CLASS XI
ANNUAL EXAMINATION (2024-25)
SUBJECT- ECONOMICS
SET A1/A2 MARKING SCHEME

SET NO. AND Q.NO.	EXPECTED ANSWER/VALUE POINTS	MARKS
SET A1 Q1	Identify the odd one out based on the nature of economic/non-economic activity: (a) Purchase of ice-creams on a hot summer day (b) Production of shirts in a factory (c) Charity for earthquake victims (d) A farmer growing crops Ans. (c) Charity for earthquake victims	**1**
SET A2	Which of these scenarios represents an economic activity? (a) Teaching the children of the house help (b) Selling food from a food cart (c) Donating blankets to the homeless (e) Charity for earthquake victims Ans. (b) Selling food from a food cart	**1**
SET A1 Q2	The unit of the coefficient of correlation between age of the father and height of the child is: (a) years (b) feet (c) non-existent (d) years or feet Ans. (c) non-existent	**1**
SET A2	The range of the simple coefficient of correlation is: (a) Zero to infinity (b) minus one to plus one (c) Zero to one (d) minus infinity to infinity Ans. (b) minus one to plus one	**1**

<table>
<tr><td>SET A1 Q3</td><td>Read the following statement -Assertion (A) and Reason (R). Choose one of the correct alternatives given below:
Assertion (A): All numerical data cannot be called as statistics but all statistics can be called numerical data.
Reason (R): A single number does not constitute statistics as no conclusion can be drawn from it.
Alternatives:
(a) Both Assertion (A) and Reason (R) are true and Reason (R) is the correct explanation of Assertion (A).
(b) Both Assertion (A) and Reason (R) are true and Reason (R) is not the correct explanation of Assertion (A).
(c) Assertion (A) is true but Reason (R) is false.
(d) Assertion (A) is false but Reason (R) is true.

Ans. (a) Both Assertion (A) and Reason (R) are true and Reason (R) is the correct explanation of Assertion (A).</td><td>1</td></tr>
<tr><td>SET A2</td><td>Read the following statement -Assertion (A) and Reason (R). Choose one of the correct alternatives given below:
Assertion (A): All numerical data can be called as statistics but all statistics can be called numerical data.
Reason (R): A single number does not constitute statistics as no conclusion can be drawn from it.
Alternatives:
(a) Both Assertion (A) and Reason (R) are true and Reason (R) is the correct explanation of Assertion (A).
(b) Both Assertion (A) and Reason (R) are true and Reason (R) is not the correct explanation of Assertion (A).
(c) Assertion (A) is true but Reason (R) is false.
(d) Assertion (A) is false but Reason (R) is true.

Ans. (d) Assertion (A) is false but Reason (R) is true.</td><td>1</td></tr>
<tr><td>SET A1 Q4</td><td>Match the correct pair of items in Column I with options in Column II and choose the correct alternative:

<table><tr><th>Column I</th><th>Column II</th></tr><tr><td>(i) Collection of Data</td><td>a) Bar Diagrams and Histograms</td></tr><tr><td>(ii) Analysis of Data</td><td>b) Census and Sample Survey</td></tr><tr><td>(iii)Presentation of Data</td><td>c) Frequency Arrays and Tally Bars</td></tr><tr><td>(iv)Organisation of Data</td><td>d) Arithmetic Mean and Averages</td></tr></table>Alternatives:
(a) (i)-a, (ii)-b, (iii)-c, (iv)-d
(b) (i)-d, (ii)-b, (iii)-c, (iv)-a
(c) (i)-b, (ii)-d, (iii)-a, (iv)-c
(d) (i)-c, (ii)-d, (iii)-c, (iv)-a

Ans. (c) (i)-b, (ii)-d, (iii)-a, (iv)-c</td><td>1</td></tr>
</table>

<table>
<tr><td>SET A2</td><td>Match the correct pair of items in Column I with options in Column II and choose the correct alternative:

<table><tr><th>Column I</th><th>Column II</th></tr><tr><td>(i) Organisation of Data</td><td>a) Bar Diagrams and Histograms</td></tr><tr><td>(ii) Presentation of Data</td><td>b) Census and Sample Survey</td></tr><tr><td>(iii)Analysis of Data</td><td>c) Frequency Arrays and Tally Bars</td></tr><tr><td>(iv)Collection of Data</td><td>d) Arithmetic Mean and Averages</td></tr></table>
Alternatives:
(a) (i)-a, (ii)-b, (iii)-c, (iv)-d
(b) (i)-d, (ii)-b, (iii)-c, (iv)-a
(c) (i)-b, (ii)-d, (iii)-a, (iv)-c
(d) (i)-c, (ii)-a, (iii)-d, (iv)-b

Ans. (d) (i)-c, (ii)-a, (iii)-d, (iv)-b</td><td>1</td></tr>
<tr><td>SET A1 Q5</td><td>Which of the following is not capable of further algebraic treatment?
(i) Median (ii) Mean (iii) Mode

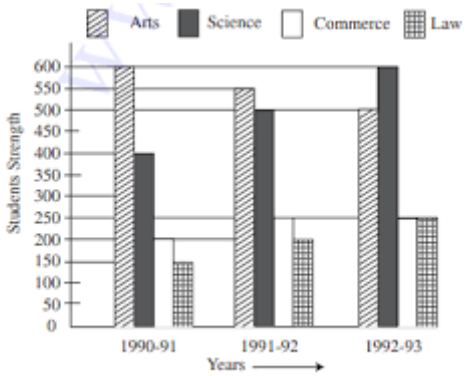
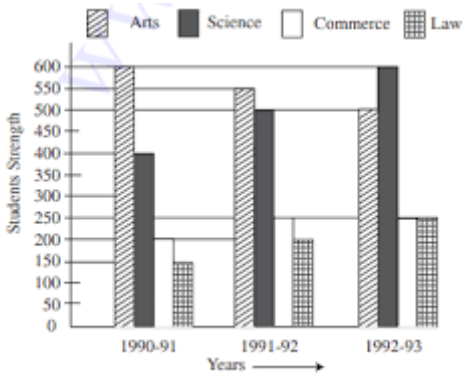
(a) Both (i) and (ii)
(b) Both (i) and (iii)
(c) (ii) only
(d) (iii) only

