
c) <u>1850</u>
d) 1853

3. During British rule more Than half of India's foreign trade was restricted to.
a) <u>Britain</u>
b) Iran
c) China
d) Srilanka

4. In India census is carried out once in
a) 5 Years
b) <u>10 Years</u>
c) 1 Years
d) 2 Years

II. Fill in the blanks: (Each question carries 1 mark)

1. Before Independence the India's Jute industries concentrated in **<u>East part (Bengal</u>**) of the country.
2. Under colonial rule the cotton textile industries dominated by **<u>India (Maharashtra)</u>**
3. **<u>1921</u>** is the year of second stage of demographic transition of India.
4. **<u>Railway</u>** Transport is considered as the most important contribution of British rule.

III. Answer the following in a sentence/ word: (Each question carries 1 mark)

1. **Name the important 'Revenue Settlement System' during British rule.**
Zamindari System
2. **Expand TISCO.**
Tata Iron and Steel Company
3. **What is Capital Goods Industries?**
Those industries which produce machineries, equipments, for further production is called capital Goods industries

4. **When was the official census carried out in India?**
   1881
5. **Why the colonial Government did ban canal transport?**
   Because of the development of railway and road transport in India

IV. Answer the following in four sentences: (Each question carries 2 marks)

1. **What was the objective of the economic policies pursued by the colonial Govt. in India?**
   The economic policies adopted by the colonial government in India were concerned more with the protection and promotion of the economic interests of their home country than with the development of Indian economy. Its sole purpose was;
   1) To convert India into an exporter of raw material
   2) An importer of finished goods produced in the factories of Britain.

2. **List out the important export goods of India before Independence.**
   Before Independence India export 1. Raw silk 2. Cotton 3. Jute 4. Indigo 5. Sugar etc….

3. **Name the modern industries which were in operation in our country at the time of Independence.**
   1. Cotton textiles industries
   2. Jute industries
   3. Iron and steel industries
   4. Paper, Sugar, Cement, industries etc….

4. **What are the infrastructure facilities developed during colonial rule?**
   1. Railway Transport
   2. Water transport
   3. Post and Telegraph facilities
   4. Development of ports

V. Answer the following in 12 sentences: (Each question carries 4 marks)

1. The traditional handicraft industries were ruined under British rule Justify the statement.
   Yes, I completely agree to this view. Because
   1. British were always guided by their own interests. They never bothered to consider the effects of their policies on the people of India in terms of unemployment, human sufferings, burden of agriculture etc…
   2. They imposed heavy duties on Indian handcrafts so that they become more expensive than British woollen and silk manufactures.
   3. They followed a policy of duty free export of raw material and import of finished goods from Britain but imposed heavy duties on exports of Indian handicrafts.
   4. Moreover, Indian handicrafts had to face competition from machine made goods from Britain. All this added fuel in the ruined of handicraft industry.

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2. Indicate the volume and direction of trade at the time of Independence.

The restrictive policies of trade and pursued by the colonial Government adversely affected the structure and composition of Indian foreign trade.

1. Composition of Foreign Trade: With the adoption of discriminatory policy by the British Government India become an exporter of primary products such as raw silk , cotton , wool, sugar , Indigo , jute and an importer of finished consumer goods like cotton , silk and woollen clothes and capital goods like machinery produced in Britain.

2. Direction of Foreign Trade: Britain maintained monopoly control over Indian exports and import as a result more than **half of India's foreign trade** was restricted to Britain.

3. What do you understand by the drain of Indian wealth during colonial period?

India has been an important trading nation since ancient period times. But the restrictive policies of commodity production, trade and tariff introduced by the colonial government adversely affected the structure, and volume of Indian foreign trade activities. India become an exporter of primary raw materials and importer of finished product. The most important characteristic of Indian's foreign trade throughout the colonial period was the generation of a large export surplus. But this surplus came at a huge cost to the country's economy. Furthermore this export surplus did not result in any flow gold or silver into India. This **export surplus was used to fulfill administrative** and **war expenses of Britain**, This is called **Drain of Indian wealth.**

VI. Answer the following in 20 sentences: (Each question carries 6 marks)

1. Explain the status of India's agriculture during British rule.

Indian Agriculture was backwardness and stagnation on the eve of independence which can be explained with the help of following points.

1. Low Agricultural Production: At the time of independence in agricultural production was estimated to be around 50.8 lakes tones which were quite low to meet the country's requirements.

2. Reasons for low productivity: Lack of agricultural equipments, poor irrigation facilities, lack of high yielding seeds, etc…

3. Commercialization of Agriculture:

British rule initiated commercialization of agriculture whereby the farmers were forced to grow **cash crops instead of food crops,** which was either used for sale in the market or was being used by the British industries back home.

4. Land settlement System:

It is one of the major cause of stagnation of agriculture sector was the introduction of land settlement by the British. Under this system there existed an intermediary class, that's Zamindars between the British government and the actual farmers. The Zamindars had been appointed to collect revenue from the farmers regardless of their economic condition.

5. Large growth in Agriculture debt:

Due to low productivity in the agriculture sector and implementation of Zamindari system farmers were under debt which added to their problems.

2. India could not develop a sound Industrial sector under colonial rule, Justify the statement.

India could not develop Industrial base under the colonial rule. British government systematically destroyed Indian handicraft industry and no modern industrial base was allowed to come up. The growth rate of industrial sector and its contribution towards GDP was very small estimated to be around 10%.The following points indicating the sate of industries in India.

1. Decline of Traditional Indian Handicraft Industry: Due to the discriminatory policy followed by the colonial government Decline of handicraft industry in India which leads to unemployment in industrial sector causing migration from urban areas to villages which made agriculture sector over burned. **Decline of the handicraft industries made the following impact.** It creates large number of unemployment in the country.

Unemployed people migrated from cities to villages; it's increased the burden of population in villages and agriculture. Consumer demands in the Indian market but could not met by the supply of local made goods. This encouraged the imports of goods made in Britain.

 2. Discriminating Tariff Policy: The British government allowed tariff free import of raw materials from India. But Higher Tariff on importing British industrial Products into India.

 3. New patterns of demand: Under the British colonial rule new class of people emerged in India. This changed the patterns of demand in India against Indian products and in favour of British product. As results the Indian Industry went out low level of improvement.

4. Competition from machine: Industrial revolution in Britain gave a more competition to the handicraft Industries in India. Due to low cost and better quality product produced by machine forced the Indian craftsman to shut down the handicraft Industries.

3. Were there any positive contributions made by British in India? Discuss.

   Though the basic intention of the British policy was not the development of Indian economy but incidentally it left some beneficial effects also. Some of them are as under:

   1. Political and economic unification of the country.
   2. Development of the means of transport (especially railways) and communication.
   3. Evolution of banking and monetary system.
   4. Introduction of the modern techniques of production and management.
   5. Evolution of new social order based on reasoning and progressive ideas.
   6. Establishment of civil laws and courts.
   7. Introduction of new system of education.
   8. Emergence of the market economy and capitalist enterprises.
   9. Stability, peace and order.

Chapter -2
Indian Economy (1950-1990)

I. Choose the correct answer: (Each question carries 1 mark)

1. Which is not the goal of five year plans
a) Growth
b) Modernization
c) Self-efficiency
d) Self -reliance

2. First phase of Green Revolution approximately.
a) Mid 1960- Mid 1970
b) 1950-1960
c) Mid 1970- Mid 1980
d) 1970-1980

II. Fill in the blanks: (Each question carries 1 mark)

1. Chairperson of planning commission **Prime Minister**
2. Small Scale Industries use more of **Labour Force** than large scale industries.
3. Regional equality was the main purpose of **Plan**

III. Match the followings: (Each question carries 1 mark)

A	B
1. Prime Minister	a. Seeds that give large proportion of Output
2. Quota	b. Chairperson of the Planning Commission
3. Land Reforms	c. Quantity of imported
4. HYV Seeds	d. The monetary assistance given by government for production actives
5. Subsidy	e. Improvement in the field of agriculture to increase its productivity

Solutions:

A	B
1. Prime Minister	**a. Chairperson of the Planning Commission**
2. Quota	**b. Quantity of goods that can be imported**
3. Land Reforms	**c. Improvement in the field of agriculture to increase its productivity**
4. HYV Seeds	**d. Seeds that give large proportion of Output**
5 .Subsidy	**e. The monetary assistance given by government for production actives**

IV. Answer the following in a sentence/ word: (Each question carries 1 mark)

1. Define planning.
A plan spells out how the resource of a nation should be put to use.

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2. **What do you mean by Land Reforms?**
   To bring a change in ownership pattern of land are called land reforms.

3. **What is Marketed Surplus?**
   The portion of agriculture produce which is sold in the market is called marketed surplus.

4. **Give the meaning of Land Ceiling.**
   Fixing the maximum size of land which could be owned by an individual is called land ceiling.

5. **Mention any one Public Sector Industry.**
   1. Hindustan Aeronautics Limited (**HAL**)
   2. Bharat Electronic Limited (**BEL**)

6. **Give the meaning of Gross Domestic Product.**
   The money value of all final goods and services produced in the country in a year is called Gross domestic product. (**GDP**)

V. Answer the following in four sentences: (Each question carries 2 marks)

1. **What are the goals of five year plans?**
   1. Economic Growth
   2. Modernisation
   3. Equity
   4. Self Reliance

2. **Write the two advantages of Small Scale Industries.**
   1. Creating more employment opportunities.
   2. Formation of with small and simple machines.

3. **Why the State had to play an extensive role in promoting industrial sector?**
   1. Promotion of import substitution
   2. Providing employment
   3. Development of backward areas and infrastructure
   4. Promotion of equality of income and wealth distribution

4. **Give the meaning of tariffs and quotas.**
   Tariffs: Taxes imposed on imported goods is called taxes or tariffs.
   Quotas: Specify the quantity of goods which can be imported is called quotas.

VI. Answer the following in 12 sentences: (Each question carries 4 marks)

1. Write a short note on land reforms in India.

At the time of independence, the land system was characterized by intermediaries that mean Zamindars who collected rent from the actual tiller. This system was demotivated the actual tiller hence productivity was very low. Therefore there was an urgent need of land reforms policy.

1. Eradication of Intermediaries or zamindaries system: The prime objectives of land reforms was the abolish intermediaries like zamindaries. There were many steps undertaken to make the tillers the owners of the land because ownership of land enables the tiller to make profit from the increased output.

2. Consolidation of land holdings: It was very necessary to consolidate the land holdings for the use of modern and advanced technology. This enabled them the benefits associated with the large scale production.

3. Land ceiling: This means fixing the maximum size of land which could be owned by an individual. The purpose of land ceiling was to reduce the concentration of land ownership in a few hands.

2. Write a short note on Green Revolution.

The large increase in production of food grains resulting from the use of high yielding variety seeds especially for wheat and rice is called green revolution. As a result Green revolution was implemented in two phases.

1. In the first phase of green revolution (mid 1960s to mid 1970s)
2. In the second phase of green revolution (mid 1970s to mid 1980s)

Effects of Green revolution: As a result of green revolution a positive impact was on Indian agriculture.

1. The spread of green revolution technology enabled India to achieve self sufficiency in food grains.
2. Green revolution helps in improving the condition of farmers and increasing marketable surplus.
3. Green revolution creates more employment opportunities.
4. India attains self sufficiency in food grains and reduced our dependence on imports.

3. Write the economic justification of the policy of Subsidies.

Subsidy is financial aid or support to the farmers provided by government. The government of India has provided large subsidies to farmers on agricultural input like irrigation, fertilizers, and power. The objective is to increase agricultural production and productivity. The following argument are given in favor of subsidy

1. Subsidies are needed to encourage farmers to adopt new technology.
2. Most of the farmers are poor and they would not be able to adopt new technology without government help.
3. Agriculture activities are risky business so government support is necessary for poor.
4. Subsidy is generally provided to the poor farmers with the motive of reducing inequality of income between rich and poor farmers.

4. Briefly explain the goals of Five year plans.

General goals as well as specific objectives to be achieve within a specific period is called plan. In India plans are made for a period of five year. Generally termed as **"FIVE YEARS PLANS"**. Let us now learnt the goals of planning are some details.

1. Goal of Economic Growth: It refers to increase in the country's capacity to produce the goods and services within country. GDP is the good indicator of economic growth (It is the market value of all the goods and services produced in the country during a year) The GDP derived from the different sector of the economy namely the agriculture sector the industrial sector and the service sector.

2. Goal of Modernization: Adoption of new technology is called modernization. The large production of goods and service based on new technology.
For example: A farmer can increase the output on the farm by using new seeds and technology.

3. Goal of self Reliance: A nation can promote economic growth and modernization by using its own resources. The first seven five year plans gave importance to Self-reliance by. This policy was considered a necessity in order to reduce our dependence on foreign countries especially for food.

4. Goal of Equity: It refers to distribution of economic power (income and wealth) equally or in such way that every Indian should be able to meet his or her basic needs such as food, house, education, healthcare.

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Chapter - 3
Liberalisation, Privatisation and Globalisation

I. Fill in the blanks: (Each question carries 1 mark)

1. Reforms were Introduced during **1991**
2. RBI regulates **Financial** Sector
3. WTO was founded in **January 1st 1995**
4. Taxes on incomes of individuals is called **Direct Taxes**

II. Answer the following in a sentence/ word: (Each question carries 1 mark)

1. **What is liberalisation?**
   Liberalisation is the process of removing the government's controls and restrictions on economic activities.
2. **Give the meaning of Privatisation.**
   Privatisation is the process transfer of ownership or management of public sector enterprises to private sector or people.
3. **What is Globalisation?**
   Globalisation means opening up of the country's economy for the world or global economy.
4. **Expand IBRD**
   International Bank for Reconstruction and Development.
5. **Expand GATT**
   General Agreement on Trade and Tariffs
6. **Give the meaning of Direct Tax.**
   Taxes levied on the income and wealth of the people is called direct taxes.
7. **What do you mean by Outsourcing?**
   Outsourcing means going outside one's own organisation to obtain the specialized services of various kinds in time and lower cost.

