



# SOMAIYA

## VIDYAVIHAR UNIVERSITY

Somaiya School of Humanities and Social Science

### QUESTION PAPERS

<b>BRANCH: Master of Arts – Economics</b>	<b>SEM: I</b>
	<b>OCT/NOV-2025</b>

Sr. No.	Subject	Available
1.	Microeconomics	
2.	131P26C102 – Public Finance	
3.	Research Methodology	
4.	Statistical Techniques	
5.	Mathematical Economics	
6.	Economics of Demography	
7.		
8.		
9.		
10.		



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MA Economics  
(Sum-I)

<b>October/November 2025</b>		
<b>Examination: End Semester Examination (UG/PG Programmes)</b>		
<b>Programme code:</b>	<b>Class: MA</b>	<b>Semester: I</b>
<b>Programme: MA Economics</b>		
<b>Name of the School: SSHSS</b>		<b>Name of the Department: Economics</b>
<b>Course Code:</b>	<b>Name of the Course: Microeconomics</b>	
<b>Duration : 2 Hr.</b>	<b>Maximum Marks : 60</b>	
<b>Instructions: 1) Draw neat diagrams 2) Assume suitable data if necessary 3)</b>		

Question No.		Max. Marks	CO
Q1	A) What are the desired properties of consumer preference ordering?	7	1
	B) What are the exceptions to comparative namely normal and Giffen goods?	8	1
	OR		
	A) What is Lexicographic ordering? Explain it with diagram.	8	1
Q2	B) Explain indirect utility function. How do consumers maximize utility through it?	7	1
	A) Write a note on revealed preference theory.	8	2
	B) Describe the effect of income and substitution effect on consumer equilibrium.	7	2
	OR		
Q3	A) What are the important properties of expenditure function?	7	2
	B) Explain the offer curve and net demand curve in short.	8	2
	A) What is production function? Explain production possibility set in short.	8	3
	B) Describe the variations in scale with reference to input proportions in short.	7	3
Q4	OR		
	A) What are the different types of costs in the firm?	7	3
	B) What is long run cost curve? Explain it with economies of scale and return to scale.	8	3
	A) Discuss the Walara's equilibrium in competitive economy.	8	4
	B) What is Edgeworth exchange theory? Examine it with diagram.	7	4



	OR		
	A) Describe the efficient consumption with input supply and output mix.	7	4
	B) Discuss the first fundamental theorem of welfare economics.	8	4



October/November 2025			
Examination: End Semester Examination (UG/PG Programmes)			
Programme code: PG Programme: MA Economics	Class: FY/SY/TY	Semester: I (KT)	
Name of the School: SS HSS		Name of the Department: ECONOMICS	
Course Code: 131P26C102	Name of the Course: Public Finance		
Duration: 2 Hrs.	Maximum Marks: 60		
Instructions: 1) Draw neat diagrams 2) Assume suitable data if necessary 3) For 7 or 8 mark questions, answer limit is 15 lines; for 15 marks questions, the answer limit is 30-35 lines.			

Question No.		Max. Marks	CO
Q1	A. What do you understand by externalities? How are the externalities typically dealt with by the government	7	ONE
	B. Why are the governments increasingly involving the private sector into various segments of the economy like healthcare, transportation, communication, civil aviation, etc. as part of economic reforms?	8	ONE
	<p style="text-align: center;"><b>OR</b></p> How does government regulation affect competition in the market	15	
Q2	A. What are external benefits of education and flood control?	7	TWO
	B. Bring in theoretical justification and concepts of public finance in the recent efforts by the Government of India envisioning, developing and executing the eradication of the Covid 19 pandemic from the country.	8	TWO
	<p style="text-align: center;"><b>OR</b></p> Discuss the key features of the cost-benefit analysis (CBA) of government		

	projects.	15	
Q 3	<p>A. How India has migrated from one of the heavily dependent nations of the indirect taxes to the one depending on the direct taxes.</p> <p>B. Give the efforts made in framing and implementing fiscal rules in India like the enactment of Fiscal Responsibility and Budget Management Act.</p> <p style="text-align: center;"><b>OR</b></p> <p>How do fiscal rules benefit the effectiveness of debt management?</p>	7  8   15	THREE
Q 4	<p>A. Explain the Goods and Services Tax with salient features in the Indian context.</p> <p>B. How this has helped the stakeholders (households/ businesses/ government) as compared to the pre implementation phase prior to 2017.</p> <p style="text-align: center;"><b>OR</b></p> <p>Define fiscal rules. What are the four major fiscal rules and briefly explain their merits. How do fiscal rules help governments in managing the public money efficiently and effectively?</p>	7  8   15	FOUR



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November 2025

Examination: End Semester Examination (PG Programmes)

Programme code:31

Programme: MA Economics

Class: FY

Semester: I

Name of the Constituent College: Somaiya School Of Humanities and Social Sciences

Name of the Department: Economics

Course Code:

Name of the Course: Research Methodology

Duration : 2 Hrs.