Ans. (b) Both (i) and (iii)</td><td>1</td></tr>
<tr><td>SET A2</td><td>Which of the following is not affected by extreme values?
(i) Median (ii) Mode (iii) Mean

(a) Both (i) and (ii)
(b) Both (ii) and (iii)
(c) Both (i) and (iii)
(d) All(i), (ii) and (iii)

Ans. (a) Both (i) and (ii)</td><td>1</td></tr>
<tr><td>SET A1 Q6</td><td>The mean of 100 observations was found to be 50. If two observations were wrongly taken as 70 and 80 instead of 50 and 60, the corrected mean would be:
(a) 50.6
(b) 49
(c) 49.6
(d) 46.6

Ans. (c) 49.6</td><td>1</td></tr>
</table>

SET A2	The mean of 100 observation was found to be 30. If two observations were wrongly taken as 25 and 13 instead of 24 and 12, the corrected mean would be: (a) 39.98 (b) 29.98 (c) 35.23 (d) 30 Ans. (b) 29.98	**1**
SET A1 Q7	The following diagram shows the number of admissions in various disciplines in a college. As compared to 1991-92, the percentage increase in 1992-93 in the Science Stream was_____ percent. (a) 100 (b) 20 (c) 25 (d) 30  Ans. (b) 20	**1**
SET A2	The following diagram shows the number of admissions in various disciplines in a college. As compared to 1991-92, the percentage increase in 1992-93 in the Law Faculty was_____ percent. (a) 100 (b) 20 (c) 25 (d) 30  Ans. (c) 25	**1**

SET A1 Q8	Read the following statements carefully: Statement 1: Correlation does not imply causation. Statement 2: Karl Pearson's Method of Correlation measures correlation for quantitative data, while Spearman's Rank Correlation measures correlation for qualitative data. In the light of the given statements, choose the correct alternative from the following: (a) Statement 1 is true and statement 2 is false (b) Statement 1 is false and statement 2 is true (c) Both statements 1 and 2 are true (d) Both statements 1 and 2 are false Ans. (c) Both statements 1 and 2 are true	**1**
SET A2	Read the following statements carefully: Statement 1: Correlation also implies causation between variables. Statement 2: Karl Pearson's Method of Correlation measures correlation for qualitative data, while Spearman's Rank Correlation measures correlation for quantitative data. In the light of the given statements, choose the correct alternative from the following: (a) Statement 1 is true and statement 2 is false (b) Statement 1 is false and statement 2 is true (c) Both statements 1 and 2 are true (d) Both statements 1 and 2 are false Ans. (d) Both statements 1 and 2 are false	**1**
SET A1 Q9	Read the following statement -Assertion (A) and Reason (R). Choose one of the correct alternatives given below: Assertion (A): Population of different states of India as per Census 2011 is an example of Temporal Classification. Reason (R): In case of Temporal Classification of data, data is classified with respect to different periods of time. Alternatives: (a) Both Assertion (A) and Reason (R) are true and Reason (R) is the correct explanation of Assertion (A). (b) Both Assertion (A) and Reason (R) are true and Reason (R) is not the correct explanation of Assertion (A). (c) Assertion (A) is true but Reason (R) is false. (d) Assertion (A) is false but Reason (R) is true. Ans. (d) Assertion (A) is false but Reason (R) is true.	**1**

<table>
<tr><td>SET A2</td><td>Read the following statement -Assertion (A) and Reason (R). Choose one of the correct alternatives given below:
Assertion (A): Population of India as per Census of 1991, 2001 and 2011 is an example of Temporal Classification.
Reason (R): In case of Temporal Classification of data, data is classified with respect to different periods of time.
Alternatives:
(a) Both Assertion (A) and Reason (R) are true and Reason (R) is the correct explanation of Assertion (A).
(b) Both Assertion (A) and Reason (R) are true and Reason (R) is not the correct explanation of Assertion (A).
(c) Assertion (A) is true but Reason (R) is false.
(d) Assertion (A) is false but Reason (R) is true.

Ans. (a) Both Assertion (A) and Reason (R) is true and Reason (R) is the correct explanation of Assertion (A).</td><td>1</td></tr>
<tr><td>SET A1 Q10</td><td>In an asymmetric distribution, state whether the following values of mean, median, and mode are possible or not.

Mean = 12, Median = 18, Mode = 8

Ans. Mode= 3 Median – 2 Mean
8 = 3(18) – 2(12)
8 = 36 - 24
8 ≠ 8
Hence, in the given asymmetric distribution, the given values of mean, median, and mode are not possible.</td><td>1</td></tr>
<tr><td>SET A2</td><td>In an asymmetric distribution, state whether the following values of mean, median, and mode are possible or not.

Mean = 12, Median = 14, Mode = 18

Ans. Mode= 3 Median – 2 Mean
18 = 3(14) – 2(12)
18 = 42 - 24
18 = 18
Hence, in the given asymmetric distribution, the given values of mean, median, and mode are possible.</td><td>1</td></tr>
<tr><td>SET A1 Q11
SET A2 Q12</td><td>Primary and secondary data are two types of data that researchers and analysts use for various purposes. Highlight the key differences between them n the field of research and data analysis.
Ans.<table><tr><td>Basis of comparison</td><td>Primary data</td><td>Secondary data</td></tr><tr><td>Accuracy</td><td>It is less accurate and might have to go through an examination.</td><td>Secondary data is more reliable and accurate as it has been pre-examined and published elsewhere.</td></tr></table></td><td>3

1</td></tr>
</table>

Cost and time	This data is costlier as it may take different strategies to uncover the required information. It is very time-consuming.	The data is less costly as it is already available and substantiated.	**1**
Error	As it is gathered first hand and not yet verified, there might be errors.	There are fewer chances of errors as this data is verified already.	**1**

Any other relevant point may be awarded marks.

SET A1 Q12
SET A2 Q11

A research was done in 20 homes in a city. People were asked about the number of cars owned by them. **3**

The results were: 1, 4, 3, 0, 5, 1, 2, 2, 1, 5, 2, 3, 2, 2, 0, 1, 2, 0, 3, 2.

Present this data in the Frequency Distribution Table. Find:

(a) the number of homes owning less than two cars.

(b) the difference between the number of homes owning the lowest and the highest number of cars.

