

<b>(11<sup>th</sup> &amp; JCC-11)</b>		
<b>DATE: 12.09.2022</b>	<b>MAXIMUM MARKS: 30</b>	<b>TIMING: 1 Hours</b>

**PAPER : ECONOMICS**  
**All Questions are Compulsory.**

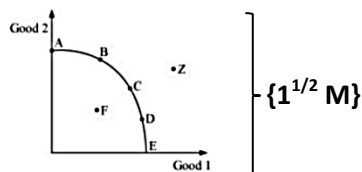
**Answer 1:**

Every economy faces three central problems due to scarce availability of resources. This scarcity challenges the best possible usage of these available resources to fulfil the unlimited demands. The three central problems of an economy are as follows:

1. What to produce and in what quantities?  
 The very first problem encountered by any economy is to decide what goods are to be produced and in what quantities or amount. There is a lot to be decided; whether to produce consumer goods or luxury goods; agricultural goods or investment goods; whether to cater education and healthcare sector or to strengthen country's military. An appropriate example was set by the Latin American nation Costa Rica; they dismantled their military in 1949 and invested the money, which earlier was spent on the maintenance of their army, on education and healthcare. Once it is decided, what to produce, the next decision is to estimate the amount or quantity of the production. So the economy constantly struggles to choose what to produce and in what quantities. {2 M}
  
2. How to produce?  
 The second problem that arrives is how to harvest the given or available resources? That is, what technique is to be used for producing various goods and services? It depends majorly on the nation's endowment of resources in deciding the optimum technique. It has to be decided whether efficient production is possible through labour-intensive or capital-intensive techniques. This decision rest on the present economic conditions and also that the selected technique shall not only reduce the cost of production but also add to the social and economic welfare. For example, if a country is facing wide unemployment possibly due to huge population, then it is wise to opt for labour-intensive technique so that there is reduction in unemployment. {2 M}
  
3. For whom to produce?  
 Finally, the purposeful distribution of final goods and services produced (national income) has to be done; that is, who gets what and how much? The economy needs to decide the best suitable mechanism for distribution of the final products among different segments of the society. The objective behind selecting such mechanism is to reduce inequality of income, to reduce poverty and to add to the social welfare and standard of living of people. {1 M}

**Answer 2:**

The production possibility frontier (PPF) refers to a curve that shows various alternative combinations of two goods that can be produced with efficient utilisation of the given resources and technology. It is also called production possibility curve (PPC). {1<sup>1/2</sup> M}



All the points lying on the PPC, that is curve AE, are associated with different quantities of good 1 and good 2 produced, by employing the available resources fully and in an efficient manner. While any point lying under the curve, like F, depicts inefficiency or underutilisation of available resources. Whereas any point lying outside the curve, like Z, depicts over utilisation of the available endowment of resources and technology; making it non-feasible. {2 M}

**Answer 3:**

Points of Difference		Microeconomics	Macroeconomics
1	Study matters	It studies about individual economic units like households, firms, consumers, etc.	It studies about an economy as a whole.
2	Deals with	It deals with how consumers or producers make their decisions depending on their given budget and other variables.	It deals with how different economic sectors such as households, industries, government and foreign sector make their decisions.
3	Method	It uses the method of partial equilibrium, i.e. equilibrium in one market.	It uses the method of general equilibrium, i.e. equilibrium in all markets of an economy as a whole.
4	Variables	The major microeconomic variables are price, individual consumer's demand, wages, rent, profit, revenues, etc.	The major macroeconomic variables are aggregate price, aggregate demand, aggregate supply, inflation, unemployment, etc.
5	Theories	Various theories studied are: 1) Theory of Consumer's Behaviour and Demand 2) Theory of Producer's Behaviour and Supply 3) Theory of Price Determination under Different Market Conditions	Various theories studied are: 1) Theory of National Income 2) Theory of Money 3) Theory of General Price Level 4) Theory of Employment 5) Theory of International Trade

{1 M  
Each for  
5  
points}

**Answer 4:**

**Calculation of Weighted Mean**

Marks (X)	Weight (W)	WX
81	2	162
76	3	228
74	6	444
58	7	406
70	3	210
73	7	511
	ΣW = 28	ΣWX = 1,961

{2 M}

Weighted Mean.

$$\bar{X}_w = \frac{\sum WX}{\sum W} = \frac{1,961}{28} = 70.04$$

{1 M}

Weighted Mean = 70.04 marks.

**Answer 5:**

Marks	Frequency (f)	Cumulative Frequency
10-20	42	42
20-30	38	80 (c.f.)
(l <sub>1</sub> ) 30-40	120(f)	200
40-50	84	284
50-60	48	332
60-70	36	368
70-80	31	399
	N = 399	

{1 M}

$$\begin{aligned}
 M &= \text{Size of } \left(\frac{N}{2}\right) \text{th item} \\
 &= \text{Size of } \left(\frac{399}{2}\right) \text{th item} \\
 &= \text{Size of 199.5th item}
 \end{aligned}
 \left. \vphantom{\begin{aligned} M \\ & \\ & } \right\} \{1 M\}$$

Hence, median lies in the class 30-40.

$$\begin{aligned}
 M &= l_1 + \frac{\frac{N}{2} - c.f.}{f} \times i \\
 &= 30 + \frac{\frac{399}{2} - 80}{120} \times 10 \\
 &= 30 + \frac{199.5 - 80}{120} \times 10 = 30 + \frac{119.5}{120} \times 10 \\
 &= 30 + 9.96 = 39.96
 \end{aligned}
 \left. \vphantom{\begin{aligned} M \\ & \\ & \\ & } \right\} \{1 M\}$$

Median Marks = 39.96. }{2 M}

**Answer 6:**

**Grouping Table for the Estimation of Mode**

Size	I Frequency	II (1 + 2)	III (2 + 3)	IV (1+2+3)	V (2+3+4)	VI (3+4+5)	
7	2	2 + 3 = 5	3 + 6 = 9	2 + 3 + 6 = 11	3 + 6 + 12 = 21	6 + 12 + 20 = 38	
8	3						
9	6						
10	12	6 + 12 = 18	12 + 20 = 32				12 + 20 + 24 = 56
11	20	20 + 24 = 44		20 + 24 + 25 = 69			
12	24	24 + 25 = 49					
13	25	25 + 7 = 32	25 + 7 + 5 = 37	7 + 5 + 3 = 15			
14	7	7 + 5 = 12					
15	5	5 + 3 = 8	5 + 1 = 4		5 + 3 + 1 = 9		
16	3						
17	1						

Analysis Table

Column	Size of items containing maximum frequency										
	7	8	9	10	11	12	13	14	15	16	17
I							✓				
II					✓	✓					
III						✓	✓				
IV				✓	✓	✓					
V					✓	✓	✓				
VI						✓	✓	✓			
Total	—	—	—	1	3	5	4	1	—	—	—

{2 M}

It is clear from the Analysis Table that the size 12 occurs the maximum number of times, i.e., 5 times. } {1 M}

Thus, the Mode (Z) = 12.

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