III. Answer the following in four sentences: (Each question carries 2 marks)

1. **Give the meaning of Industrial Licencing.**
   Permission or an approval to start an industry with a certain capacity in a specified area is called industrial licencing.
2. **Mention four Objectives of Trade Policy.**
   1. Removal of Government control and licencing.
   2. Simplification of procedure for imports and exports.
   3. Removal of restriction on the movement of goods and services.
   4. Greater freedom will be given to private people to take their own decision.
3. **What is Fiscal Policy?**
   The public revenue, public expenditure and public debt policies of the government is called fiscal policy.
4. **What are the Services of Out Sourcing?**
   1. Banking Services
   2. Music Recording
   3. Film Editing
   4. Clinical Advice
   5. Record Keeping
   6. Maintenance of Accounting

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5. **What do you mean by Disinvestment?**

   Sale of a part of equity of public enterprises to private sector is called disinvestment.

6. **Give Example for Direct Tax and Indirect Tax.**

   Direct Tax: Income tax**,** corporation tax, wealth tax etc…

   Indirect Tax: Excise duties, custom duties, Goods and Services Tax (GST) etc…

IV. Answer the following question in 12 sentences: (Each question carries 4 marks)

1. Briefly explain the back ground of Economic Reforms in India.

The origin of the financial crisis can be traced from the inefficient management of the Indian economy in the 1980's. The need for new economic reforms arose from a number of factors or reasons. These reasons are;

1. Slow rate of industrial growth: There was slow rate of industrial growth, because the private sector was subject to a number of restrictions, controls, quotas etc…

2. Poor performance of public sector: The performance of public sector enterprises was much below the desired level and a number of public sector enterprises run in to loss.

3. Deficit balance of payment and Fiscal deficit: There was serious balance of payments problem because imports exceed exports and fiscal deficit rise to 8.5% to GDP. Current account deficit in external balance rise to 2.5%.

4. Economic Imbalance: The expenditure incurred by the government particularly on subsidies and welfare schemes was huge, and the tax collection was insufficient. This leads economic imbalance in the economy.

2. Write a note on WTO.

World trade organization came into existence on 1ˢᵗ January 1995 as a successor of GATT. WTO is located in **Geneva** in Switzerland. At present 149 countries have got membership of WTO and India is a founder member of WTO.

The WTO is a properly established permanent world trade organization. It has a legal status and enjoys privileges and immunities on the same footing as the IMF and the World Bank. WTO is a **"watching dog of international trade"** and it regularly examines the trade regimes of individual members.

Objectives of WTO: The main objectives of WTO are as follows;

1. WTO provides equal opportunities for all countries in international trade.

2. To implement multilateral trade agreements among all the member countries.

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3. To settle disputes among member countries on issues related to multilateral trade.

4. Optimum utilization of world resources to increase production and trade in goods and services.

5. To reduce tariffs, subsidies, and trade restrictions among all the member countries.

6. To implement liberalisation, privatisation and globalisation policies and removal of trade discrimination among all countries.

3. Briefly explain the financial sector reforms.

Financial sector includes financial institutions such as commercial banks, investment banks, stock exchange operations and foreign exchange market. This financial sector is controlled by the RBI through various norms and regulations. One of the major aims of the financial sector reforms is to reduce the role of RBI.

The important financial sector reforms of NEP are as follows;

1. Liberalising the restrictions of banks and other financial institutions.

2. The financial sector reform policies led to the establishment of new private sector banks.

3. The reform policies allowed foreign banks to function in the country.

4. Foreign investment limit in banks is raised to 50%.

5. Banks have been given permission to raise funds within the country and abroad.

6. Foreign institutional investors (FII) such as merchant bankers, mutual funds, and pension funds are now allowed to invest in Indian financial markets**.**

4. Write a short note on outsourcing.

Outsourcing means going outside one's own organisation to obtain the specialized services of various kinds in time and at lower cost.

Services of out sourcing;

1. Banking Services   2. Music Recording   3. Film Editing   4. Clinical Advice

5. Record Keeping   6. Maintenance of Accounts etc….

Advantages of outsourcing in India:

1. Increasing employment opportunities.

2. Increasing income of the people.

3. Increasing standard of living of the people.

4. Increasing economic progress.

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V. Answer the following question in 20 sentences: (Each question carries 6 marks)

1. Briefly explain the important areas of Liberalisation.

Liberalisation leads to market oriented economy. It reduces Government role and allows market forces to play a major role in the economy. It involves:

1. Deregulation of Industrial Sector: Government of India introduced several reforms in its industrial sector in 1991. The main reforms are;

1. Abolition of industrial licencing expect for few industries related to security, strategic and environmental concerns.

2. The number of industries reserved for the public sector has been reduced from 17 to 3.

3. The only 3 industries which are now reserved for the public sector are automic energy, railway transport and production of war equipments.

2. Financial Sector Reforms: The important financial sectors reforms of NEP are as follows;

1. Liberalising the restrictions of banks and other financial institutions.

2. The financial sector reform policies led to the establishment of new private sectors banks.

3. The reform policies allowed foreign banks to function in the country.

3. Tax Reforms: The important tax reforms of NEP are as follows;

1. To rate of tax on individual income have been reduced substantially.

2. Reduction of corporation tax on domestic companies to 30%

3. Government of India introduced GST in July, 1. 2017.

4. Foreign Exchange Reforms: The important foreign exchange reforms are as follows;

1. Devaluation of rupee reduces the prices of export goods and at the same time, it increases the prices of imports goods.

2. Devolution led to increases in export and solves the problem of balance of payment in India.

5. Reforms in Trade and Investment: The important trade and investment reforms are as follows;

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1. Reforms were introduced to remove trade barriers and liberalize foreign and investments.

2. Reduction of tariff rates.

3. Removal of licencing producers for imports.

2. Briefly explain the effects of reforms on Agriculture sector.

Though the economic reforms have made significant changes in the Indian economy, they are not free from criticisms. On the other hand, the reform process has been widely criticized for not being able to address some of the basic problems facing our economy especially in the areas of employment, agriculture, industry, infrastructure development and fiscal management. Reforms have not been able to benefit agriculture.

1. Public investment in agriculture sector especially in infrastructure, which includes irrigation, power, roads, and market linkages, has been reduced in the reform period.

2. The removal of fertilizer subsidy has led to increase in the cost of production, which has severely affected in the small and marginal farmers.

3. This sector has been experiencing number of policy changes such as reduction in import duties on agricultural products, removal of minimum support price and lifting of quantitative restrictions on agricultural products etc... have adversely affected Indian farmers.

4. Due to economic reform Indian farmers have to face international competition.

5. Export oriented policy strategy in agriculture has encouraged the farmers to take up the cultivation of each crops. This has led to rise in prices of food grains.

VI. Project-Oriented Question. (5marks)

1. **Identify the following banks as agriculture, industry, nationalized, private and foreign bank.**

ICICI, Canara Bank, HSBC, NABARD, IDBI

ICICI	Private Bank
CANARA BANK	Nationalized Bank
HSBC	Foreign Bank
NABARD	Agriculture Bank
IDBI	Industrial Bank

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Chapter - 4
Poverty

I. Choose the correct answer: (Each question carries 1 mark)

1. Poverty Line separates
a) Poor and non-poor
b) Rich and non-rich
c) Poor and Weak
d) None of the above

2. In pre-independent India, he was the first to discuss the concept of poverty line.
a) Dadabhai Naoraji
b) Gopala Krishna Gokhale
c) Vinobha bave
d) Vinoda Bai

3. Some are rich most of the time but may sometime have a patch of bad luck. they are called
a) Occasionally Poor
b) Usually Poor
c) Always Poor
d) None of the above

4. The act provides guaranted wage employment to every poor household for minimum of 100 days in a year is called.
a) PMRY
b) SJSRY
c) MGNREGA
d) SGSY

II. Fill in the blanks: (Each question carries 1 mark)

1. The causes of poverty line in the institutional and **social** factors that mark the life of the poor.

2. Most poverty alleviation programmes implemented are based on the perspective of the **5 year plans**

3. **British Rule** impoverished millions of people in India.

4. Economists identify the poor on the basis of their occupation and **Income Assessment**

III. Answer the following in a sentence/ word: (Each question carries 1 mark)

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1. **Give the meaning of poverty.**
   Inability to secure the minimum consumption requirements for life, health and efficiency is called poverty.
2. **Why the poor are physically weak?**
   1. Malnutrition
   2. Ill health
   3. Dis ability
3. **Who are the churning poor?**
   Those who are living sometime above poverty line some other time below poverty line are called churning poor.
4. **Define poverty line as per planning commission.**
   According to planning commission "poverty line on the basis nutritional requirements of less than 2400 calories per person per day in rural areas and 2100 calories per person per day in urban areas."
5. **What is 'Head count Ratio'?**
   The number of poor estimates as the proportion of people below the poverty line is known as head count ratio.
6. **What programme has the government adopted to help the elderly people and poor and destitute women?**
   National social assistance programme.

 IV. Answer the following in four sentences: (Each question carries 2 marks)

1. **List the features of poorest households.**
   1. The poor people have few assets
   2. Poor people live in huts
   3. Some poorest people do not even have such huts also
   4. Starvation, hunger, lack of literacy and skills
2. **Who are the urban poor? Give examples.**

   Urban poor are those poor who are come from rural areas for seeking employment in urban area is called urban poor. **Example:** 1. Push cart vendor 2. Street cobbler

3. **Who are the rural poor? Give examples.**

   Rural poor are those who are living below poverty line lived in rural areas is called rural poor.

    Example: 1. Landless labours 2. Small land owners

4. **What are the social factors that trigger and perpetuate the poverty?**
   1. Joint family system
   2. Traditional bound
   3. Illiteracy and ignorance
   4. Caste system
5. **Name the self-employment generation programmes of the government for the poor.**

    1. Rural employment generation programme
    2. Pradhanamanthri Rojghar yojana (PMRY)
    3. Swarna Jayanthi Shahari Rojghar yojana (SJSRY)

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6. **List the programme that aims at improving the food and nutritional status of the poor.**

   1. Public Distribution System (PDS)
   2. Integrated Children Development Scheme (ICDS)
   3. Mid Day Meals Scheme (MDMS)

7. **List the factors that prevent the successful implementation of poverty alleviation programmes.**

   1. Distribution of land and other assets were unequal
   2. Benefits were illegally taken by the noon poor
   3. Insufficient resources
   4. Lack of proper implementation

V. Answer the following in 12 sentences: (Each question carries 4 marks)

1. What do you mean by Growth oriented approach to poverty reduction? Why it is not successful in India?

Increase in domestic product and percapita income for the purpose of reduction of poverty is called growth oriented approach.

The main objective of the panning in 1950's and early 1960's was based on the economic growth which increased Gross Domestic Product and percapita income to reduce poverty. But growth oriented approach has not succeed because.

1. Rapid growth of population.
2. Lack of proper implementation of land reforms.
3. Negligence of the government to employment growth oriented approach.
4. It widened the gap between the rich and poor.

2. Critically asses the poverty alleviation programmes of the government.

The main objective of Indian planning is to eradicate poverty. In this regard government has launched many poverty alleviation programmes. Inspite of various poverty alleviation programmes, hunger, malnutrition, illiteracy and lack of basic amenities continue in many parts of the country. No radical changes taken over the last 6 decades. The main reasons of the failure are as follows;

1. Distribution of Land and Other Assets were Unequal

2. Benefits were illegally taken by the non poor

3. Insufficient Resources

4. Lack of proper implementation

5. Lack of active participation of the poor

6. Lack of proper identification of poor

VI. Answer the following in 20 sentences: (Each question carries 6 marks)

1. Explain the causes of poverty.

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Poverty is one of the serious problems of India. Poverty is a wide spread phenomenon and is one of the outstanding features of developing economies. The main causes of poverty in India are as follows;

1. Rapid growth of population: The rate of growth of population in India has been larger than the rate of growth of the country. As a result the standard of living of the people is slow and they have remained poor.

2. Inequality of income: Inequality of income and wealth is another reason for poverty in India. The income and wealth is concentrated in a few hands and inequalities breed further inequalities.

3. Unemployment: Unemployment and under employment are much more wide spread problem in India. The degree of unemployment among the poor is very high. So that they are not able to earn the required income to purchase minimum needs of their family members.

4. Social and political factors: Various social and political factors such as illiteracy, ignorance, traditional bound nature and political system etc… contribute in the country.

5. Backward agriculture: India is the predominantly agricultural economy. Agriculture in the country is backward and primitive methods of cultivation are on practice. As a result, the people depending on agriculture also poor and backward.

6. Vicious circle of poverty: At present India is facing the challenge of vicious circle of poverty. Here poverty is both the cause and the effect.

2. Explain briefly the three dimensional programmes adopted by the government to eradicate the poverty in India. OR Explain the employment generation programmes of poverty alleviation in India.

