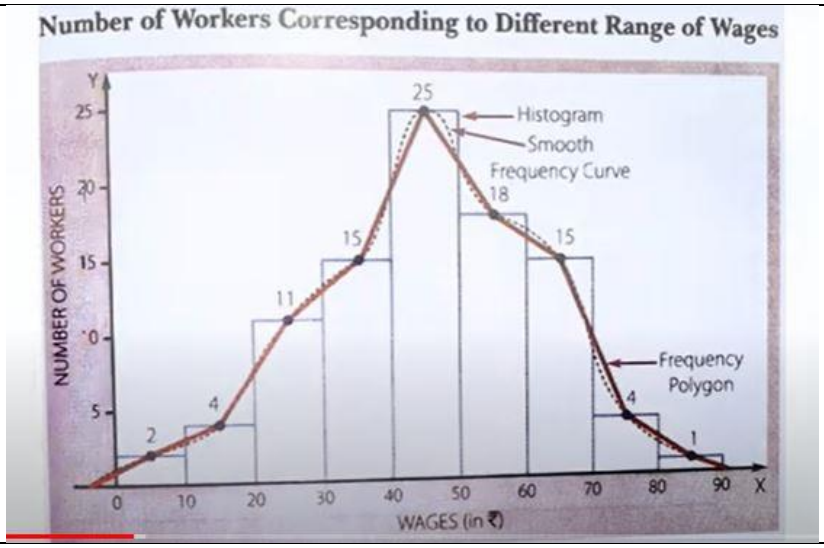
INDIAN SCHOOL AL WADI AL KABIR

First Assessment - 2024-25

Economics – Answer Key

Class: XI

SECTION A: STATISTICS		
Q. No.	**Questions**	**Marks**
1	A: a	1
2	A: b	1
3	A: a	1
4	A: b	1
5	A: a	1
6	A: c	1
7	A: a	1
8	A: a.	1
9	A: d	1
10	A: a	1
11		3

12	<table><tr><th>Marks</th><th>Frequency (f)</th><th>Cumulative Frequency</th></tr><tr><td>10–20</td><td>42</td><td>42</td></tr><tr><td>20–30</td><td>38</td><td>80 (c.f.)</td></tr><tr><td>(l_1) 30–40</td><td>120 (f)</td><td>200</td></tr><tr><td>40–50</td><td>84</td><td>284</td></tr><tr><td>50–60</td><td>48</td><td>332</td></tr><tr><td>60–70</td><td>36</td><td>368</td></tr><tr><td>70–80</td><td>31</td><td>399</td></tr><tr><td></td><td>N = 399</td><td></td></tr></table> $M = \text{Size of } (\frac{N}{2})\text{th item}$ $= \text{Size of } (\frac{399}{2})\text{th item}$ $= \text{Size of } 199.5\text{th item}$ Hence, median lies in the class 30–40.	3
13	<table><tr><th>Quantity</th><th>Tally Marks</th><th>Frequency</th></tr><tr><td>5 – 9</td><td></td><td>6</td></tr><tr><td>10 – 14</td><td></td><td>11</td></tr><tr><td>15 – 19</td><td></td><td>13</td></tr><tr><td>20 – 24</td><td></td><td>18</td></tr><tr><td>25 – 29</td><td></td><td>8</td></tr><tr><td>30 – 34</td><td></td><td>5</td></tr><tr><td>35 – 39</td><td></td><td>3</td></tr><tr><td>40 – 44</td><td></td><td></td></tr><tr><td></td><td></td><td>$\sum f = 64$</td></tr></table> b. Chronological classification In such a classification data are eclassified either in ascending or in decending order with reference to time such as years, quarters, months weeks etc. S patial classification → the data are classified with reference to geographical location such as countries, states cities, districts, etc.	2+2
14	Answer: a. Table number denotes the number of the table in a chronological order. Assigning a number to a table proves more useful when more than one table is prepared for a given information. By denoting each table with a unique number, one table can be easily differentiated from the other. b. Captions c. Body of the table d. Source in a table helps us to provide a clear and organized presentation of the information.	4