Ans.

No. of cars	**No. of Households**
0	3
1	4
2	6
3	3
4	2
5	2

1

(a) the number of homes owning less than two cars= 3+4=7. **1**

(b) the difference between the number of homes owning the lowest and the highest number of cars.= 3-2=1 **1**

OR

What is meant by qualitative classification of data? What is the difference between Simple and Manifold Classification? **3**

Ans.

The classification of data on the basis of descriptive or qualitative characteristics like region, caste, sex, gender, education, etc., is known as **Qualitative Classification.** A qualitative classification can not be quantified and can be of two types; viz., **Simple Classification** and **Manifold Classification.** **1**

Simple Classification

When based on only one attribute, the given data is classified into two classes, which is known as **Simple Classification**. **For example,** when the population is divided into literate and illiterate, it is a simple classification. **1**

Manifold Classification

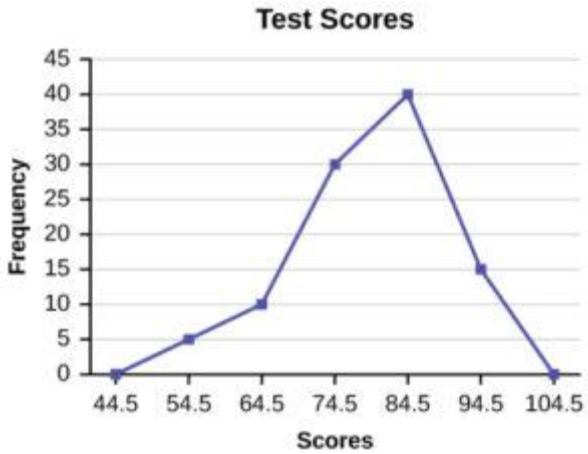
When based on more than one attribute, the given data is classified into different classes, and then sub-divided into more sub-classes, which is known

	as **Manifold Classification. For example,** when the population is divided into literate and illiterate, then sub-divided into male and female, and further sub-divided into married and unmarried, it is a manifold classification.	**1**
SET A1 Q13 SET A2 Q15	Sahil, a student of Class Xl, opted the subject of physical education due to his keen interest in making a career in the field of physical education. When he was told about the career options available in this field, he was slightly surprised that there is a plethora of career options in this field of physical education as for him it was only about playing. So, he went to his subject teacher to discuss the performance of students in the subject in the previous year. His teacher provided him the following result analysis for the students of the previous year's batch. Construct a frequency polygon without a histogram using the data given below to help Sahil better analyse the given information.	**4**

Test Scores	**Frequency**
49.5-59.5	5
59.5-69.5	10
69.5-79.5	30
79.5-89.5	40
89.5-99.5	15

Ans.

Test Scores	**Frequency**	**Cumulative Frequency**
49.5-59.5	5	5
59.5-69.5	10	15
69.5-79.5	30	45
79.5-89.5	40	85
89.5-99.5	15	100



Scale:
X Axis: 1 cm = 5 units
Y Axis: 1 cm = 10 units

1 mark - scale

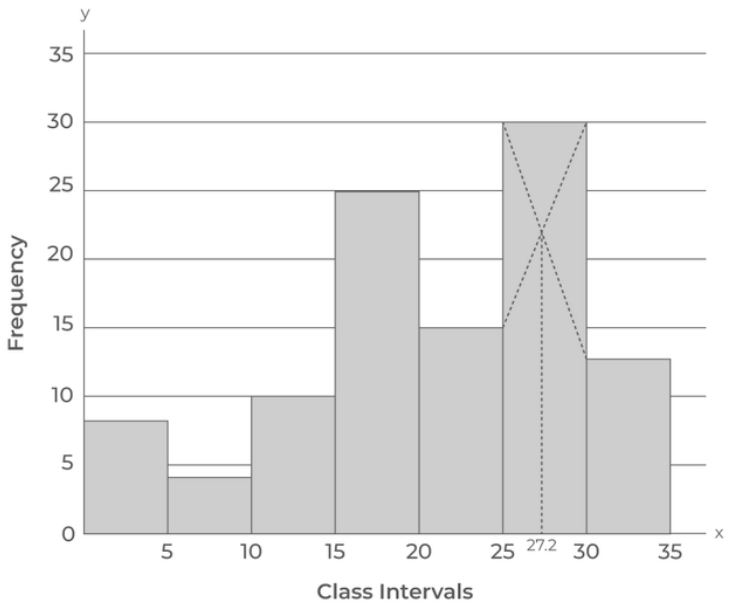
3 marks- graph

SET A1 Q14
SET A2 Q13

Determine mode of the following series, using the Graphic Method. **4**

Class Interval	0-5	5-10	10-15	15-20	20-25	25-30	30-35
Frequency	8	4	10	25	15	30	12

Ans.



Scale:
X Axis: 1 cm = 5 units
Y Axis: 1 cm = 5 units

3

Mode= 27.2 **1**

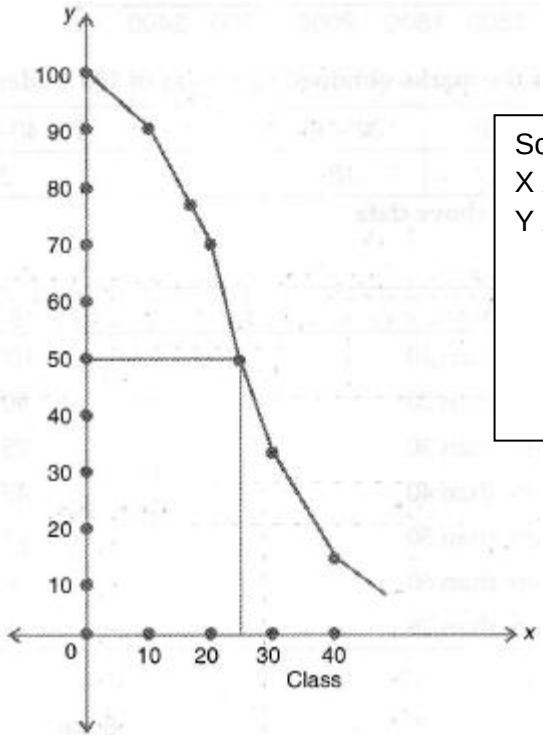
OR

Draw a more than ogive for the following distribution. Find the median from the curve. **4**

Class	**Frequency**
0 – 10	10
10 – 20	18
20 – 30	40
30 – 40	20
40 – 50	12

Ans.