The Government of India was implemented several national policies and programmes for poverty eradication and employment generation. The most important are as follows:
1. Self Employment Programme: Our Government implemented various self employment programmes for poverty eradication. The important self employment programmes are:
 A. Swarnajayanthi Grama Swarozgar Yojana (SGSY): This implemented though Self Help Groups, providing financial assistance for self employment.
B. Swarna Jayanthi Shahari Rozgar Yojana (SJSRY) and **Pradhana Manthri Rozgar Yojana (PMRY):** These two programmes provide financial assistance in the form of bank loans to set up industries.
2. Wage Employment Programmes: Such as **National Food for Work Programme (NFWP), Sampoorna Gramena Rozgar Yojana (SGRY)** and **Mahatma Gandhi National Rural Employment Guarantee Programme (MGNREGA).** MGNREGA provides guaranteed wage employment to every poor household for minimum of 100 days in a year.
3. Providing minimum basic needs to the people: The major programmes that aim to provide basic amenities are:
1. The three programmes which are aimed to improve the food and nutritional status of the poor are; **Public Distribution System (PDS) Intergraded Child Development Scheme (ICDS)** and **Mid-day Meals Scheme.**

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2. The programmes that aims to provide basic infrastructures in rural area are; **Pradhana Manthri Gram Sadak Yojana (PMGSY)** and **Pradhana Manthri Gramodaya Yojana (PMGY).**

3. The programmes that provide shelter to the poor are; **Indira Awas Yojana (IAY), Valmiki Ambedkar Awas Yojana (VAMBAY)** and **Basava Vasathi Yojana in Karnataka.**

4. Social security measures: The government has adopted various social security measures to help the poor: such as, **National social assistance programmes;** initiated by the central government to give pension for elderly people who do not have any one to care. In Karnataka it is named as **Sandhya Suraksha Yojana**. **Aam Aadmi Bima Yojana**; provides insurance to the head of family of rural landless households. **Bhagya Lakshmi Yojana**; provides financial support to the female child which is born in poor family

VII. Project Oriented Question: (5 marks)

1. Write the chart of poverty line.

Chart 4.2: The Chronic Poor, Transient Poor and Non-Poor

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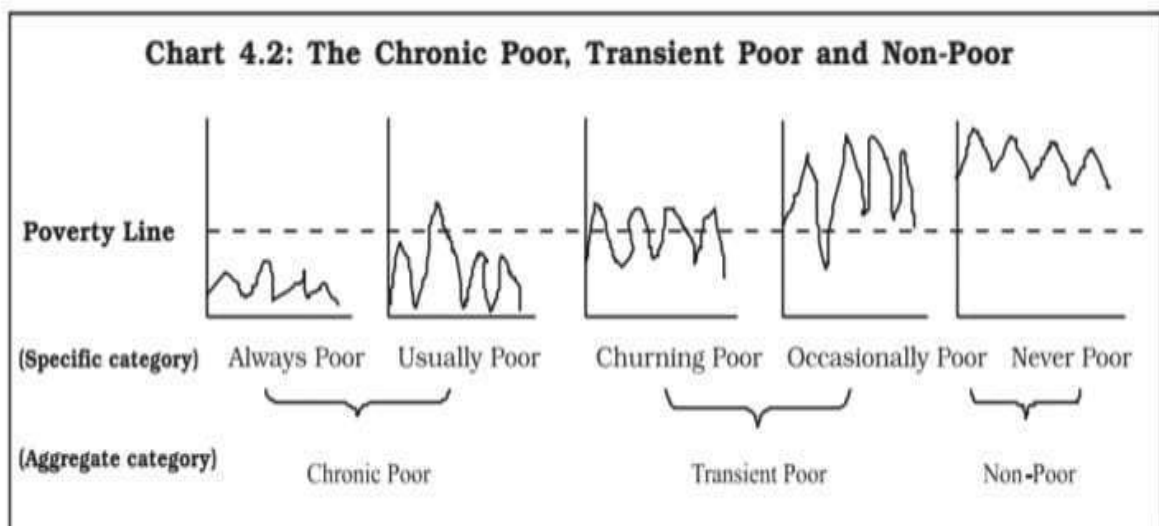
Chapter - 5
Human Capital Formation in India

I. Choose the correct answer: (Each question carries 1 mark)

1. Who can work better in the following:
a) A sick person
b) An unhealthy labourer
c) A person with sound health
d) None of the above

2. What per cent GDP as estimated by the Tapas Majumdar Committee should spend for education.
a) 4%
b) 6%
c) 8%
d) 5%

3. Education for all,
a) Still not a distant dream
b) Still a distant dream
c) Dream only
d) None of the above

II. Fill in the blanks: (Each question carries 1 mark)

1. Investment on Education is considered as one of main sources of **Human Capital**
2. Government of India has also started levying a 2 percent of **Education cess (Tax)** on all union taxes.
3. The revenue from education cess has been ear marked for spending on **Primary Education**
4. The contribution of the educated person to economic growth is more than that of an **Uneducated** person

III. Match the following: (Each question carries 1 mark)

A	B
1.More contribution to National Income	a. Global Growth Centres
2. Deutsche Bank	b. India and the Knowledge economy
3. World Bank	c. Literacy Rate
4. Education Achievements	d. A positive Development
5. Better Gender Equity	e. Skilled Labourer

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Solutions:

A	B
1.More contribution to National Income	**Skilled Labourer**
2. Deutsche Bank	**Global Growth Centres**
3. World Bank	India and the Knowledge economy
4. Education Achievements	**Literacy Rate**
5. Better Gender Equity	**A positive Development**

IV. Answer the following in a sentence/ word: (Each question carries 1 mark)

1. **Expand NCERT**
   National Council of Educational Research and Training
2. **State the reasons for migration.**
   1. Migration of people from rural areas to urban areas in India. This type of migration takes places mainly because of Unemployment.
   2. Migration of technical persons from India to other countries of the world. The technically qualified persons like doctors, engineers, managers, etc… migrate to other countries to better job and higher salaries.
3. **Expand UGC.**
   University Grants Commission.
4. **Expand ICMR.**
   Indian Council for Medical Research.

V. Answer the following in four sentences: (Each question carries 2 marks)

1. **State the need of investment on human capital.**
   Investment on human capital is very essential, because human capital formation raises the productivity and production as knowledgeable and skilled worker makes the better use of the resources.
2. **Why individuals spend money on education?**
   1. For increasing knowledge and skill.
   2. For increasing efficiency.
   3. For employment and income generating opportunities.
3. **What are the two major sources of human capital in a country?**
   1. Expenditure on education
   2. Expenditure on health
4. **What are the indicators of educational achievements in a country?**
   1. Literacy rate
   2. Gross enrolment ratio
   3. Drop out ratio
   4. Primary Completion rate
5. **What factors contribute to human capital formation?**
   1. Expenditure on education
   2. Expenditure on health
   3. Expenditure on training
   4. Expenditure on migration

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6. **What are the various forms of health expenditures?**
   1. Preventive medicine (Vaccination)
   2. Curative medicine
   3. Spread of health education (Social medicine)
   4. Provision of clean drinking water

VI. Answer the following in 12 sentences: (Each question carries 4 marks)

1. Education is considered to be an important input for the development of the nation. How? OR Examine the role of education in the economic development of a nation. (Imp 4 and 6 marks)

"Education refers to making each and every citizen as a literate". The investment made in education accelerates economic growth. **Education is an important tool of transforming man from his animal existence to human excellence.** The importance of education can be understood from the following points.
1. Gain of Knowledge: The important objective of education is acquiring knowledge. People can gain knowledge on social, political, economic, scientific, moral and other aspects of life.
2. Skill Development: Education helps in providing basic skills and encourages modern attitudes in the diverse segments of the population. This will, intrun improve their efficiency and productivity.
3. Removal of Ignorance: Education plays an important role in the removal of ignorance and unscientific thinking of people. It will be make people more rational, scientific and prudent.
4. Moral Development: Education is very important in the improvement of moral standards of people. This is supplementary to will power development and strengthening of ethical valves.
5. Individual Evaluation: Education is an avenue for individual development and evaluation. It teaches us the art of living. It is a base for intellectual progress.
6. Economic Development: Education is an engine of economic progress. It accelerates economic growth through improved intellectual progress, skill, efficiency and productivity of human beings.

2. How does investment in human capital contribute to growth?

As physical capital is essential for economic development of a country, human capital is also equally significant. Human capital contributes substantially not only towards increasing labour productivity but also stimulates innovations and creates ability to absorb new technologies. The following points the role of human capitial formation in economic growth.

1. Increases the standard of living of the people.

2. Increases the productivity of the workforce.

3. Brings positive transformation in the attitude of the people.

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4. Helps in increasing the level of production.

5. Longevity (Life expectancy) is increased.

3. Bring out the need for on-the –job-training foe a person.

On the job training is an arrangement where employees develop skills while they are working.

Technical training adds to the capacity of the people to produce more. On the job, training is needed to train workers in new technologies and modern ideas so that their productive skills can be improved. This is beneficial for the employees and the organisation. Following are the reasons for on the job training:

1. It improves the efficiency and moral of the employees.

2. It helps in the introduction of new technology and science.
3. It facilitates the better utilisation of raw materials.
4. It increases the mobility of the labour.
5. It increases the efficiency of persons which enhances the productivity. As a result the profitability industry increases in which he works.

4. Discuss the need for promoting women's education in India.

In India the women the backward from the beginning. Due to the man dominating society less attention has been paid towards women education. But now a day's equal opportunities are provided to the women. At this stage government is also promoting women education. Free education and scholarship are provided to the girls. Following are the needs for promoting women's education in India;
1. Women's education helps in increasing standard of living of the family.
2. It creates a strong female generation which helpful in economic development.
3. Women's literacy increases the national literacy ratio.
4. A women is the pillar of economy and a family as well.
5. It promotes women's economic independence.
6. It makes a positive impact on fertility rate and reduces birth rate.

VII. Answer the following in 20 sentences: (Each question carries 6 marks)

1. Discuss the following as a source human capital formation.
a) Health Infrastructure   b) Expenditure on migration

1. Health Infrastructure: Health refers to a state of complete physical, mental and social soundness. Health is another important source of human capital formation. A good health increases the physical capacity of human beings. Like education, health is also considered as a important input for the development of a nation as much as it is important for the development of an individual. Hence expenditure on health is an important source of human capital formation.
Various forms of health expenditure:
1. Preventive medicine (Vaccination)
2. Curative medicine

3. Spread of health education (Social medicine)

4. Provision of clean drinking water   etc….

2. Expenditure on migration: Movement of people one place to another place for different purposes is called migration. People sometimes migrate from one place to the other in **search of better job, and higher salaries.** We normally find two forms of migration.

1. Migration of people from rural areas to urban areas in India. This type of migration takes places mainly because of Unemployment.

2. Migration of technical persons from India to other countries of the world. The technically qualified persons like doctors, engineers, managers, etc… migrate to other countries to better job and higher salaries.

2. Examine the role of education in the economic development of a nation.

"Education refers to making each and every citizen as a literate". The investment made in education accelerates economic growth. **Education is an important tool of transforming man from his animal existence to human excellence.** The importance of education can be understood from the following points.

1. Gain of Knowledge: The important objective of education is acquiring knowledge. People can gain knowledge on social, political, economic, scientific, moral and other aspects of life.

2. Skill Development: Education helps in providing basic skills and encourages modern attitudes in the diverse segments of the population. This will, intrun improve their efficiency and productivity.

3. Removal of Ignorance: Education plays an important role in the removal of ignorance and unscientific thinking of people. It will be make people more rational, scientific and prudent.

4. Moral Development: Education is very important in the improvement of moral standards of people. This is supplementary to will power development and strengthening of ethical valves.

5. Individual Evaluation: Education is an avenue for individual development and evaluation. It teaches us the art of living. It is a base for intellectual progress.

6. Economic Development: Education is an engine of economic progress. It accelerates economic growth through improved intellectual progress, skill, efficiency and productivity of human beings.

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Chapter - 6
Rural Development

I. Choose the correct answer: (Each question carries 1 mark)

1. Most of the agricultural labourers are
a) Rich
b) Middle class
c) Poor
d) Upper class

2. Leather industry and tourism are
a) Non farm sector
b) Farm sector
c) Other sectors
d) Productive activities

3. The increased milk production can be mainly attributed to the successful implementation of
a) Operation food
b) Operation flood
c) Operation blue
d) Operation fruit

4. It is an agricultural allied activity
a) Poultry
b) Cottage industry
c) Small industry
d) Tourism

II. Fill in the blanks: (Each question carries 1 mark)

1. The growth of real India is possible only from the development of **Rural areas**
2. At the time of independence **Money lenders and traders** exploited the small and marginal farmers.
3. **Organic** farming is free from chemicals.
4. The fishing community regards the water body as **Life giving sources**

III. Match the followings: (Each question carries 1 mark)

A	B
1. NABARD	a. Milk production
2. Money lender	b. Institutional source
3.Green Revolution	c. Fruit production
4.Golden Revolution	d. Non-institutional force
5.White Revolution	e. Food production

Solutions:

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A	B
1. NABARD	**Institutional source**
2. Money lender	**Non-institutional source**
3. Green Revolution	Food production
4. Golden Revolution	**Fruit production**
5. White Revolution	**Milk production**

IV. Answer the following in a sentence/ word: (Each question carries 1 mark)

1. **What is rural credit?**
   The credit available for the rural people for both agricultural and non agricultural activities is known as rural credit.

2. **Give the meaning of agricultural marketing.**
   A process which involves in assembling, storage, processing, grading, packing and distribution of agricultural products all over the country through transportation is called agricultural marketing.

3. **What is organic farming?**
   A system of farming that uses traditional practices of farming application of animal manure, compost and natural pests control is called organic farming.

4. **Expand PDS.**
   Public Distribution System.

V. Answer the following in four sentences: (Each question carries 2 marks)

1. **Name the areas which are challenging and need fresh initiatives for rural development.**
   1. Implementation of land reforms
   2. Development of human resources

2. **Give the meaning of Rural Development.**
   The improvement of the socio economic life of rural people by providing basic infrastructures and enables them to engage in productive activities is called rural development.

3. **How money lenders exploited the rural farmers.**
   1. The charge very high rate of interest on loans
   2. Manipulating the accounts to keep them in debt trap
   3. They do not give any proper receipt to the farmers
   4. They force the farmers to sell their product to them at low price

4. **Name the institutional sources of rural credit.**
   1. National Bank for Agriculture and Rural Development. (**NABARD**)
   2. Commercial banks
   3. Regional Rural Banks (**RRB_S**)
   4. Co-operative credit societies

5. **Give two examples for alternative market.**
   1. Rythara Sante in Karnataka.
   2. Rytha Bazaar in Andhra Pradesh

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6. Name the two life-giving sources of fishing community.
   1. Rivers
   2. Natural Aquatics
   3. Lakes
   4. Ponds

7. Mention the benefits of organic farming.
   1. Production of healthy nutritious food grains.
   2. Reduces soil erosion and water contamination
   3. More demand for organic products
   4. A good returns from organic farming.