15		4
16		6

Marks (X)	Mid-value $\left(m = \frac{l_1 + l_2}{2}\right)$	Number of Students or Frequency (f)	Deviation (d = m – A) (A = 25)	Multiple of Deviation and Frequency (fd)
0–10	$\frac{0+10}{2} = 5$	20	5 – 25 = –20	20 × – 20 = – 400
10–20	$\frac{10+20}{2} = 15$	24	15 – 25 = –10	24 × –10 = – 240
20–30	$\frac{20+30}{2} = 25$	40	25 – 25 = 0	40 × 0 = 0
30–40	$\frac{30+40}{2} = 35$	36	35 – 25 = +10	36 × +10 = + 360
40–50	$\frac{40+50}{2} = 45$	20	45 – 25 = +20	20 × + 20 = + 400
		Σf = 140		Σfd = 120

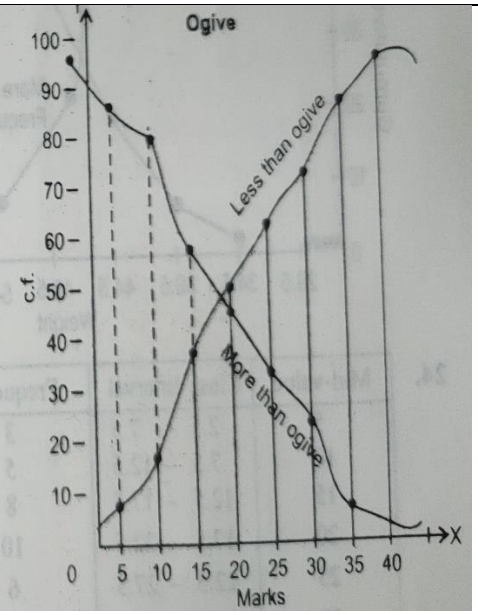
$$\overline{X} = A + \frac{\Sigma fd}{\Sigma f}$$

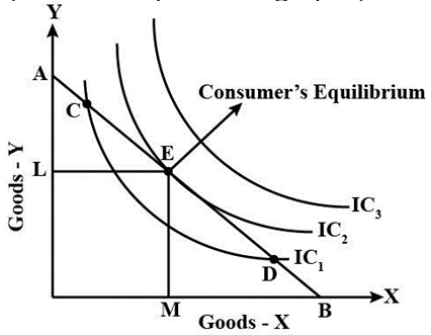
$$= 25 + 0.86$$

$$= 25.86$$

Marks	c.f.
Less than 5	7
Less than 10	17
Less than 15	37
Less than 20	50
Less than 25	62
Less than 30	72
Less than 35	87
Less than 40	95

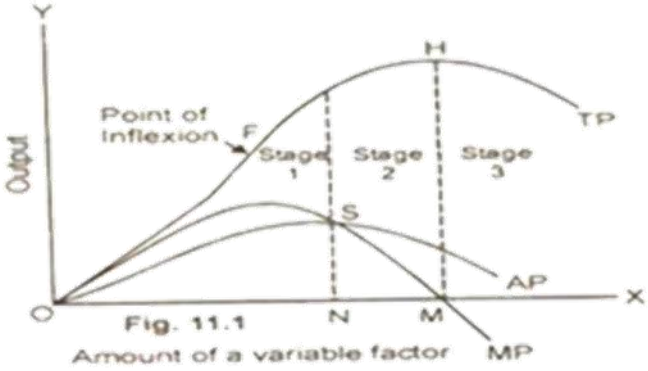
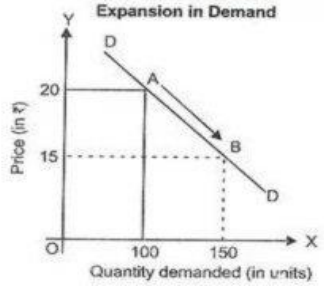
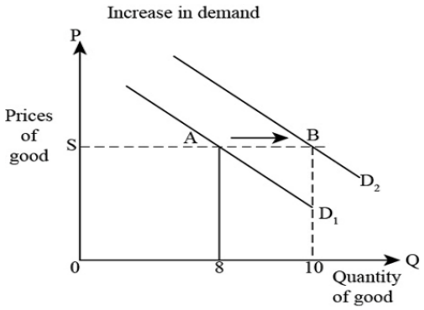
Marks	c.f.
More than 0	95
More than 5	88
More than 10	78
More than 15	58
More than 20	45
More than 25	33
More than 30	23
More than 35	8