Class	Frequency	Cumulative Frequency
0 – 10	10	100
10 – 20	18	90
20 – 30	40	72
30 – 40	20	32
40 – 50	12	12



Scale:
X Axis: 1 cm = 10 units
Y Axis: 1 cm = 10 units

3

N/2 = 100/2 = 50
Median = 2

1

SET A1 Q15
SET A2 Q14

4

Construct price index number of the following data by using:
(i) Laspeyres's Method, (ii) Paasche's Method

Items	Base Year		Current Year	
	Quantity	Price	Quantity	Price
A	12	10	15	12
B	15	7	20	5
C	24	5	20	9
D	5	16	5	14

Ans.

Items	**q0**	**p0**	**p1**	**q1**	**p0q0**	**p1q1**	**p1q0**	**p0q1**
A	12	10	12	15	120	180	144	150
B	15	7	5	20	105	100	75	140
C	24	5	9	20	120	180	216	100
D	5	16	14	5	80	70	70	80
					Σp0q0 = 425	Σp1q1= 530	Σp1q0 =505	Σp0q1= 470

2

(i) Laspeyre's Price index:

$P_{01}=\frac{\Sigma p1q0}{\Sigma p0q0}\times 100$

$P01=\frac{505}{425}\times 100=118.82$

(ii) Paasche's Price index:

$P_{01}=\frac{\Sigma P1q1}{\Sigma P0q1}\times 100$

$P_{01}=\frac{530}{470}\times 100=112.76$

2

SET A1 Q16
SET A2 Q17

(a) If the arithmetic mean of the data given below is 28, find the missing frequency

Profit per retail shop (in Rs)	0-10	10-20	20-30	30-40	40-50	50-60
Number of retail shops	12	18	27	-	17	6

4

(b) Which average would be suitable in the following cases?
(i) Average size of readymade garments.
(ii) Average intelligence of students in a class.
(iii) Average production in a factory per shift.
(iv) Average wages in an industrial concern.

2

Ans.

Class Interval	Frequency (f)	Mid Value (m)	fm
0-10	12	5	60
10-20	18	15	270
20-30	27	25	675
30-40	x	35	35x
40-50	17	45	765
50-60	6	55	330
	$\Sigma f = 80 + x$		$\Sigma fx = 2100 + 35x$

2

(a) Mean = $\Sigma fx/\Sigma f$

$\Rightarrow 28 = 2100 + 35x/80 + x$

$\Rightarrow 2240 + 28x = 2100 + 35$

$\Rightarrow 2240 - 2100 = 35x - 25x$

$\Rightarrow 140 = 7x$

$\Rightarrow x = 140/7 = 20$

1

Missing frequency = 20 — **1**

(b) Which average would be suitable in the following cases? — **2**

(i) Average size of readymade garments.- Mode — **0.5**
(ii) Average intelligence of students in a class.- Median — **0.5**
(iii) Average production in a factory per shift.- Arithmetic average — **0.5**
(iv) Average wages in an industrial concern.- Arithmetic average — **0.5**

OR

Find the mode from the following table using grouping method: — **6**

Class Interval	40-50	50-60	60-70	70-80	80-90	90-100	100-110	110-120
Frequency	8	7	13	10	13	12	9	8

Ans.

Class-Interval	Frequency 1	2	3	4	5	6
40-50	8					
50-60	7	} 15				
60-70	**13**		} 20			
70-80	$10f_0$	} 23		} 28		
L_1 80-90	$\mathbf{13f_1}$		} **23**		} 30	
90-100	$12f_2$	} **25**		} **35**		} **36**
100-110	9		} 21		} **34**	
110-120	8	} 17				} 29

Grouping Table - 2 marks

Column \ Item-Value	40-50	50-60	60-70	70-80	80-90	90-100	100-110	110-120
1			✓		✓			
2					✓	✓		
3				✓	✓			
4				✓	✓	✓		
5					✓	✓	✓	
6			✓	✓	✓			
Total			2	3	6	3	1	0

Analysis Table -2 marks

Modal Class= 80-90

$$Mode = l + \left(\frac{f_1 - f_0}{2f_1 - f_0 - f_2}\right) \times h$$

Mode Calculation- 2 marks

$$= 80 + \frac{(30 - 10)}{(2x13 - 10 - 12)} \times 5$$

$$= 80 + 30/4 = 80 + 7.5$$

$$= 87.5$$

SET A1 Q17
SET A2 Q16

Find out rank difference correlation of X and Y: **6**

X	48	33	40	9	16	65	26	15	57
Y	13	13	22	6	14	20	9	6	15

X	R1	Y	R2	D = R1 – R2	D2
48	3	13	5.5	–2.5	6.25
33	5	13	5.5	–0.5	0.25
40	4	22	1	3	9
9	9	6	8.5	0.5	0.25
16	7	14	4	3	9
65	1	20	2	-1	1
26	6	9	7	-1	1
15	8	6	8.5	-0.5	0.25
57	2	15	3	-1	1
N = 8					$\sum D^2=28$

3

13 and 6 are repeated two times in series 2. Thus, $m_1 = 2$ and $m_2 = 2$ and following formula is used to calculate correlation.

$$r_k = 1 - \frac{6\left[\sum D^2 + \frac{1}{12}(m_1^3 - m_1) + \frac{1}{12}(m_2^3 - m_2)\right]}{N_3 - N}$$ **1**

$$r_k = 1 - \frac{6\left[28 + \frac{1}{12}(2^3 - 2) + \frac{1}{12}(2^3 - 2)\right]}{729 - 9}$$ **1**

$\therefore \boxed{r_k = 0.758}$ **1**

SECTION B – MICRO ECONOMICS

SET A1 Q18

Production Possibility Frontier can be a straight line when: **1**
(a) Decrease in production of both goods
(b) More of both goods can be produced
(c) All resources are equally efficient in production of both goods
(d) All resources are not equally efficient in production of both goods