VI. Answer the following in 12 sentences: (Each question carries 4 marks)

1. List out the problems of rural development.

Rural development is thus a wider term and hence it requires development in various directions in the rural sector. The following are the major problem of rural development.
   1. Development of human resources
   2. Land reforms measures
   3. Developmental of Infrastructure
   4. Creation of Permanent Assets
   5. Development of cottage and small scale industries

2. Explain the Drawbacks of agriculture market.

At the time of independence, agricultural marketing system in India was full of many defects and obstacles that hinder mechanism of agricultural marketing. They are as follows;

   1. Lack of Grading and Standardisation: There is a lack of proper grading and standardisation of agriculture produce. As a result the farmers are forced to sell their produce in one common lot.

   2. Lack of Transport Facilities: Transport facilities are highly inadequate in India. There is a shortage of all weather roads. Farmers experience a lot of difficulty in carrying produce from producing centres to marketing places.

   3. Exploitation of Middlemen: There are a large number of middlemen between the farmers and the final consumers. Therefore, the middlemen get the maximum benefit but the farmers get the minimum.

   4. Lack of Warehouses: There is the absence of proper warehousing facilities in the villages. The few that are available are not scientific.

   5. Lack of Market Information: The farmer does not get the necessary information regarding prices, demand and supply of their produce in the market. As a result farmers are forced to sell their produce at low price.

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3. Write a short note on alternative markets.

The market where farmers directly sell their produce to consumers, which increases their income is known as alternative market. Now in the country alternative marketing channels are also emerging. Through these channels farmers directly sell their produce to the consumers, Hence this system increases their share in the price paid by the consumers, some examples of these are as follows.

1. Rythara Sante in Karnataka
2. Rytha Bazaar in Andhra Pradesh
3. Apani Mandi in Punjab, Haryana and Rajasthan
4. Hadastar Mandi in Pune, Maharashtra

VII. Answer the following in 20 sentences: (Each question carries 6 marks)

1. Explain the measures taken by the government to improve the Agricultural Marketing System.

An efficient marketing system can be important measures for raising agricultural productivity. After independence, the government of India adopted a number of measures to improve the system of agricultural marketing. Some important measures are discussed below:

1. Organisation of Regulated Markets: Regulated markets have been organised by the government with a view to protect the farmers from the malpractice of sellers and brokers. They are set up in most of the town and cities.

The important functions of regulated marketing committees are as follows:

1. Fixation of charges for weighing, commission, etc….
2. Enforcing the use of standardised weights and measures.
3. Prevention of unfair practices.
4. Provision of market information etc…

2. Co-operative Marketing Societies: The government has encouraged the setting up of a large number of co-operative marketing societies for the efficient marketing of agricultural products. Co-operative marketing system has various advantages. They are:

1. Increases bargaining strength of the powers.
2. Promotes direct dealings with the buyers.
3. Grading and Standardisation
4. Provision of Credit
5. Market intelligence
6. Providing Cheaper transport facilities etc….

3. Provision of Infrastructural Facilities: Provision of infrastructural facilities such as transportation, godown and storage, processing units is also very important for the improvement in the agricultural marketing system. This enhances bargaining power of the farmers.

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3. Write a short on the following:

a) Horticulture b) Fisheries

1. HORTICULTURE: Horticulture is one of the types of farming in which cultivation of land is undertaken to grow crops like fruits, vegetables, flower medicinal plants, spices and plantation of crops.

Uses of Horticulture: The following are the uses of horticulture

1. Horticulture helps in generating employment opportunities.
2. Horticulture improving the economic conditions of farmers.
3. Horticulture enhancing exports
4. Providing nutritional security to the people

Flower harvesting, nursery maintenance, hybrid seed production, tissue culture, propagation of fruits and flowers and food processing have become remunerative job options for women in rural area

2. FISHERIES: India is the third largest producer of fish in the world. As per 2010-11 the fishery sector is a source of livelihood of 14 million people who are fully or partially engaged in this sector. **Marine fishing policy** (2004) laid the foundation for a sustainable level of marine fish production keeping in view ecological and bio diversity considerations.

Life giving sources fishing community; Rivers, Lakes, Tanks, Natural Aquatics, Pounds, Streams, Oceans and Sea are the life giving sources for the fishing community.
The following points are the importance of fisheries in India.

1. Profitable employment
2. Food supply
3. Fish manure
4. A contribution to National Product etc….

3. List out the benefits of Organic farming.

The farming which is done with the use of organic manure bio-fertilizers with a view to restore, maintain and enhance ecological balance is called organic farming. Organic farming is a form of agriculture which excludes the use of chemical fertilizers and pesticides. Organic agriculture can thus be considered as a basis of sustainable agriculture and thereby sustainable development. The following are the important benefits of the organic farming.

1. Production of Healthy and Nutritious Food Grains: Organic farming provides healthy food with more nutritious valve compared to chemical farming.

2. Reduces Soil Erosion and Water Contamination: Organic reduces soil erosion and water contamination. It increases bio-diversity and thus sustains and enhances the health of eco systems and organisms.

3. More Demand for Organic Products: Organic farmers can take advantages of growth domestic and international demand of organic foods. It can thus provide higher income to organic farmers.

4. A Good Returns come from Organic Farming: Organic farming generates income through export as the demand for organically grown crops particularly from foreign countries has increased.

5. Maintaining Environmental Health: Organic farming helps in maintaining environmental health and reduces pollution. It ensures optimum utilization of resources for short term benefits and conserves them for future generations.

6. Improving the Quality of Life: Organic farming system is beneficial for improving the quality of life to the people by increasing the longevity of life.

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Chapter - 7
Employment: Growth, Information and Other Issues

I. Choose the correct answer: (Each question carries 1 mark)

1. GDP stands for
a) Gross domestic product
b) Gross domestic price
c) None of the above
d) Gross dollar price

2. Which of the following activity is not considered as productive work
a) House hold activities
b) Agricultural activities
c) Service sector
d) Industrial activities

3. Work who own and operate an enterprise to earn their livelihood is called
a) Ministers
b) Public servant
c) Self employees
d) Government doctor

4. Urban people are mainly engaged in the
a) Primary sector
b) Service sector
c) Mining
d) Agriculture

5. Those who are working in the formal sector enjoy
a) Economic benefits
b) Social security benefits
c) Educational advantages
d) Cultural benefits

II. Fill in the blanks: (Each question carries 1 mark)

1. **Mahathma Gandhiji** insisted upon education and training through variety of works including craft.

2. Majority of workforce reside in **Rural** area in our country.

3. The construction workers are known as **Casual wage labourers**

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4. **Self employed** is the main source of employment for majority of workers in India.

5. The Government protects the rights of workers thorough **Social Security measures**

6. In India disguised unemployment can be seen more in **Agriculture** sector.

III. Answer the following in a sentence/ word: (Each question carries 1 mark)

1. **Give the meaning of work force.**

   The part of the labour force **which is employed** is called work force.

2. **Define jobless growth.**

   A situation when the economy is able to produce more goods and service without a proportionate increase in employment opportunities is called jobless growth.

3. **What is seasonal unemployment?**

   A situation in which people become unemployed due to change in season is called seasonal unemployment.

4. **Expand ILO.**

   International Labour Organisation.

5. **What you mean by formal sector establishment?**

   All the public enterprises and private establishments, which employ 10 or more hired workers are called formal sector establishment.

IV. Answer the following in four sentences: (Each question carries 2 marks)

1. **Why are regular salaried employees more in urban areas than in rural areas?**
   Regular salaried employees are in urban areas than in rural areas because;
   1. In urban areas, tertiary sector dominates and in tertiary sector, more regular salaried jobs are there.
   2. Regular salaried jobs call for higher skill requirement which is more in urban areas.

2. **Name any four kinds of unemployment.**
   1. Open unemployment
   2. Disguised unemployment
   3. Seasonal unemployment
   4. Urban employment

3. **Who are self employed? Give two examples.**
   A person who owns and operates a company or enterprise to earn his or her livelihood is self employment.
   For example: 1. Own petty shop   2. Radio, TV repairs etc....

4. **Name the types of rural unemployment.**
   1. Open unemployment
   2. Disguised unemployment
   3. Seasonal unemployment
   4. Under employment

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5. **Name the Three sectors of the economy.**
   1. Primary sector
   2. Secondary sector
   3. Tertiary or Service sector

6. **Distinguish between formal and Informal sector labourers.**

Formal sector workers	Informal sector workers
1. Formal sector is an organised sector	1. Informal sector is an unorganised
2. Only registered business units in the formal sector.	2. Registered units as well as unregistered are in the informal sector.

V. Answer the following in 12 sentences: (Each question carries 4 marks)

1. Write a note on Informal sector.

The workers who are working informal sector establishments are called informal sector workers. The informal sector includes millions of farmers, agriculture workers, owners and workers of small enterprises, vendor's contraction workers, small traders, casual wage workers, self employed workers etc…

As per 2011 census 93% workers are informal workers. The following are important features of informal sector.

1. Informal sector is an unorganised sector
2. Registered units as well as unregistered units are in the informal sector.
3. Informal sector workers are generally, self employed and casual workers
4. Strong trade unions are absence in the informal sector
5. Informal sector workers, does not have holiday facility
6. No benefits of pension etc….

2. List out the economic activities in different sectors.

Activities which are concerned with economic aspect or are concerned with money are called Economic Activities. An economic activity means that activity which is based on to the use of scare resources for the satisfaction of human wants.

In our country the major economic activities are classified into 3 main sectors they are;

1. Primary sector: Primary sector also includes Agriculture and allied activities, poultry, fishing, dairying, horticulture, sericulture, floriculture, mining, quarrying etc….

2. Secondary sector: Secondary sector also includes Manufacturing, construction, electricity, gas, water supply, power projects etc….

3. Tertiary sector: Tertiary sector also includes Transport, communication, banking, insurance, real estate, share market, health, education, public admistration, hotel management etc….

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3. Explain the types of unemployment.

A situation in which people who are willing and able to work at existing wages are not getting suitable jobs is called unemployment.

Types of unemployment:

1. Seasonal unemployment: A situation in which people become unemployment due to change in season is called seasonal unemployment.

2. Disguised unemployment: A situation in more people is engaged any economic activity than the number of workers marginal production is close zero is called disguised unemployment.

3. Open unemployment: A situation where large labour force does not get work opportunity that may yield them regular income is called open unemployment.

VI. Answer the following in 20 sentences: (Each question carries 6 marks)

1. What role does the government play in generating employment opportunities in India?

The government of India has introduced a number of measures for employment generation. The following are the important measures.

1. Employment Oriented Investment and Production Programmes: India's problem is double folded in nature. We are required to increase both production and employment simultaneously. For this adoption labour intensive technique may prove more fruitful. Hence more stress should be given on cottage and small scale industries, agriculture based rural industries, irrigation, dairy development, fishing, and other similar programmes.

2. Educational Reforms: Indian education system should be made employment oriented. There should be more stress on vocationalisation and educational plan should be prepared in such a way the educated youth do not face the problem of unemployment.

3. Encouragement for Self Employment: There is a large number of people who are self employed they own occupations. In future also, this sector has large possibilities. Therefore, the government should provide all sorts of facilities and encouragements to the people engaged in self employment.

4. Increase in the Rate of Capital Formation: Increase in the rate of capital formation is very much essential to provide employment to the fast increasing population in India.

5. Special Employment Generation Programmes: In view of these the government has launched several special employment generation and poverty alleviation programmes.

6. Skill Development: With the improvement in technology and change in the method of production, the demand for skill labour has increased in the country. Hence, skilled development can increase employment opportunities for the unemployment youths.

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2. Discuss the informalisation of Indian work force.

Indian economy is divided into formal and informal sectors. Formal sector comprises all the public enterprises and those private sector enterprises which employ 10 hired workers or more. Those who work in the formal sector establishments are termed as formal sector workers. The rest is informal sector and its workers are informed sector workers.

1. Out of total 400 million workers in the workers in the country, only 28 million workers are engaged in the formal sector.

2. Only a small percentage (just 7 percent) of the total workforce of the country is employed in the formal sector.

3. The informal sector in the economy is quite large. It provides employment to around 93 percent of the workforce.

4. Most of the workers in the informal sector do not get maternity benefit, provident fund, gratuity and pension etc….

5. They normally get lower wages compared to the workers in the formal sector.

6. The informal sector is mainly self-employed sector in which due to lack of capital, skill and technology, most of the employment continues to be low level employment.

2. Write a note on the changing structure in the employment formation.

Employment generation is one of the main objectives of our economic policy and economic planning. The main indicators of economic development are growth of employment and increasing GDP. Our 60 years of planned development has been aimed at the expansion of economy through increase in GDP and employment.

1. Primary sector generating **52%** of both direct and indirect employment and contributing only **15%** to GDP. Because agriculture is seasonal occupation and its products are perishable in nature. This shows agriculture is still less profitable.

2. Secondary sector generates **22%** employment and contributes **26%** to GDP. Economic reforms have brought Global competition, foreign direct investment (FDI), foreign technology, Disinvestment and privatisation of public industries lead to expansion in the production of secondary sector.

3. Service sector generated **26%** of employment and contributing **59%** to the GDP. It is the **"ENGINE OF GROWTH"** of the Indian economy. Information technology by contributing **one third (1/3)** of total output of services becomes one the fastest growing service sub-sector. Cities like Bangalore, Hyderabad, Noida, Pune etc… become Major IT Hub in the country. Other than this, trade, transport, finance etc… also growing and contributing to both GDP and employment.