17	$\overline{X} = A + \frac{\Sigma fd'}{\Sigma f} \times C$ $= 45 + \frac{-108}{216} \times 10$ $= 45 - 5 = 40$ **Class Interval (X)** | **Mid-value** $\left(m = \frac{l_1 + l_2}{2}\right)$ | **Frequency (f)** | **Deviation (d = m – A) (A = 45)** | **Step-deviation** $\left(d' = \frac{d}{C}\right)$ **(C = 10)** | **Multiple of Step-deviation and Frequency (fd')** 0–10 | 5 | 12 | – 40 | – 4 | – 48 10–20 | 15 | 16 | – 30 | – 3 | – 48 20–30 | 25 | 32 | – 20 | – 2 | – 64 30–40 | 35 | 52 | – 10 | – 1 | – 52 40–50 | 45 | 42 | 0 | 0 | 0 50–60 | 55 | 32 | 10 | 1 | 32 60–70 | 65 | 18 | 20 | 2 | 36 70–80 | 75 | 12 | 30 | 3 | 36 | | $\Sigma f = 216$ | | | $\Sigma fd' = -108$	6
	SECTION B: MICRO ECONOMICS	
18	A: c	1
19	A: c	1
20	A: c	1
21	A: a	1
22	A: a	1
23	A a	1
24	A: d	1
25	A: c	1
26	A: a	1
27	A: a	1
28	Indifference curve analysis: An indifference curve depicts all the combinations of two goods that provide the consumer with equal satisfaction. When the Budget line is tangent to the indifference curve, a consumer will be in equilibrium, according to the indifference curve approach. (Draw n Explain the graphs)  	3

29	A: PPC The two-basic property of production possibility curve are: a**. It slopes downward from left to right**- Production possibility curve slopes downward because both the variables involve in the equation are inversely related as one increase then other one decreases and vice versa because the resources are constant. b. **The curve is concave to the origin-** Since resources are use specific, therefore every time when one more unit of a commodity is produced more units of the other commodity is sacrificed that results in increasing marginal opportunity cost which leads to the concave shape of production possibility curve.	3
30	a. – An increase in income of households will result in the increase in demand for TV sets. The demand curve for both TVs will shift rightward. b. Ans- Train and bus services are substitute to each other. If bus fare comes down the demand for train travel will decrease as a result there would be left ward shift of demand curve.	2+2
31	The production function of a firm depicts the relationship between the inputs used in the production process and the final output. It specifies how many units of different inputs are needed in order to produce the maximum possible output. **In short run**, a firm cannot change all the inputs, which means that the output can be increased (decreased) only by employing more (less) of the variable factor (labour). It is generally assumed that in short run a firm does not have sufficient or enough time to vary its fixed factors such as, installing a new machine, etc. Hence, the output levels vary only because of varying employment levels of the variable factor. **In long run**, a firm can change all its inputs, which means that the output can be increased (decreased) by employing more (less) of both the inputs − variable and fixed factors. In the long run, all inputs (including capital) are variable and can be changed according to the required levels of output.	4
32	**Answer Key:** 1. Inferior 2. Negative 3. Leftward shift of the demand curve 4. Shifts to the left	4
33	a. Law of variable proportion or returns to variable factor - This law state that keeping other factors of production constant, when only one variable factor is increased, in the beginning total physical product increases at an increasing rate, then increases at a decreasing rate and ultimately decline. b. $\Delta P = TP/Q$, $MP_{nth} = TP_n - TP_{n-1}$ c.	2+2+2

Land (Units)	Labour (Units)	Total Product (TP)	Marginal Product (MP)	Stages
1	1	2	2	Increasing returns
1	2	5	3	
1	3	9	4	
1	4	12	3	Diminishing returns
1	5	14	2	
1	6	15	1	
1	7	15	0	Negative returns
	8	14	-1	

	Graph of Law of variable Proportions  Fig. 11.1	
34	A: 2. Extension in Demand | Increase in Demand This is caused by changed in price only | This is caused by change in the factorsother than price of the commodity. It results in downward movement alongthe demand curve.When demand increases due to fallsin price only, it is called extention indemand. | Itresults in the rightward shift in demandcurve.When demand increases due to changesfactors other than price, it is calledincrease in demand.   A: Price elasticity of demand indicates the rate of change in quantity demanded of the commodity due to change in its price. i. Electricity has elastic demand as it can be put to several uses. ii. Cigarettes have inelastic demand as its consumers are habituated. iii. Butter for a poor person has elastic demand as it is a luxury item for the poor person.	3+3