Ans. (c) All resources are equally efficient in production of both goods

SET A2

Production Possibility Frontier cannot be a straight line when: **1**
(a) Decrease in production of both goods
(b) More of both goods can be produced
(c) All resources are equally efficient in production of both goods
(d) All resources are not equally efficient in production of both goods

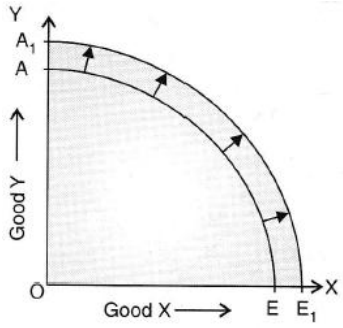
Ans. (d) All resources are not equally efficient in production of both goods

SET A1 Q 19	When one moves up with the supply curve, which one of these factors is not constant? (a) the seller numbers (b) the commodity prices (c) expected prices in the future (d) the resources cost that was used for commodity production Ans. (b) the commodity prices	**1**
SET A2	The supply curve will be_____ when the supply elasticity is greater than one. (a) horizontal (b) vertical (c) touching y-axis (d) passing through the origin Ans: (c) touching the y-axis	**1**
SET A1 Q20	Read the following statements carefully. Statement 1: The demand curve shifts towards the right if the price of complementary goods has a downfall Statement 2: The relation of quantity demanded and quantity supplied is explained by the law of demand. In the light of the given statements, choose the correct alternative: (a) Statement 1 is true and statement 2 is false (b) Statement 1 is false and statement 2 is true (c) Both statements 1 and 2 are true (d) Both statements 1 and 2 are false Ans. (a) Statement 1 is true and statement 2 is false	**1**
SET A2	Read the following statements carefully. Statement 1: The demand curve shifts towards the left if the price of complementary goods has a downfall Statement 2: For the demand for durable goods, the elasticity is less than unity In the light of the given statements, choose the correct alternative: (a) Statement 1 is true and statement 2 is false (b) Statement 1 is false and statement 2 is true (c) Both statements 1 and 2 are true (d) Both statements 1 and 2 are false Ans. (d) Both statements 1 and 2 are false	**1**

SET A1 Q21	Which one is the characteristic of perfect competition? (a) It has a large number of buyers and sellers selling homogeneous products at a uniform price. (b) There is no free entry and exit for all the firms. (c) It has a large number of buyers and sellers where the government decides the price of the product. (d) It has a large number of buyers and sellers selling heterogeneous products at a uniform price. Ans:(a) It has a large number of buyers and sellers selling homogeneous products at a uniform price.	**1**
SET A2	Which of the following options is not the characteristics of the perfect competition market? (a) Sellers selling homogeneous products. (b) Free entry and exit for the firms. (c) No intervention by the government. (d) Sellers spend a huge amount of money on advertising. Ans. (d) Sellers spend a huge amount of money on advertising	**1**
SET A1 Q22	Read the following statement -Assertion (A) and Reason (R). Choose one of the correct alternatives given below: Assertion (A): The prices of goods and the income of consumer determine the quantity of a commodity to be bought by a consumer. Reason (R): Slope of the Budget Line is the ratio of the price of good shown on X axis and price of good shown on Y axis. Alternatives: (a) Both Assertion (A) and Reason (R) are true and Reason (R) is the correct explanation of Assertion (A) (b) Both Assertion (A) and Reason (R) are true and Reason (R) is not the correct explanation of Assertion (A) (c) Assertion (A) is true but Reason (R) is false. (d) Assertion (A) is false but Reason (R) is true. Ans. (b) Both Assertion (A) and Reason (R) are true and Reason (R) is not the correct explanation of Assertion (A)	**1** **1**
SET A2	Read the following statement -Assertion (A) and Reason (R). Choose one of the correct alternatives given below: Assertion (A): The prices of goods determine the quantity of a commodity to be bought by a consumer. Reason (R): Slope of the Budget Line is the ratio of the price of good shown on X axis and price of good shown on Y axis. Alternatives: (a) Both Assertion (A) and Reason (R) are true and Reason (R) is the correct explanation of Assertion (A) (b) Both Assertion (A) and Reason (R) are true and Reason (R) is not the correct explanation of Assertion (A) (c) Assertion (A) is true but Reason (R) is false. (d) Assertion (A) is false but Reason (R) is true. Ans. (a) Assertion (A) is false but Reason (R) is true.	

SET A1 Q23	Marginal utility is : (a) the utility from the last unit consumed (b) the utility from first unit of a commodity consumed (c) total utility divided by number of units consumed (d) always positive Ans. (a) the utility from the last unit consumed	**1**
SET A2	Total utility is : (a) always increasing (b) utility from first unit X number of units consumed (c) the sum of marginal utilities (d) utility from last unit X number of units consumed Ans.(c) the sum of marginal utilities	**1**
SET A1 Q24	A consumer spends his income on goods X and Y with prices ₹ 4 and ₹ 6 per unit respectively and has income of ₹ 60. Consider bundles (i) [10,1] (ii) [12, 2] (iii) [15, 5], which of the following is true. (a) (i) and (ii) are in his budget set. (b) (i) and (iii) are in his budget set. (c) (ii) is in his budget set. (d) None of the above. Ans. (a) (i) and (ii) are in his budget set.	**1**
SET A2	A consumer spends his income on goods X and Y with prices ₹ 6 and ₹ 4 per unit respectively and has income of ₹ 80. Consider bundles (i) [10,10] (ii) [12, 2] (iii) [15, 0], which of the following is true. (a) (i) and (ii) are in his budget set. (b) (ii) and (iii) are in his budget set. (c) (ii) is in his budget set. (d) None of the above. Ans. (b) (ii) and (iii) are in his budget set.	**1**
SET A1 Q25	Read the following statements carefully. Statement 1: In case of constant prices, average revenue is more than marginal revenue. Statement 2: Total revenue curve is a positively sloped straight line when price remains same at all levels of output. In the light of the given statements, choose the correct alternative: (a) Statement 1 is true and statement 2 is false (b) Statement 1 is false and statement 2 is true (c) Both statements 1 and 2 are true (d) Both statements 1 and 2 are false Ans. (b) Statement 1 is false and statement 2 is true	**1**