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VII. **Assignment and project-oriented Question. (5marks)**

1. **Identify the formal and informal workers in the following list.**

   1. A petty shop owner   2. Hand loom weaver   3. SBI Cashier   4. A Street vendor

   5. Government Hospital nurse 6. Tailor 7. Police 8.Government Primary School teacher   9. Revenue Inspector   10. Agricultural labours

Formal workers	Informal workers
1. SBI Cashier	1. A petty shop owner
2. Government Hospital nurse	2. Hand loom weaver
3.Government Primary School teacher	3. A Street vendor
4. Revenue Inspector	4. Tailor
5. Police	5. Agricultural labours

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Chapter - 8
Infrastructure

I. Choose the correct answer: (Each question carries 1 mark)

1. Which state in India is popularly known as " God's Own Country"
a) <u>Kerala</u>
b) Kashmir
c) Goa
d) Himachal Pradesh

2. Which state has achieved Excellency in Information Technology
a) Rajasthan
b) West Bengal
c) Tamilnadu
d) <u>Karnataka</u>

II. Fill in the blanks: (Each question carries 1 mark)

1. Infrastructure facilities can be classified in to **Two(2)** types

2. Indian System of Medicine includes **Five (5)** systems.

III. Answer the following in a sentence/ word: (Each question carries 1 mark)

1. Mention the state achieved prosperity in Agriculture and Horticulture.

Haryana, Punjab, Himachal Pradesh etc...

2. Identify the state which has most achieved state in India.

Kerala (99.99%)

3. Write any one industrially most advanced state in India.

1. Maharashtra   2. Gujarath

4. Why Bangalore city attracts many multinational companies?

Because Bangalore city have very good infrastructural facilities.

5. What is infrastructure?

The facilities, activities and services which support, operation and development of other sector of the economy is called infrastructure.

6. What is the meaning of Health?

A state of complete physical, mental and social soundness of man is called Health.

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IV. Answer the following in four sentences: (Each question carries 2 marks)

1. **What are the Economic Infrastructures?**
   Infrastructure which is directly concerned with the needs of production sectors such as: Agriculture, irrigation, industry, Trade and commerce, energy etc… is called physical or Economic infrastructure.

2. **Which are the Social Infrastructures**
   Infrastructure which is concerned with the supply of services to meet the basic needs of the society is called Social Infrastructure. Such as: Education, health, training, invention, supply of water, electricity etc…..

3. **What is the meaning of Global Burden of diseases?**
   It is an indicator used by experts to gauge the number of people dying prematurely due to a particular disease as well as the number of years spent by them in a state of disability.

4. **Which are the health indicators?**
   1. Curde birth and death rate
   2. Infant Mortality rate
   3. Life Expectancy
   4. Literacy Rate

5. **Which are the components of Indian Systems of Medicine?**
   A- Ayurveda
   Y- Yoga
   U- Unani
   S- Sidda
   H- Homeopathy

V. Answer the following in 12 sentences: (Each question carries 4 marks)

1. Explain the role of Infrastructure in the development of a modern economy?

Infrastructure contributes to economic development of a country both increasing the productivity of the factors of production and improving the quality of life of its people. The following points indicate the need and importance of infrastructure for an economy.

1. Smooth Functioning of the Economy: Infrastructural facilities are very necessary for smooth functioning of an economy. They are like wheels of development without which economy cannot function properly.

2. Development of Agriculture: The development of agriculture depends, to a considerable extent, on the adequate expansion and development of irrigation, power, credit facility, transportation, marketing, education and education and training, research and development and other facilities.

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3. Development of Industry: Industrial production requires not only machinery and equipment but also such economic and social infrastructure as energy, skilled manpower, management, banking and insurance, marketing, transport services, etc…

4. Improvement in Productivity: Infrastructure development such as transport facilities, education and training, development of science and technology, research and development, etc… improve productivity significantly.

2. Briefly explain the state of Infrastructure in rural India.

The investment of government on infrastructure is inadequate. At present the private sector is playing every pivotal role in the infrastructure development.

1. A majority of our people still live in rural areas with poor facilities.

2. Despite so much technical progress in the world, our rural women are still using bio fuels, such as crop residues, dried dung, and fuel wood to meet their energy requirements.

3. As per 2011 census, in rural India, only 67.2% households have electricity connection and rest of the people still use kerosene.

4. About 90% of rural households use bio fuels for cooking.

5. Tap water availability is limited to only 24% rural households.

6. About 76% of the population of India drink water from open sources, such as wells, tanks, pounds, rivers, lakes etc..

7. Access to improved sanitation in rural areas is only 22%

8. Though infrastructure is the foundation of development, India spends only 5% of its GDP on infrastructure.

3. Write a note on private health infrastructure in India.

A healthy man power is great asset of a nation as it leads to greater output. Efficiency of worker depends considerably on their health, balanced and nutritional diet and medical care are the two important attributes of good health.

In India private sector is playing an important role in the development of health infrastructure to provide health care to the people.

1. At present, more than 70% of the hospitals in the country are run by the private sector and they control nearly two fifths of beds available in the country's hospitals.

2. Similarly, nearly 70% of dispensaries are run by the private sector.

3. Private sector provides health care for 80% of out patients and 60% inpatients.

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4. Apart from it, private sector is also making significant contribution in medical education and training, medical technology and diagnostics, manufacture and sale of pharmaceuticals, hospital construction and in the provision of medical services.

As a consequence of the liberalisation measure, industrialists and pharmaceutical companies and NRI$_S$ have set up **super speciality or multi speciality hospitals.** They provides to India's rich class and medical tourists.

VI. Answer the following in 20 sentences: (Each question carries 6 marks)

1. Write a note on energy.

It is unimaginable to think of producing anything without using energy. The process of economic of economic development demand increasing higher level of consumption of energy, because energy is essential input of all productive activities such as industries, agriculture and other allied activities, house hold purposes like lighting, heating and cooking.

Sources of energy are broadly classified, as conventional sources of energy and non-conventional sources of energy.

1. Conventional sources of energy: Conventional sources of energy are again classified into two types.

A. Commercial sources of energy are coal, petroleum and electricity, as they are bought and sold. These sources are generally exhaustible (with the exception of hydropower)

B. Non commercial sources of energy are fire wood, agricultural waste and dried dung, as they are found in nature. These are generally renewable sources.

More than 60% of Indian households depends on conventional sources of energy for meeting their regular cooking and heating needs.

2. Non conventional sources of energy: Solar energy, wind power and tidal power are termed as non conventional sources of energy. Being a tropical country, India has almost unlimited potentiality for producing all these three types of energy, if some appropriate cost effective technologies are used.

2. Write an appraisal on the indicators of health and health infrastructure.

Health infrastructure refers to improving the basic needs of the people in terms of health services.

Health infrastructure includes hospital, trained staff like doctors, nurses, and medical testing facilities. It also includes development of pharmaceutical industries.

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1. Over the years India has built up a strong health infrastructure.

2. India has built up a vast health infrastructure and manpower at different levels. At the village level, a variety of hospitals, technically known as primary health centres (PHCs), have been set up by the government. India also has a large number of hospitals run by voluntary agencies and the private sectors.

3. Hospitals which have better health care facilities are called secondary sector.

4. Tertiary sector includes many premier institutes which impart quality medical education and conduct research and provide specialized health care. Examples include All India Institute of Medical Sciences, Post Graduate Institute etc…

3. Write a note on Women health in India.

Women constitute about half of the total population in India. But they suffer from many disadvantages as they are compared to men in the areas of education, participation in economic activities and health care. The following points indicate the health status of women in India.

1. The decline in the child sex ratio in the country from 945 in 1991, to 927 in 2001 and 914 in 2011 points to the growing incidence of female feticide in the country.

2. About 300000, girls at the age of 15 are not only married but have already born children at least once.

3. Abortions are also major cause of maternal mortality in India.

4. More than 50% of the married of 15-49 age suffer from anemia and nutritional deficiency. It is one of the important reasons for maternal deaths in the country.

Thus the status of women health has become a matter of great concern and much has to be done in this area. In recent years government provide various facilities for the improvement of women health. They are:

1. Maternity Facilities in Hospitals

2. Rural Health Facilities

3. Janani Suraksha Yojana (JSY)

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Chapter - 9
Environment and Sustainable Development Exercise

I. Fill in the blanks: (Each question carries 1 mark)

1. India supports approximately 17% of the world's population on a mere percent **2.5%** of the world's geographical area.

2. Forest are **Renewable** resource.

3. Thermal power plants emit large quantities of **Coal Ash**

II. Match the followings: (Each question carries 1 mark)

A	B
1.Non renewable resource	a. Sustainable development
2. Bio pest control	b. Air population
3. Encroachment into forest	c. Water resource
4. Industrialisation	d. Land degradation
5. Renewable resource	e. LPG

5. Solutions:

A	B
1.Non renewable resource	**a. LPG**
2. Bio pest control	**b. Sustainable development**
3. Encroachment into forest	**c. Land degradation**
4. Industrialisation	**d. Air population**
5. Renewable resource	**e. Water resource**

III. Answer the following in a sentence/ word: (Each question carries 1 mark)

1. **What is meant by environment?**

   The sum of all living and non living things that surround an organism or group of organisms is called environment.

2. **Give the meaning of renewable resource.**

   Those resources which can be used again and again for thousands of years without any loss in them are called renewable resources.

3. **Give the meaning of non- renewable resource.**

   Those resources which can be used only once are called non renewable resources.

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4. What is meant by absorptive capacity of environment?

The ability of the environment to absorb degradation is called absorptive capacity of environment.

5. What is sustainable development?

Sustainable development means "Meeting the needs of the present generation without compromising with the needs of future generation".

6. Expand CNG.

Compressed Natural Gas.

IV. Answer the following in four sentences: (Each question carries 2 marks)

1. Mention any four functions of environment.
1. Environment supplies resources
2. Assimilation of waste
3. Sustainability of life
4. Aesthetic services

2. Name the renewable and non- renewable resources.
Renewable Resources: Water, Land, Forest, Fish etc…
Non- Renewable Resources: Petroleum, Coal, Iron ore, LPG etc…

3. What do you mean by carrying capacity of the environment?
Resource extraction is not above the rate of generation of the resource and the waste regenerated are within the assimilating capacity of the environment is called carrying capacity of environment.

4. Write any two threats to environment in our country.
1. Ozone Layer Depletion
2. Global warming

5. Name the types of medical systems included in AYUSH.
A- Ayurveda
Y- Yoga
U- Unani
S- Sidda
H- Homeopathy

V. Answer the following Assignment and project oriented questions: (Each question carries 5 marks)

1. Prepare a list of causes of land degradation in India.

1. Loss of vegetation due to deforestation.

2. Encroachment of forest land.

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3. Non adaption of adequate soil conservation measures.

4. Wrong crop rotation.

5. Over use of fertilizers and pesticides.

6. Improper planning and management of irrigation systems.

7. Excess extraction of ground water.

8. Shifting Cultivation.

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Chapter- 10
Development Experience of India a Comparison with Neighbours

I. Fill in the blanks: (Each question carries 1 mark)

1. The Great Leap Forward campaign was initiated in the year **1958**
2. **India** Country has the largest work force in agriculture.
3. Both India and Pakistan have followed **Mixed Economy** model of development
4. Life expectancy at birth (years) is highest in **China**

II. Answer the following in a sentence/ word: (Each question carries 1 mark)

1. **When were reforms introduced in all the three economies – India, China and Pakistan?**

   1. India – 1991   2. China – 1978   3. Pakistan - 1988

2. **Give the meaning of infant mortality rate.**
   The number of children dying before celebrating their **first birth day per 1000 children** born during a year is called infant mortality rate.
3. **Who introduced, the Great Proletarian Cultural Revolution?**
   Mao in 1965
4. **Mention the major reason for the low population growth in China.**
   One child Norm
5. **Name the campaign initiated in China with the aim of industrialisation.**
   Great Leap farward.

IV. Answer the following in four sentences: (Each question carries 2 marks)

1. **Why are regional and economic groupings formed?**

   Regional and economic groupings are formed to strength their own domestic economies.

2. **What is a Commune system?**
   The system in which all individual ownership of land was done with the favour of communal ownership is called commune system.
3. **Give the meaning of Liberty indicator.**
   The measure of extent of demographic participation in social and political decision making is called liberty indicator.
4. **Write two implications of the 'one child norm' in China.**

   1. One child norm in China has successfully reduced the growth rate of population.

   2. After a few decades in China there will be more elderly people in proportion to young people.

IP.U.C. ANNUAL EXAMINATION FEBRUARY-2018   ①

SUBJECT : ECONOMICS (22)

TIME 3 Hrs. 15 Mins.   **MARKS : 100**

Instructions :
1. Write the question numbers legibly in the margin.
2. Answer for a question should be continuous.

PART-A

I   Choose the correct answer :   **1x5=5**

1. Economics is the study of mankind in _____ of life.
   a) the ordinary business   b) the weekly business
   c) special business   d) extraordinary business

2. In qualitative classification is done on the basis of
   a) Attributes like physical status, nationality etc
   b) Characteristics like age, height, production etc.,
   c) Time such as hours, days, week etc.,
   d) place like village, town, block, district. etc.,

3. In India census is carried out once in
   a) 5 years   b) 10 years   c) 1 year   d) 2 years

4. The act provides guaranteed wage employment to every poor household for minimum of 100 days in a year is carried.
   a) PMRY   b) SJSRY   c) MGNREGA   d) SGSY

5. Which state in India is popularly known as "God's own Country"
   a) Kerala   b) Kashmir   c) Goa   d) Himachal pradesh

II Fill in the blanks :   **1x5 = 5**
6. Data classified according to geographical areas is called _____.
7. A measure that divides the series in to hundred equal parts, is called _____.
8. Chairperson of planning commission _____.
9. Economic reforms were introduced during _____.
10. Indian System of medicine includes _____ system.

III 11. Match the following :   **1x5=5**

A	B
1. Σ N	1. producers price Index
2. PPI	2. Literacy rate
3. Educational attainment	3. Total no. of observations
4. Golden revolution	4. Land degradation
5. Encroachment in to forest	5. Fruits production

IV Answer the following questions in a sentence / word :   **1x5=5**
12. What is correlation ?
13. Define the Dispersion ?
14. What do you mean by seasonal unemployment ?
15. Give the meaning of Infant mortality rate.
16. Which country has the heighest life expectancy ?

(P.T.O.)

PART-B

V Answer any Four of the following questions in about four sentences each:
2x4=8

17. Mention the two sources of Data.
18. Mention the types of variable.
19. How can you obtain a frequency curve ?
20. What is Mean deviation ? Which average is used to find it ?
21. Write any four features of Index Numbers.
22. Mention the name of any four statistical tools.