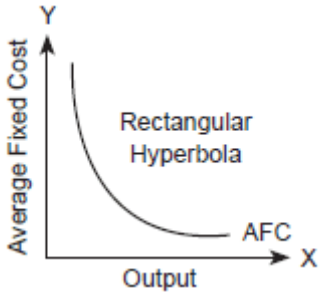
SET A 2	Read the following statements carefully. Statement 1: In case of constant prices, average revenue is the same as marginal revenue. Statement 2: Total revenue curve is a negatively sloped straight line when price remains same at all levels of output. In the light of the given statements, choose the correct alternative: (a) Statement 1 is true and statement 2 is false (b) Statement 1 is false and statement 2 is true (c) Both statements 1 and 2 are true (d) Both statements 1 and 2 are false Ans. (d) Both statements 1 and 2 are false	**1**
SET A1 Q26	The total revenue (TR) at 4 units of level of output is ₹ 100. Marginal Revenue (MR) at 5 units of level of output is ₹ 15. What will be the Average Revenue (AR) at 5 units of level of output: (in Rupees) (a) 23 (b) 25 (c) 27 (d) 29 Ans. (a) 23	**1**
SET A2	The total revenue (TR) at 5 units of level of output is ₹ 200. Marginal Revenue (MR) at 5 units of level of output is ₹ 15. What will be the Average Revenue (AR) at 5 units of level of output: (in Rupees) (a) 209 (b) 205 (c) 207 (d) 203 Ans. (d) 203	**1**
SET A1 Q27	Read the following statement -Assertion (A) and Reason (R). Choose one of the correct alternatives given below: Assertion (A): The perfect competitive market is characterized by the firm earning normal profit in the long run. Reason(R): There is no restriction on the entry and exit of the firms in the perfect competitive market. Alternatives: (a) Both Assertion (A) and Reason (R) are true and Reason (R) is the correct explanation of Assertion (A). (b) Both Assertion (A) and Reason (R) are true and Reason (R) is not the correct explanation of Assertion (A). (c) Assertion (A) is true but Reason (R) is false. (d) Assertion (A) is false but Reason (R) is true. Ans. (a) Both Assertion (A) and Reason (R) are true and Reason (R) is the correct explanation of Assertion (A).	**1**

SET A2	Read the following statement -Assertion (A) and Reason (R). Choose one of the correct alternatives given below: Assertion (A): The perfect competitive market is characterized by the firm earning normal profit in the short run. Reason(R): There is no restriction on the entry and exit of the firms in the perfect competitive market Alternatives: (a) Both Assertion (A) and Reason (R) are true and Reason (R) is the correct explanation of Assertion (A). (b) Both Assertion (A) and Reason (R) are true and Reason (R) is not the correct explanation of Assertion (A). (c) Assertion (A) is true but Reason (R) is false. (d) Assertion (A) is false but Reason (R) is true. Ans. (d) Assertion (A) is false but Reason (R) is true.	**1**
SET A1 Q28 SET A2 Q29	(a) Identify the following as Microeconomic study and Macroeconomic study giving suitable reasons: (i) Household expenditure (ii) Aggregate demand (iii) Market demand for apples Ans. (i) – Microeconomics – deals with households only (ii) Macroeconomics- at the level of the whole economy (iii) Microeconomics – deals with demand of only apples (b) 'In the fiscal year (FY) 2023–24, India received $70.95 billion in (Foreign Direct Investment), FDI. This includes $44.42 billion in FDI equity inflows.' What will be the likely impact of the above movement of foreign capital on the production possibilities curve of the economy? Use a diagram to support your answer. Ans. Inflow of foreign capital will lead to a rightward shift in the PPC  	**1.5** **0.5** **0.5** **0.5** **1.5** **0.5** **1**
SET A1 Q29 SET A2 Q28	(a) Can there be some fixed cost in the long run? If not, why? Ans. No, there can't be any fixed cost in the long run since all costs are variable costs in the long run and no factor is a fixed factor in the long run as	**1** **1**

fixed costs exists only in the short-run.

(b) What does the average fixed cost curve look like? Why does it look so? **2**

Ans. The Average Fixed Cost (AFC) curve is a rectangular hyperbola in shape. The area under the curve is constant because TFC is constant at all levels of output. AFC decreased as the output increases. So, AFC curve is downward sloping to the right. **1**



1

Rectangular Hyperbola

OR

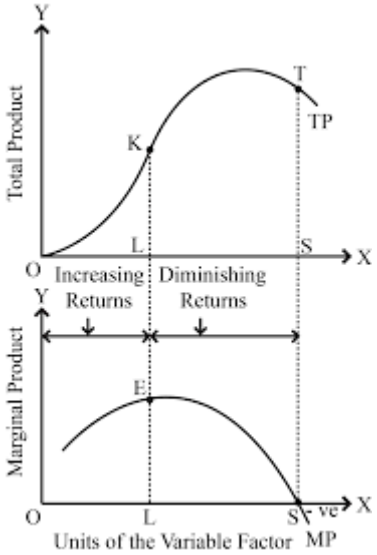
Use the table given below to answer the following questions.
Yummy Burgers is a small restaurant selling burgers. The table below shows the output and cost data of Yummy Burgers.

Quantity	Total Cost
0	100
10	210
20	300
30	400
40	540
50	790
60	1060

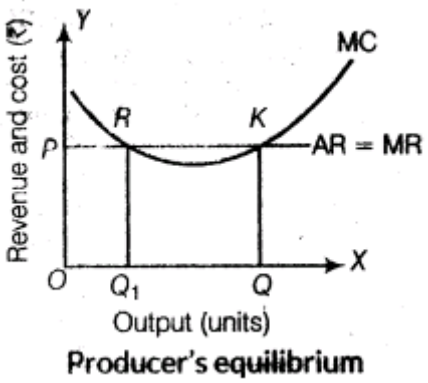
3

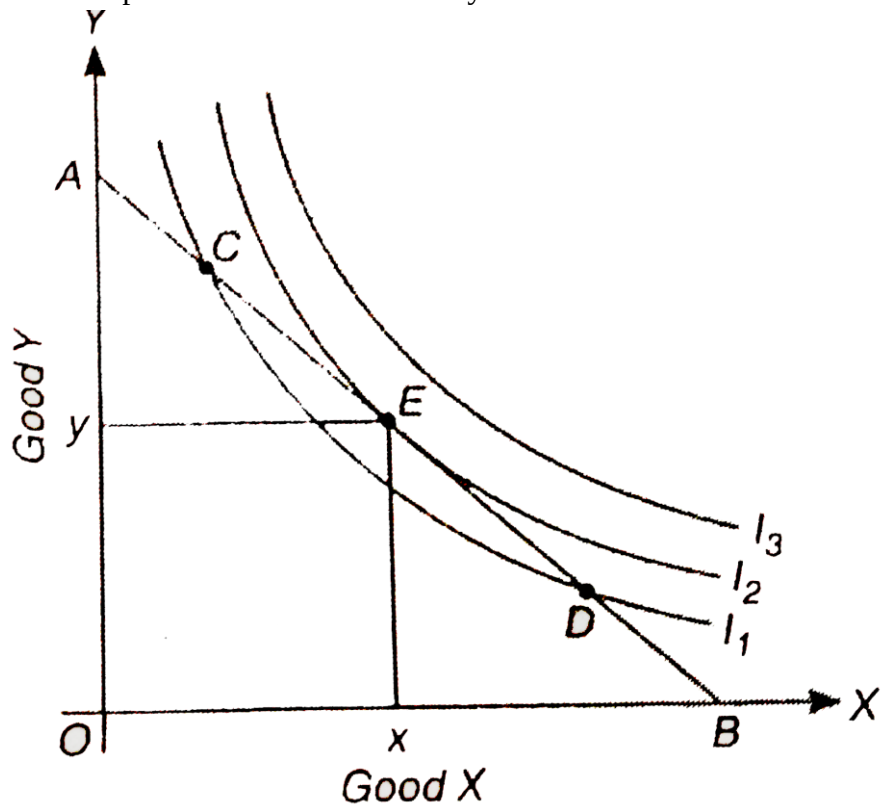
(a) What is the average fixed cost when 20 burgers are produced?
(b) Between 10 to 20 burgers, what is the marginal cost (per burger)?
(c) What is the total variable cost when 50 burgers are produced?
Ans.

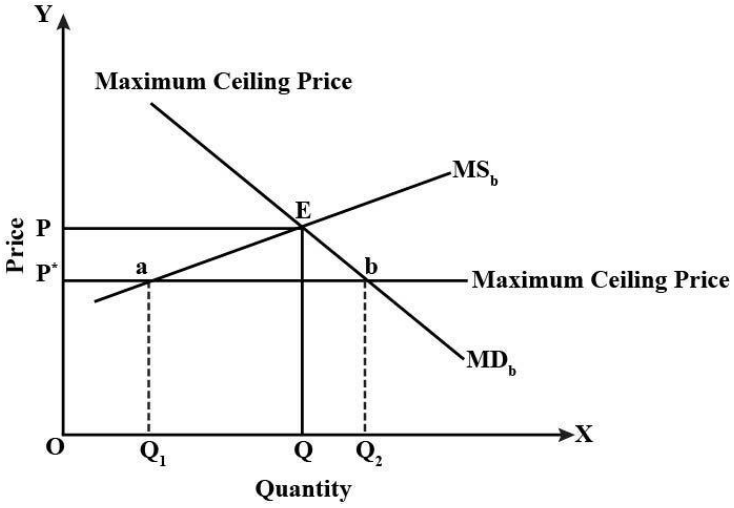
(a) TFC = 100, AFC = TFC/ Q = 100/20 = 5 **1**
(b) $MC_n = TC_n - TC_{n-1}$ = 300-210 = 90 , MC per burger = 90/10 =9 **1**
(c) TVC (9 burgers) = TC – TFC **1**
= 790 – 100 = 690

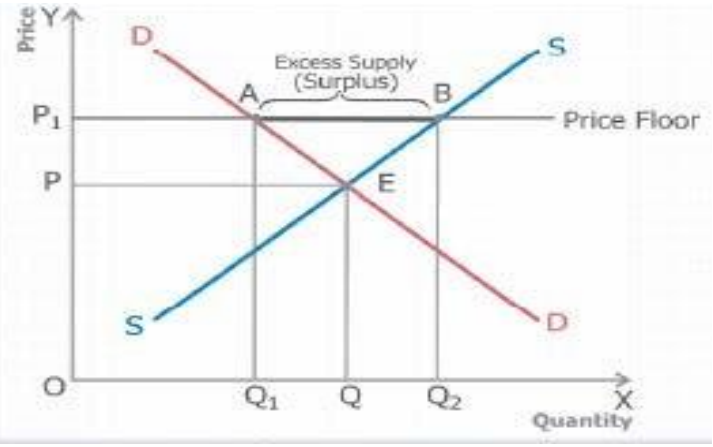
SET A1 Q30 SET A2 Q32	Explain with the help of a diagram the meaning of increasing returns to a factor. Give any two reasons for increasing returns to a factor. Ans. Stage I : Increasing returns to a factor Total Physical Product (TPP) increases at a steady rate while the Marginal Physical Product (MPP) increases as well. Reasons: Better utilization of fixed factors, Division of labour, Economies of scale, Better coordination between factors, Optimum combination of factors  **OR** (a) What is the behaviour of TP, when: (i) MP rises, (ii) MP falls, but remains positive, (iii) MP is zero, (iv) MP becomes negative. Ans. The behaviour of TP in different cases will be : (i) TP increase at increasing rate. (ii) TP increases at diminishing rate. (iii) TP is at its maximum point. (iv) TP decreases	**4** **1** **(Any 2, ½ mark each)** **2** **2** **½ mark each**