VI Answer any Five of the following questions in about four sentences each:
2x5=10

23. What are the infrastructure facilities developed during colonial rule.
24. What do you mean by dis investment ?
25. List the features of poorest households.
26. What are the various forms of health expenditures ?
27. Mention the benefits of organic forming.
28. Who are self employed ? Give two examples.
29. How infrastructure facilities have been classified ?

PART-C

VII Answer any Three of the following questions in about Twelve sentences each:
4x3=12

30. Briefly explain how statistics helps to study economics.
31. Briefly explain sampling errors.
32. Write a note on classification of data.
33. Calculate the arithmetic mean from the following data

X :	5	10	15	20	25	30	35	40
Y :	5	7	9	10	8	6	5	2

34. Calculate weighted average of price relative index from the following data

Items	Weight in %	Base year price (Rs)	Current year price (Rs)
A	40	2	4
B	30	5	6
C	20	4	5
D	10	2	3

VIII Answer any Four of the following questions in about Twelve sentences each:
4x4=16

35. The traditional handicraft industries were ruined under 'British rule' justify this statement.
36. Give the meaning and the importance of small-scale industries.
37. Explain the drawbacks of agriculture market.
38. Write a short note on women health in India.
39. Write a note on Eco-friendly traditional knowledge and practices of our country.

(P.T.O.)

40. Compare and contrast the development of India, China and Pakistan with respect to some salient Human Development Index indicators.

PART-D

IX Answer any Two of the following questions in about Twenty sentences each: 6x2=12

41. Explain the method of constructing a frequency polygon with an example.

42. The yield of wheat per acre for 10 districts of a state is as under :

District	1	2	3	4	5	6	7	8	9	10
Wheat :	12	10	15	19	21	16	18	9	25	10

Calculate standard deviation and co-efficient variation.

43. Calculate Karl Pearson's co-efficient of correlation for the following data using deviation method

X	12	14	16	18	20	22	24	28	30
Y	36	33	30	27	24	21	18	15	12

X Answer any Two of the following questions in about Twenty sentences each: 6x2=12

44. Briefly explain the effects of reforms on Agriculture sector.

45. Examine the role of education in the economic development of a nation.

46. What role does the government play in generating employment opportunities in India?

PART-E

XI Answer any Two of the following project oriented questions: 5x2=10

47. As per recorded temperature per two hours in a day from 6 am to 6 pm, calculate the range and mean temperature of a day.

48. Suppose you are a resident of a village, suggest a few measures to tackle the problem of poverty.

49. Identify the formal and informal workers in the following list.
    1. A petty shop owner.
    2. Hand loom weaver.
    3. SBI Cashier
    4. A street vendor
    5. Government hospital Nurse.
    6. Government primary school teacher.
    7. Tailor.
    8. Revenue inspector
    9. Police.
    10. Agricultural labourers.

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I P.U.C. ANNUAL EXAMINATION JANUARY/FEBRUARY-2019 ①

SUBJECT : ECONOMICS (22)

Time : 3 Hrs. 15 Mins.
Maximum Marks : 100

Instructions :
1. Write the question number legibly in the margin.
2. Answer for a question should be continuous.

PART-A

I   Choose the correct answer :   5x1= 5

1. Scarcity is the root of
   a) All economic problems   b) Social problems
   c) political problems   d) All problems

2. The Index numbers of which year price is assumed to be 100.
   a) current year   b) base year   c) selection of prices   d) None of these

3. Railway transport introduced in India in the year.
   a) 1835   b) 1776   c) 1850   d) 1853

4. Which is not the goal of five year plan.
   a) Growth   b) Modernization   c) Self-efficiency   d) Self-reliance

5. G.D.P. stands for
   a) Gross Domestic product   b) Gross Domestic price
   c) Gross Dollor price   d) None of the above

II   Fill in the blanks :   5x1 = 5

6. Body of the table contains _____.

7. A measure that divides the series into hundred equal parts is called _____

8. Infrastructure facilities can be classified into _____ types.

9. Investment on Education is considered as one of the main source of _____

10. _____ farming is free from chemicals.

III   11. Match the following :   5x1=5

A	B
1. Pilot survey	a) Positional value
2. Median	b) Literacy rate
3. White Revolution	c) Pre-testing of questionnaire
4. NABARD	d) Milk production
5. Educational achievement	e) Institutional source

IV   Answer the following questions in a word or sentence each :   5x1=5

12. What is Dispersion ?

13. Expand N.S.S.O.

14. What is infrastructure ?

15. What is meant by environment ?

16. What type of Economic System is followed in Pakistan ?

(P.T.O.)

PART-B

V Answer any Four of the following questions in about four sentences each:
4x2=8

17. Mention the two sources of data.

18. Give the formula to find out mid-point ?

19. What are four kinds of classification used in tabulation ?

20. Mention types of correlation ?

21. Calculate the value of the median from the following figures.

    X : 5, 7, 9, 12, 11, 8, 7, 15, 25.

22. Mention the name of any four statistical tools ?

VI Answer any Five of the following questions in about four sentences each:
5x2=10

23. What were the main causes of Indian agricultural stagnation during the colonial period ?

24. Who are the rural poor ? Give the examples.

25. State the meaning of human capital.

26. Name the two life giving sources of fishing community.

27. Name the institutional sources of rural credit.

28. Name the three sectors of economy.

29. Name the types of medical systems included in AYUSH.

PART-C

VII Answer any Three of the following questions in about Twelve sentences each:
3x4=12

30. Briefly explain how statistics helps to study economics.

31. Do sample survey provide better results than census ? Give reasons for your answer.

32. Calculate the arithmetic mean by direct method from the following data

X	5	10	15	20	25	30	35	40
f	5	7	9	10	8	6	5	2

33. The yield of wheat per acre for 10 districts of a state is as under

District	1	2	3	4	5	6	7	8	9	10
Wheat	12	10	15	19	21	16	18	9	25	10

Calculate the mean deviation from median for the above data.

34. Mention the difficulties in construction of consumer price index.

(P.T.O.)

VIII Answer any Four of the following questions in about Twelve sentences each: 4x4=16

35. 'The traditional handicraft industries where ruined under British rule' Justify this statement.

36. Explain the drawbacks of Agricultural Market.

37. List out the major problems of rural development.

38. Explain the functions of environment.

39. Briefly explain the state of infrastructure in rural India.

40. What are the various indicators of Human development ?

PART-D

IX Answer any Two of the following questions in about Twenty sentences each: 2x6=12

41. Explain ogive with proper diagrams.

42. Calculate Q_1, Q_2 and Q_3 from the following data.

15, 21, 26, 30, 40, 45, 50, 54, 60, 65, 70,

43. The yield of rice per acre for 10 districts of a state is as under, calculate S.D. and CV for the following data.

District	1	2	3	4	5	6	7	8	9	10
Rice	22	29	12	23	18	15	12	34	18	12

X Answer any Two of the following questions in about Twenty sentences each: 2x6=12

44. Discuss the following as a source of human capital formation

a) Health infrastructure

b) Expenditure on migration.

45. What are the main causes of unemployment in India ?

46. Write the short note on animal husbandry.

PART-E

XI Answer any Two of the following project oriented questions: 2x5=10

47. Identify the formal and informal workers in the following

1. Petty shop owner
2. Handloom weaver.
3. SBI Cashier
4. A street vender.
5. Government hospital nurse
6. Government school teacher
7. Tailor
8. Revenue Inspector
9. Police
10. Agricultural labour.

48. Name any ten power generating stations in Karnataka.

49. As per recorded temperature per two hours in a day from 6 am to 6 pm. Calculate the range and mean temperature of a day.

Hours	6-8	8-10	10-12	12-14	14-16	16-18
Temperature	18	24	26	29	30	25

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I P.U.C. ANNUAL EXAMINATION FEBRUARY-2020

SUBJECT : ECONOMICS (22)

Time : 3 Hrs. 15 Mins.   Maximum Marks : 100

Instructions :
1. Write the question number legibly in the margin.
2. Answer for a question should be continuous.

PART-A

I   Choose the correct answer :   5x1= 5

1. Alternative uses of resources give rise to the problem of
   a) Rights   b) Price   c) Choice   d) Chance

2. Range is the
   a) Difference between the largest and the smallest values of a variable
   b) Average of the largest and smallest observation.
   c) Ratio of the largest and smallest values of a variable.
   d) None of the above

3. During British rule more than half of India's foreign trade was restricted to
   a) Britain   b) Iran   c) China   d) Srilanka

4. The act provide guaranteed wage employment to every poor household for minimum of 100 days in a year is called.
   a) PMRY   b) SJSRY   c) MGNREGA   d) SGSY

5. Urban people are mainly engaged in the
   a) primary sector   b) service sector   c) Mining   d) Agriculture

II   Fill in the blanks :   5x1 = 5

6. _____ of the table contains actual data.

7. Using current year quantities as weights is known as _____.

8. Taxes on incomes of individuals is called _____.

9. Infrastructure facilities can be classified into _____ types.

10. Forests are _____ resource.

III   11. Match the following :   5x1=5

A	B
1. Pilot survey	a) India and the knowledge economy
2. Median	b) Institutional source
3. Subsidy	c) Pre-testing of questionnaire
4. World Bank	d) The monetary assistance for production activities
5. NABARD	e) Positional value

IV   Answer the following questions in a word or sentence/word each :

                                                                     5x1=5

12. What is mean deviation ?

13. Mention the last step in developing a project.

14. Give the meaning of infant mortality rate.

15. Expand ILO.

16. Name the campaign initiated in China with the aim of industrilisation.

                                                                     (P.T.O.)

PART-B

V Answer any Four of the following questions in about four sentences each: 4x2=8

17. Mention the two sources of data.
18. Give the formula to find out mid-point ?
19. What kind of diagrams are more effective in presenting the following ?
    a) Monthly rainfall in a year.
    b) Composition of the population of Delhi by religion.
20. Calculate arithmetic mean from the following data. Marks obtained by 10 students,
    30, 62, 47, 25, 52, 39, 56, 66, 12 , 24
21. What is negative correlation ? Give an example.
22. Mention the name of any four statistical tools.

VI Answer any Five of the following questions in about four sentences each: 5x2=10

23. List out the important export goods of India before independence.
24. List the factors that prevent the successful implementation of poverty alleviation programmes.
25. What are the two major sources of human capital in a country ?
26. Give two examples of alternative market.
27. Name any four kinds of unemployment.
28. Which are the components of Indian system of medicine ?
29. Mention any four functions of environment.

PART-C

VII Answer any Three of the following questions in about Twelve sentences each: 3x4=12

30. Briefly explain how statistics helps to study economics.
31. Write briefly about the census and NSSO.
32. Write a note on classification of data.
33. The yield of rice per acre for 10 districts of a state is as under

District	A	B	C	D	E	F	G	H	I	J
Rice (tonnes)	23	18	12	22	29	12	24	18	12	15

Calculate the mean deviation from median.

34. Draw scatter diagram and interpret.

X	1	2	3	4	5	6
Y	2	4	6	8	10	12

VIII Answer any Four of the following questions in about Twelve sentences each: 4x4=16

35. Indicate the volume and direction of trade at the time of independence.
36. Write a short note on Green revolution.

(P.T.O.)

37. Briefly explain the back ground of economic reforms in India.

38. Explain the drawbacks of agricultural market in India.

39. Write a note on private health infrastructure in India.

40. What are the various indicators of Human development ?

PART-D

IX   Answer any Two of the following questions in about Twenty sentences each: 2x6=12

41. Construct Ogive by using the following data

Marks (x)	Number of students (f)
0-20	6
20-40	5
40-60	33
60-80	14
80-100	6
Total	64

42. Find the median of the following data.

Wages (in ₹)	60-70	50-60	40-50	30-40	20-30
No. of Workers	7	21	11	6	5

43. Calculate the standard deviation for the following distribution.

Classes	Frequencies
0-20	9
20-40	12
40-60	20
60-80	6
80-100	3
	50

X   Answer any Two of the following questions in about Twenty sentences each: 2x6=12

44. Briefly explain the important area of liberalisation.

45. Discuss the following as a source of human capital formation.

   1) Health infrastructure

   2) Expenditure on migration.

46. What role does the government play in generation of employment opportunities in India.

PART-E

XI   Answer any Two of the following project oriented questions: 2x5=10

47. Write a note on SENSEX.

48. Write the chart of poverty line.

49. Prepare a list of causes of land degradation in India.

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I PUC ANNUAL EXAMINATION MARCH/APRIL-2022

ಪ್ರಥಮ ಪಿಯುಸಿ ವಾರ್ಷಿಕ ಪರೀಕ್ಷೆ ಮಾರ್ಚ್/ಏಪ್ರಿಲ್–2022

SUBJECT : ECONOMICS ಅರ್ಥಶಾಸ್ತ್ರ (22)

①

Time : 3 Hours 15 mins   Max. Marks : 100

ಸಮಯ : 3 ಗಂಟೆ–15 ನಿಮಿಷಗಳು   ಗರಿಷ್ಠ ಅಂಕಗಳು : 100

Instructions : ಸೂಚನೆಗಳು :

1. **Write the question numbers legibly in the margin.**
   ಪ್ರಶ್ನೆ ಸಂಖ್ಯೆಗಳನ್ನು ಮಾರ್ಜಿನ್ಸ್‌ನಲ್ಲಿ ಸ್ಪಷ್ಟವಾಗಿ ಬರೆಯಿರಿ.
2. **Answer for a question should be continuous.**
   ಪ್ರತಿ ಪ್ರಶ್ನೆಗೆ ಉತ್ತರವು ನಿರಂತರವಾಗಿರಬೇಕು.