	(b) Complete the following table: **Units of labour** / **Total product (Units)** / **Average product (Units)** / **Marginal product (Units)** 1 / 20 / – / – 2 / – / – / 18 3 / – / – / 16 4 / – / – / 14 5 / – / – / 12 6 / – / – / 10 Ans. **Units of labour** / **Total product (Units)** / **Average product (Units)** / **Marginal product (Units)** 1 / 20 / **20** / **20** 2 / **38** / **19** / 18 3 / **54** / **18** / 16 4 / **68** / **17** / 14 5 / **80** / **16** / 12 6 / **90** / **15** / 10	**2** **1 mark for each column**
SET A1 Q31 SET A2 Q30	Explain the conditions leading to maximisation of profit by a producer. through the 'marginal cost and marginal revenue' approach. Use diagram. Ans. Producer's equilibrium refers to the state in which a producer earns his maximum profit or minimise its losses. According to MR-MC approach, the producer is at equilibrium, when the Marginal Revenue (MR) is equal to the Marginal Cost (MC) and Marginal Cost curve must cut the Marginal Revenue curve from below. Two conditions under this approach are: (i) MR = MC (ii) MC curve should cut the MR curve from below, or MC should be rising. In the diagram, output is shown on the X-axis and revenue and cost on the Y-axis. The Marginal Cost (MC) curve is U-shaped and P ~ MR = AR, is a horizontal line parallel to X-axis. MC = MR at two points Rand K in the diagram, but profits are maximised at point K, corresponding to O Q level of output. Between O Q, and O Q levels of output, MR exceeds MC. Therefore, firm will not stop at point R but will continue to produce to take advantage of additional profit. Thus, equilibrium will be at point K, where both the conditions are satisfied.	**4** **1** **1** **1**

	 **Producer's equilibrium**	**1**
SET A1 Q32 SET A2 Q31	Read the following text carefully and answer the given questions on the basis of the same and common understanding: The price of crude oil continued to rise. As a result, the petrol and diesel prices also took an upward move. The oil refining companies studied the trend of the price rise in the last two years and reckoned that, though reluctantly, customers submitted to the price rise. However, after an unaffordable petrol price rise, a small class of people shifted from using their personal vehicles to public transport. Moreover, for travelling to short distances, they dropped using petrol run vehicles, and adopted bicycles that became the need of the hour. The oil refining companies studied the price elasticity of demand for petrol in short run and long run. And they reckoned that the short run elasticity for petrol is 0.2. Whereas, the long run elasticity is 0.4. The petrol authority decided to increase the price by 10%. (a) What will be the change in demand in the short run and the long run when the price of petrol increases by 15%? (b) Compare the price elasticity of demand for petrol in the short run and long run citing reasons for the nature of elasticity. Ans. (a) Ed (Short Run) = $\frac{\%\text{ change in Quantity Supplied}}{\%\text{ change in Price}}$ $0.2 = \frac{\%\text{ change in Quantity Supplied}}{15\%}$ % change in Quantity Supplied = 0.2 x 15 = 3 % Ed (Long Run) = $\frac{\%\text{ change in Quantity Supplied}}{\%\text{ change in Price}}$ $0.4 = \frac{\%\text{ change in Quantity Supplied}}{15\%}$ % change in Quantity Supplied = 0.4 x 15 = 6 %	**2** **2** **1** **1**

	(b) Price elasticity of demand for petrol in the short run is less elastic as due to unavailability of alternate modes of transport, though reluctantly, customers submitted to the price rise. However, after an unaffordable petrol price rise, a small class of people shifted from using their personal vehicles to public transport. Moreover, for travelling to short distances, they dropped using petrol run vehicles, and adopted bicycles that became the need of the hour.	**2**
SET A1 Q33 SET A2 Q34	(a) A consumer consumes only two goods. Why is the consumer said to be in equilibrium when he buys only that combination of the two goods which lies at that point on the indifference curve where the budget line is tangent to the indifference curve? Explain using an appropriate diagram. Ans. (a) Let the two goods be X and Y as shown in the diagram. The tangent is at point E where: slope of indifference curve = Slope of budget line Or MRSxy=Px/Py. The equilibrium purchase is Ox of X and Oy of Y on the indifference curve l2  The consumer cannot get satisfaction level higher than l2 because his income not permit him to move above the budget line AB. The consumer will not like to purchase any other bundle on the budget line AB, for example the bundle at C and D, because they all lie on the lower indifference curve, and give him lower satisfaction. Therefore, the equilibrium choice is only at the tangent point E.	**4** **1** **2**

	(b) A consumer consumes only one good. The marginal utility from the good is 60 utils and its price is ₹ 7 per unit. Indicate whether the consumer is at equilibrium or not if marginal utility of money for the consumer is 6 utils. What should he do to attain equilibrium? Ans: <u>For consumer equilibrium:</u> Marginal Utility of Commodity (MU_X)/Marginal Utility of Money (MU_M) Given: MU_X=60utils, P_X= ₹7 per util, MU_M=6 utils. Substituting values, we find that: 60/6>7 Therefore, consumer is not at equilibrium. As marginal utility is greater than the price, consumer should increase the level of consumption.	**2** **1** **1**
SET A1 Q34 SET A2 Q33	Discuss Price Ceiling as a pricing technique used by the Government for the welfare of the consumers. What are the effects of this strategy used by the Government? Ans. Maximum price ceiling refers to the maximum price of a commodity that sellers can charge from buyers. Often, the government fixes this price to be lower than the equilibrium market price so that the commodity remains within the reach of the poorer sections of the society. When the ceiling price is lower than the equilibrium price, there is likely to be excess demand in the market, leading to a shortage of the commodity. The figure illustrates this situation.  OP is the equilibrium price and OQ is the equilibrium quantity. In the diagram, OP∗ is the maximum ceiling price fixed by the government. Here, demand expands from OQ to OQ2 while supply contracts from OQ to OQ1. Consequently, a gap emerges between market demand and market supply. It is a situation when Demand > Supply or a situation of excess demand which is equal to "ab" in the figure. This might lead to black marketing of the product.	**6** **2** **2** **2**

	OR Discuss the Minimum Support Price as a price floor technique used by the Government for the welfare of the farmers. What are the effects of this strategy used by the Government?	**6**
	Ans. Price floor is fixed above the market determined equilibrium price. Price floors are used by the government to prevent prices from being too low. The main reason for imposing the price floor policy is the welfare of the producers/farmers.	**1**
		**2**
	At minimum support price, producers will be willing to supply more but the buyers will be willing to buy less quantity of the commodity.	**1**
	Effect: Excess supply of foodgrains resulting in surplus. This in turn may lead to illegal selling below the minimum price ceiling as the producers are not able to sell what they desire to sell. In order to maintain the minimum support price, the government may purchase the surplus to store or sell it at subsidised prices in situation when the production of the supported commodity suffers. Government may also use it as aid and send it to other countries.	**2**