PART-A ಭಾಗ – ಎ

I Answer the following questions by choosing the correct answer :
(Each question carries one mark)   5x1=5

ಈ ಕೆಳಗಿನ ಪ್ರಶ್ನೆಗಳಿಗೆ ಸರಿಯಾದ ಉತ್ತರ ಆರಿಸಿ ಬರೆಯಿರಿ. (ಪ್ರತಿಯೊಂದಕ್ಕೂ 1 ಅಂಕ ಮಾತ್ರ)

1. The frequency distribution of two variables is known as
   ಎರಡು ಚಲಕಗಳ ಆವೃತ್ತಿ ವಿತರಣೆಯನ್ನು ಹೀಗೆ ಕರೆಯುವರು
   a) Univariate classification ಏಕ ಚಲಕ ವಿತರಣೆ   b) Bivariate classification ದ್ವಿ ಚಲಕ ವಿತರಣೆ
   c) Multivariate classification ಬಹು ಚಲಕ ವಿತರಣೆ   d) None of the above ಮೇಲಿನ ಯಾವುದೂ ಅಲ್ಲ
2. The graphical measures available to measure dispersion is called.
   ಹರವಿನ ಅಳತೆಗಳ ರೇಖಾತ್ಮಕ ಮಾಪನವನ್ನು ಹೀಗೆ ಕರೆಯುತ್ತೇವೆ
   a) Lorenz curve   b) Marshal curve   c) Production curve   d) None of the above
   ಲಾರೆಂಜ್ ವಕ್ರರೇಖೆ   ಮಾರ್ಷಲ್ ವಕ್ರರೇಖೆ   ಉತ್ಪಾದಕ ವಕ್ರರೇಖೆ   ಮೇಲಿನ ಯಾವುದೂ ಅಲ್ಲ
3. In Pre-Independent India - he was the first to discuss the concept of a poverty line.
   ಸ್ವತಂತ್ರ ಪೂರ್ವದಲ್ಲಿ ಭಾರತದಲ್ಲಿ ಇವರು ಬಡತನ ರೇಖೆಯ ಪರಿಕಲ್ಪನೆಯ ಬಗ್ಗೆ ಮೊಟ್ಟ ಮೊದಲು ಚರ್ಚಿಸಿದರು.
   a) Dadabhai Navaroji ದಾದಾ ಭಾಯಿ ನವರೋಜಿ b) Gopal Krishna Gokhale ಗೋಪಾಲಕೃಷ್ಣ ಗೋಖಿಲೆ
   c) Vinobha Bhave ವಿನೋಭಾ ಭಾವೆ   d) Vinoda Bai ವಿನೋದಾ ಬಾಯಿ
4. Urban people are mainly engaged in the
   ನಗರದ ಜನರು ಮುಖ್ಯವಾಗಿ ಯಾವುದರಲ್ಲಿ ಹೆಚ್ಚಾಗಿ ತೊಡಗಿರುತ್ತಾರೆ ?
   a) Primary sector   b) Service sector   c) Mining   d) Agriculture
   ಪ್ರಾಥಮಿಕ ವಲಯ   ಸೇವಾ ವಲಯ   ಗಣಿಗಾರಿಕೆ   ಕೃಷಿ
5. Which State has achieved Excellency in Information Technology ?
   ಮಾಹಿತಿ ತಂತ್ರಜ್ಞಾನ ಕ್ಷೇತ್ರದಲ್ಲಿ ಭಾರಿ ಸಾಧನೆ ಮಾಡಿರುವ ರಾಜ್ಯ ಯಾವುದು ?
   a) Rajasthan ರಾಜಸ್ಥಾನ   b) West Bengal ಪಶ್ಚಿಮ ಬಂಗಾಳ
   c) Tamilnadu ತಮಿಳುನಾಡು   d) Karnataka ಕರ್ನಾಟಕ

II Answer any FIVE of the following questions by choosing the correct answer :
(Each question carries 1 mark)   5x1=5

ಈ ಕೆಳಗಿನ ಯಾವುದಾದರೂ ಐದು ಪ್ರಶ್ನೆಗಳಿಗೆ ಖಾಲಿ ಬಿಟ್ಟ ಸ್ಥಳ ಭರ್ತಿ ಮಾಡಿ. (ಪ್ರತಿಯೊಂದಕ್ಕೂ 1 ಅಂಕ ಮಾತ್ರ)

6. _____ of the table contains actual data.
   .... ಭಾಗವು ಕೋಷ್ಟಕದ ನೈಜ ದತ್ತಾಂಶವನ್ನು ಒಳಗೊಂಡಿರುತ್ತದೆ.
7. 3rd quartile and _____ percentile are the same.
   ಮೂರನೇ ಚತುರ್ಥಕ ಮತ್ತು .... ಶತಾಂಕ ಒಂದೇ ಆಗಿವೆ.
8. Inflation affects the _____ of common people.
   ಹಣದುಬ್ಬರವು ಜನಸಾಮಾನ್ಯರ .... ಮೇಲೆ ಪ್ರಭಾವ ಬೀರುತ್ತದೆ.
9. The choice of target groups is very important while preparing the _____
   .... ಸಿದ್ಧ ಪಡಿಸುವಾಗ ನಿರ್ಧರಿತ ಗುಂಪಿನ ಆಯ್ಕೆಯು ಬಹಳ ಮುಖ್ಯವಾದುದ್ದಾಗಿದೆ.
10. _____ is the year of second stage of demographic transition of India.
    .... ಭಾರತದ ಜನಸಂಖ್ಯಾ ಸ್ಥಿತ್ಯಂತರದ ಎರಡನೇ ಹಂತ ಪ್ರಾರಂಭವಾದ ವರ್ಷ.
11. RBI regulates _____ sector.
    ಆರ್.ಬಿ.ಐ. .... ವಲಯವನ್ನು ನಿಯಂತ್ರಿಸುತ್ತದೆ.
12. In India disguised unemployment can be seen more in _____ sector.
    ಭಾರತದಲ್ಲಿ ಮರೆಮಾಚಿದ ನಿರುದ್ಯೋಗವು .... ವಲಯದಲ್ಲಿ ಹೆಚ್ಚಾಗಿ ಕಾಣಬಹುದಾಗಿದೆ.
13. The great leap forward campaign was initiated in the year _____ .
    ಮಹಾ ಮುಂಜಿಗಿತ ಅಭಿಯಾನ ಪರಿಚಯಿಸಿದ ವರ್ಷ ....

(P.T.O)

III Match the following : (Each question carries 1 mark) 5x1=5
ಹೊಂದಿಸಿ ಬರೆಯಿರಿ (ಪ್ರತಿಯೊಂದಕ್ಕೂ 1 ಅಂಕ ಮಾತ್ರ)

14.   A ಎ   B ಬಿ

1. Personal Interview   a. Divisional values
   ವೈಯಕ್ತಿಕ ಸಂದರ್ಶನ   ವಿಭಾಜಕ ಮೌಲ್ಯಗಳು

2. Q_1, Q_2, P_{25}, P_{50} b. A positive development ಒಂದು ಧನಾತ್ಮಕ ಅಭಿವೃದ್ಧಿ

3. Quota ಕೋಟಾ   c. Fruit Production ಹಣ್ಣುಗಳ ಉತ್ಪಾದನೆ

4. Better gender equity ಲಿಂಗ ಸಮಾನತೆ ಅಭಿವೃದ್ಧಿ   d. More expensive ಅಧಿಕ ವೆಚ್ಚ

5. Golden revolution   e. Quantity of imported goods
   ಸುವರ್ಣ ಕ್ರಾಂತಿ   ಸರಕುಗಳನ್ನು ಆಮದು ಮಾಡಿಕೊಳ್ಳುವ ಪ್ರಮಾಣ

IV Answer any FIVE of the following questions in a word or a sentence.
(Each question carries 1 mark) 5x1=5
ಕೆಳಗಿನ ಯಾವುದಾದರೂ ಐದು ಪ್ರಶ್ನೆಗಳಿಗೆ ಒಂದು ವಾಕ್ಯ ಅಥವಾ ಒಂದು ಪದದಲ್ಲಿ ಉತ್ತರಿಸಿ. (ಪ್ರತಿಯೊಂದಕ್ಕೂ 1 ಅಂಕ ಮಾತ್ರ)

15. What is Statistics ? ಸಂಖ್ಯಾಶಾಸ್ತ್ರ ಎಂದರೇನು ?
16. What do you mean by frequency polygon ? ಆವೃತ್ತಿ ಬಹುಭುಜಾಕೃತಿ ಎಂದರೇನು ?
17. Give the meaning of Standard deviation. ಮಾನಕ ವಿಚಲನೆಯ ಅರ್ಥ ತಿಳಿಸಿ.
18. Expand IBRD. IBRD ಯನ್ನು ವಿಸ್ತರಿಸಿ.
19. State the reason for migration. ಜನರ ವಲಸೆಗೆ ಕಾರಣ ತಿಳಿಸಿ.
20. Define jobless growth. 'ಉದ್ಯೋಗ ರಹಿತ ಬೆಳವಣಿಗೆ' ಯನ್ನು ವ್ಯಾಖ್ಯಾನಿಸಿ.
21. What is meant by environment ? ಪರಿಸರ ಎಂದರೇನು?
22. Give the meaning of infant mortality rate ? ಶಿಶು ಮರಣದರದ ಅರ್ಥ ನೀಡಿ.

PART-B ಭಾಗ–ಬಿ

V Answer any FOUR of the following questions in four sentences each : 4x2=8
(Each question carries 2 marks)
ಈ ಕೆಳಗಿನ ಯಾವುದಾದರೂ ನಾಲ್ಕು ಪ್ರಶ್ನೆಗಳಿಗೆ ಪ್ರತಿಯೊಂದಕ್ಕೂ ನಾಲ್ಕು ವಾಕ್ಯಗಳಲ್ಲಿ ಉತ್ತರಿಸಿ. (ಪ್ರತಿಯೊಂದಕ್ಕೂ 2 ಅಂಕ ಮಾತ್ರ)

23. Mention any two scarcities in your daily life. ನೀವು ನಿತ್ಯ ಜೀವನದಲ್ಲಿ ಕಾಣುವ ಎರಡು ಕೊರತೆಗಳನ್ನು ತಿಳಿಸಿ.
24. Name the two methods of Selecting Samples in Random Sampling.
    ಯಾದೃಚ್ಛಿಕ ಮಾದರಿಯಲ್ಲಿ ಮಾದರಿಯನ್ನು ಆಯ್ಕೆ ಮಾಡುವ ಎರಡು ವಿಧಾನಗಳನ್ನು ತಿಳಿಸಿ.
25. Mention the types of classification of data. ದತ್ತಾಂಶದ ವರ್ಗೀಕರಣದ ವಿಧಗಳನ್ನು ಹೆಸರಿಸಿ.
26. What are the types of Bar diagram ? ಸ್ತಂಭ ರೇಖಾ ಚಿತ್ರದ ವಿಧಗಳಾವುವು ?
27. Calculate the value of median from the following figures :
    ಈ ಕೆಳಗಿನ ದತ್ತಾಂಶಗಳಿಗೆ ಮಧ್ಯಾಂಕವನ್ನು ಕಂಡು ಹಿಡಿಯಿರಿ.
    X : 5, 7, 9, 12, 11, 8, 7, 15, 25
28. What is positive correlation ? Give an example.
    ಧನಾತ್ಮಕ ಸಹ ಸಂಬಂಧ ಎಂದರೇನು? ಒಂದು ಉದಾಹರಣೆ ಕೊಡಿ.
29. Mention some important index numbers. ಪ್ರಮುಖ ಸೂಚ್ಯಂಕಗಳನ್ನು ಹೆಸರಿಸಿ.
30. Write the first four steps in developing a project.
    ಯೋಜನೆಯನ್ನು ಅಭಿವೃದ್ಧಿ ಪಡಿಸುವಲ್ಲಿ ಮೊದಲ ನಾಲ್ಕು ಹಂತಗಳನ್ನು ಬರೆಯಿರಿ.

VI Answer any FIVE of the following questions in four sentences each : 5x2=10
(Each question carries 2 marks)
ಈ ಕೆಳಗಿನ ಯಾವುದಾದರೂ ಐದು ಪ್ರಶ್ನೆಗಳಿಗೆ ಪ್ರತಿಯೊಂದಕ್ಕೂ ನಾಲ್ಕು ವಾಕ್ಯಗಳಲ್ಲಿ ಉತ್ತರಿಸಿ. (ಪ್ರತಿಯೊಂದಕ್ಕೂ 2 ಅಂಕ ಮಾತ್ರ)

31. What are the infrastructure facilities developed during colonial rule.
    ವಸಾಹತುಶಾಹಿ ಆಳ್ವಿಕೆಯಲ್ಲಿ ಅಭಿವೃದ್ಧಿಯಾದ ಮೂಲಸೌಕರ್ಯಗಳಾವುವು ?
32. What are the goals of five year plans ? ಪಂಚವಾರ್ಷಿಕ ಯೋಜನೆಯ ಗುರಿಗಳಾವುವು ?
33. Give example for Direct Tax and Indirect Tax. ನೇರ ಮತ್ತು ಪರೋಕ್ಷ ತೆರಿಗೆಗಳಿಗೆ ಉದಾಹರಣೆ ಕೊಡಿ.
34. Who are the urban poor ? Give examples. ನಗರ ಪ್ರದೇಶದ ಬಡವರೆಂದರೆ ಯಾರು? ಉದಾಹರಣೆ ಕೊಡಿ.
35. What are the two major sources of human capital in a country ?
    ಒಂದು ದೇಶದ ಮಾನವ ಬಂಡವಾಳದ ಎರಡು ಪ್ರಮುಖ ಮೂಲಗಳಾವುವು ?
36. Name the two life-giving sources of fishing community.
    ಮೀನುಗಾರ ಸಮುದಾಯಕ್ಕೆ ಬದುಕನ್ನು ಕಟ್ಟಿಕೊಡುವ ಎರಡು ಮೂಲಗಳನ್ನು ಹೆಸರಿಸಿ.
37. Name any four kinds of unemployment. ನಿರುದ್ಯೋಗದ ಯಾವುದಾದರೂ ನಾಲ್ಕು ವಿಧಗಳನ್ನು ಹೆಸರಿಸಿ.
38. Which are the health indicators ? ಆರೋಗ್ಯ ಸೂಚಕಗಳಾವುವು ?
39. Name the renewable and non-renewable resources
    ನವೀಕರಿಸಬಹುದಾದ ಮತ್ತು ನವೀಕರಿಸಲಾಗದ ಸಂಪನ್ಮೂಲಗಳಾವುವು ಹೆಸರಿಸಿ.
40. What is commune system ? ಕಮ್ಯೂನ್ ಪದ್ಧತಿ ಎಂದರೇನು ?

(P.T.O)

PART-C ಭಾಗ–ಸಿ

VII **Answer any THREE of the following questions in Twelve sentences each :** 3x4=12
(Each question carries 4 marks)

ಈ ಕೆಳಗಿನ ಯಾವುದಾದರೂ ಮೂರು ಪ್ರಶ್ನೆಗಳಿಗೆ ಪ್ರತಿಯೊಂದಕ್ಕೂ ಹನ್ನೆರಡು ವಾಕ್ಯಗಳಲ್ಲಿ ಉತ್ತರಿಸಿ. (ಪ್ರತಿಯೊಂದಕ್ಕೂ 4 ಅಂಕಗಳು)

41. "Scarcity is the root of all economic problems" Explain the Statement.

"ಕೊರತೆಯು ಎಲ್ಲಾ ಆರ್ಥಿಕ ಸಮಸ್ಯೆಗಳಿಗೆ ಮೂಲ ಕಾರಣವಾಗಿದೆ" ಈ ಹೇಳಿಕೆಯನ್ನು ವಿವರಿಸಿ.

42. "Briefly explain Sampling errors". ಮಾದರಿ ದೋಷಗಳನ್ನು ಸಂಕ್ಷಿಪ್ತವಾಗಿ ವಿವರಿಸಿ.

43. Differentiate between continuous and discrete variables.

ಸತತ ಮತ್ತು ಅಸತತ ಚಲಕಗಳ ವ್ಯತ್ಯಾಸವನ್ನು ಗುರುತಿಸಿ.

44. Draw the format of a table and identify its components.

ಒಂದು ಕೋಷ್ಟಕದ ನಮೂನೆಯನ್ನು ಬರೆದು ಅದರ ಭಾಗಗಳನ್ನು ಗುರುತಿಸಿ.

45. Find the standard deviation for the following data.

ಈ ಕೆಳಗಿ ದತ್ತಾಂಶಗಳಿಗೆ ಮಾನಕ ವಿಚಲನೆಯನ್ನು ಕಂಡು ಹಿಡಿಯಿರಿ.

8, 9, 15, 23, 5, 11, 19, 8, 10, 12.

46. Draw scatter diagram and conclude about correlation

ಚದುರಿಕೆಯ ಚಿತ್ರ ಬಿಡಿಸಿರಿ ಮತ್ತು ಸಹಸಂಬಂಧವನ್ನು ನಿರ್ಣಯಿಸಿ.

X	10	20	30	40	50	60	70	80
Y	25	20	25	35	40	35	50	45

VIII **Answer any FOUR of the following questions in Twelve sentences each :** 4x4=16
(Each question carries 4 marks)

ಈ ಕೆಳಗಿನ ಯಾವುದಾದರೂ ನಾಲ್ಕು ಪ್ರಶ್ನೆಗಳಿಗೆ ಪ್ರತಿಯೊಂದಕ್ಕೂ ಹನ್ನೆರಡು ವಾಕ್ಯಗಳಲ್ಲಿ ಉತ್ತರಿಸಿ. (ಪ್ರತಿಯೊಂದಕ್ಕೂ 4 ಅಂಕಗಳು)

47. Indicate the volume and direction of trade at the time of Independence.

ಸ್ವಾತಂತ್ರ್ಯ ಪೂರ್ವ ಭಾರತದ ವಿದೇಶಿ ವ್ಯಾಪಾರದ ಪ್ರಮಾಣ ಮತ್ತು ದಿಕ್ಕನ್ನು ಸೂಚಿಸಿ.

48. Write a short note on green revolution.

ಹಸಿರು ಕ್ರಾಂತಿಯ ಬಗ್ಗೆ ಒಂದು ಲಘು ಟಿಪ್ಪಣಿ ಬರೆಯಿರಿ.

49. Write a short note on outsourcing. ಹೊರಗುತ್ತಿಗೆ ಬಗ್ಗೆ ಒಂದು ಲಘು ಟಿಪ್ಪಣಿ ಬರೆಯಿರಿ.

50. Explain the employment generation programmes of poverty alleviation in India.

ಭಾರತದಲ್ಲಿ ಬಡತನ ನಿರ್ಮೂಲನೆ ಮಾಡುವ ಉದ್ಯೋಗ ಸೃಷ್ಟಿಯ ಕಾರ್ಯಕ್ರಮಗಳನ್ನು ವಿವರಿಸಿ.

51. List out the major problems of rural development.

ಗ್ರಾಮೀಣಾಭಿವೃದ್ಧಿಯ ಪ್ರಮುಖ ಸಮಸ್ಯೆಗಳನ್ನು ಪಟ್ಟಿಮಾಡಿ.

52. List out the economic activities in different Sectors.

ವಿವಿಧ ವಲಯಗಳಲ್ಲಿನ ಆರ್ಥಿಕ ಚಟುವಟಿಕೆಗಳನ್ನು ಪಟ್ಟಿಮಾಡಿ.

53. Explain the role of infrastructure in the development of a modern economy.

ಆಧುನಿಕ ಆರ್ಥಿಕತೆಯ ಅಭಿವೃದ್ಧಿಯಲ್ಲಿ ಮೂಲಸೌಕರ್ಯಗಳ ಪಾತ್ರವನ್ನು ವಿವರಿಸಿ.

54. What are the various indicators of human development ?

ಮಾನವ ಅಭಿವೃದ್ಧಿಯ ವಿವಿಧ ಸೂಚಕಗಳ ಬಗ್ಗೆ ಸಂಕ್ಷಿಪ್ತವಾಗಿ ವಿವರಿಸಿ.

PART-D ಭಾಗ–ಡಿ

IX **Answer any TWO of the following questions in Twenty sentences each :** 2x6=12
(Each question carries 6 marks)

ಈ ಕೆಳಗಿನ ಯಾವುದಾದರೂ ಎರಡು ಪ್ರಶ್ನೆಗಳಿಗೆ ಪ್ರತಿಯೊಂದಕ್ಕೂ ಇಪ್ಪತ್ತು ವಾಕ್ಯಗಳಲ್ಲಿ ಉತ್ತರಿಸಿ. (ಪ್ರತಿಯೊಂದಕ್ಕೂ 6 ಅಂಕಗಳು)

55. Draw an arithmetic line graph using following data.

ಕೆಳಗಿನ ದತ್ತಾಂಶಗಳಿಗೆ ಅಂಕಗಣಿತೀಯ ರೇಖಾಚಿತ್ರವನ್ನು ಬರೆಯಿರಿ.

Value of import and export of India. (in 100 Crores)

ಭಾರತದ ಆಮದು ಮತ್ತು ರಫ್ತಿನ ಮೌಲ್ಯಗಳು (100 ಕೋಟಿ. ರೂ.ಗಳಲ್ಲಿ)

Year ವರ್ಷ	Exports ರಫ್ತುಗಳು	Imports ಆಮದುಗಳು
2009-10	8455	13637
2010-11	11370	16835
2011-12	14660	23455
2012-13	16343	26692
2013-14	19050	27154

56. Calculate arithmetic mean by direct, assumed mean and step deviation methods for the following data

ಈ ಕೆಳಗಿನ ದತ್ತಾಂಶಗಳಿಗೆ ನೇರವಿಧಾನ, ಊಹಾತ್ಮಕ ವಿಧಾನ ಮತ್ತು ಹಂತ ವಿಚಲನಾ ವಿಧಾನಗಳ ಮೂಲಕ ಅಂಕಗಣಿತ ಸರಾಸರಿಯನ್ನು ಕಂಡುಹಿಡಿಯಿರಿ.

40, 50, 55, 78, 58

(P.T.O.)

57. Calculate the Standard Deviation for the following distribution

ಈ ಕೆಳಗಿನ ವಿತರಣೆಗೆ ಮಾನಕ ವಿಚಲನೆಯನ್ನು ಲೆಕ್ಕ ಮಾಡಿ.

Classes ವರ್ಗಗಳು	Frequencies ಆವೃತ್ತಿಗಳು
0-20	9
20-40	12
40-60	20
60-80	6
80-100	3

58. Write a short note on CPI, WPI and IIP.

CPI, WPI ಮತ್ತು IIP ಗಳ ಬಗ್ಗೆ ಟಿಪ್ಪಣಿ ಬರೆಯಿರಿ.

X   Answer any TWO of the following questions in Twenty sentences each :   2x6=12
(Each question carries 6 marks)

ಈ ಕೆಳಗಿನ ಯಾವುದಾದರೂ ಎರಡು ಪ್ರಶ್ನೆಗಳಿಗೆ ಪ್ರತಿಯೊಂದಕ್ಕೂ ಇಪ್ಪತ್ತು ವಾಕ್ಯಗಳಲ್ಲಿ ಉತ್ತರಿಸಿ.
(ಪ್ರತಿಯೊಂದಕ್ಕೂ 6 ಅಂಕಗಳು)

59. Briefly explain the effects of reforms on agricultural sector.

ಕೃಷಿ ಕ್ಷೇತ್ರದ ಮೇಲಾದ ಸುಧಾರಣೆಗಳ ಪರಿಣಾಮಗಳನ್ನು ವಿವರಿಸಿರಿ.

60. Examine the role of education in the economic development of a nation.

ಒಂದು ದೇಶದ ಆರ್ಥಿಕಾಭಿವೃದ್ಧಿಯಲ್ಲಿ ಶಿಕ್ಷಣದ ಪಾತ್ರವನ್ನು ಪರಿಶೀಲಿಸಿ.

61. Write a note on animal husbandry.

ಪಶುಸಂಗೋಪನೆಯ ಬಗ್ಗೆ ಟಿಪ್ಪಣಿ ಬರೆಯಿರಿ.

62. Write an appraisal on the indicators of health and health infrastructure.

ಆರೋಗ್ಯ ಸೂಚಕ ಮತ್ತು ಆರೋಗ್ಯ ಮೂಲ ಸೌಕರ್ಯದ ಬಗ್ಗೆ ಒಂದು ಮೌಲ್ಯಮಾಪನ ಮಾಡಿ.

PART-E ಭಾಗ-ಇ

XI   Answer any TWO of the following project and assignment oriented questions :
(Each question carries 5 marks)   2x5=10

ಈ ಕೆಳಗಿನ ಯಾವುದಾದರೂ ಎರಡು ಕಾರ್ಯಭಾರ ಮತ್ತು ನಿಯೋಜನೆ ಆಧಾರಿತ ಪ್ರಶ್ನೆಗಳಿಗೆ ಉತ್ತರಿಸಿ
(ಪ್ರತಿಯೊಂದಕ್ಕೂ 5 ಅಂಕಗಳು)

63. On the basis of data you have collected regarding participation of women in your locality in the below mentioned categories. Construct a pie-chart.

ನಿಮ್ಮ ಪ್ರದೇಶದಲ್ಲಿ ಈ ಕೆಳಗೆ ಸಮೂದಿಸಿದ ಉದ್ಯೋಗ ಸ್ತರಗಳಲ್ಲಿ ಭಾಗಿಯಾಗಿರುವ ಮಹಿಳೆಯರ ಬಗ್ಗೆ ನೀವು ಸಂಗ್ರಹಿಸಿರುವ ದತ್ತಾಂಶದ ಆಧಾರದ ಮೇಲೆ ಒಂದು ಪೈ ಚಿತ್ರವನ್ನು ರಚಿಸಿ.

Status ಸ್ಥಾನಮಾನ	Population ಜನಸಂಖ್ಯೆ
a) Marginal Worker ಸೀಮಾಂತ ಕೆಲಸಗಾರ	12
b) Main Worker ಮುಖ್ಯ ಕೆಲಸಗಾರ	36
c) Non Worker ಕೆಲಸ ಮಾಡದವರು	73

64. Write a note on SENSEX. ಸೆನ್ಸೆಕ್ಸ್ (ಸಂವೇದಿ ಸೂಚ್ಯಾಂಕ)ನ್ನು ಕುರಿತು ಟಿಪ್ಪಣಿ ಬರೆಯಿರಿ.

65. Write a chart of poverty line. ಬಡತನ ರೇಖೆಯ ಪಟವನ್ನು ಬರೆಯಿರಿ.

66. Identify formal and informal workers in the following list.

ಈ ಕೆಳಗಿನ ಪಟ್ಟಿಯಲ್ಲಿ ಔಪಚಾರಿಕ ಮತ್ತು ಅನೌಪಚಾರಿಕ ಕೆಲಸಗಾರರನ್ನು ಗುರುತಿಸಿ.

1. A petty shop owner	ಪೆಟ್ಟಿಗೆ ಅಂಗಡಿ ಮಾಲಿಕ.
2. Handloom weaver	ಕೈಮಗ್ಗದ ನೇಕಾರ.
3. SBI Cashier	ಎಸ್‌ಬಿಐ ಕ್ಯಾಷಿಯರ್
4. A street vendor	ರಸ್ತೆ ಬದಿಯ ಮಾರಾಟಗಾರ
5. A Government Hospital Nurse	ಸರ್ಕಾರಿ ಆಸ್ಪತ್ರೆಯಲ್ಲಿನ ನರ್ಸ್
6. Government Primary School Teacher	ಸರ್ಕಾರಿ ಪ್ರಾಥಮಿಕ ಶಾಲೆಯ ಶಿಕ್ಷಕ
7. Tailor	ಸಿಂಪಿಗ (ದರ್ಜಿ)
8. Revenue Inspector	ಕಂದಾಯ ನಿರೀಕ್ಷಕರು
9. Police	ಆರಕ್ಷಕರು.
10. Agriculture labourers.	ಕೃಷಿ ಕಾರ್ಮಿಕರು.

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