Maximum Marks : 60

Instructions: 1) Draw neat diagrams 2) Assume suitable data if necessary

Question No.		Max. Marks	Co Attainment
Q.1	Explain the Following		
A	Highlight the motivation and objectives in research.	08	01
B	Differentiate between research method and research methodology.	07	01
	OR		
C	Mention in detail about preparing the research design and determining sample design as a part of research design	08	01
D	List down the problems encountered by researchers in India.	07	01
Q.2	Explain the Following		
A	Write in detail about meaning , need and features of good research design.	07	02
B	Summarize different categories of research design.	08	02
	OR		
C	Outline non probability sampling.	07	02
D	Mention different types of probability sampling.	08	02
Q.3	Explain the Following		
A	Define and explain in detail measurement scale.	08	03
B	Primary data collection through questionnaire is most economical and suitable for modern day times methods of data collection. Explain it with different aspects of questionnaire method.	07	03
	OR		
C	Collection of secondary data specially refers to the selection of appropriate method of data collection. Explain it with its suitable features and methods for data collection.	08	03
D	Explain advantages and limitations of case study method of data collection.	07	03

Q.4	Explain the Following																								
A	Classification of data is important step while doing processing to reduce it into homogenous groups to find out a meaningful relationship between the variables.	08	04																						
B	What is tabulation? Mention generally accepted principles of tabulation	07	04																						
OR																									
C	Explain meaning and classification of scale.	07	04																						
D	The following data give the number of years in the pit and daily earnings of 10 miners. Find the regression of daily earning on the number of years in the pit.	08	04																						
	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%;">Years of pit</td> <td>5</td> <td>6</td> <td>9</td> <td>5</td> <td>8</td> <td>3</td> <td>7</td> <td>5</td> <td>1</td> <td>1</td> </tr> <tr> <td>Daily earnings (in rs)</td> <td>32</td> <td>25</td> <td>30</td> <td>34</td> <td>30</td> <td>39</td> <td>26</td> <td>23</td> <td>15</td> <td>11</td> </tr> </table>	Years of pit	5	6	9	5	8	3	7	5	1	1	Daily earnings (in rs)	32	25	30	34	30	39	26	23	15	11		
Years of pit	5	6	9	5	8	3	7	5	1	1															
Daily earnings (in rs)	32	25	30	34	30	39	26	23	15	11															



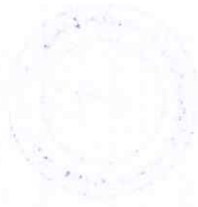
<b>November 2025</b>		
<b>Examination: End Semester Examination (PG Programme)</b>		
<b>Programme code:</b> <b>Programme:</b> MA Economics	<b>Class:</b> FY	<b>Semester:</b> I
<b>Name of the School:</b> School of Humanities and Social Sciences		<b>Name of the Department:</b> Economics
<b>Course Code:</b>	<b>Name of the Course:</b> STATISTICAL TECHNIQUES	
<b>Duration:</b> 2 Hrs.	<b>Maximum Marks:</b> 60	
<b>Instructions:</b> 1) Draw neat diagrams. 2) Assume suitable data if necessary		

Question No.		Max. Marks	Co Attainment										
Q.1	Answer the following questions												
A	Two sets of Candidates are competing for the positions on the Board of Directors of a company. The probabilities that the first and second sets will win are 0.6 and 0.4 respectively. If the first sets win the probability of introducing a new product is 0.8 and the corresponding probability if the second sets win is 0.3. What is the probability that the product will be introduced?	08	01										
B	If $P(A) = 0.4, P(B) = 0.7$ and $P(\text{at least } A \text{ and } B) = 0.8$ , Find $P(A \cap \bar{B})$ and $P(\bar{A} \cap B)$ .	07	01										
	OR												
C	The probability distribution of a random variable X is given as follows, $Var(X)$ , and $Var(2X - 1)$ . <table border="1" style="margin: 10px auto; border-collapse: collapse;"> <tr> <td>X</td> <td>0</td> <td>1</td> <td>2</td> <td>3</td> </tr> <tr> <td>P(X)</td> <td>1/3</td> <td>1/2</td> <td>0</td> <td>1/6</td> </tr> </table>	X	0	1	2	3	P(X)	1/3	1/2	0	1/6	08	02
X	0	1	2	3									
P(X)	1/3	1/2	0	1/6									
D	Find the probability that in a random arrangement of the letters of the word "ASSASSINATION", the four "S", come consecutively.	07	01										
Q.2	Answer the following questions												
A	An urn contains 6 red and 4 white balls. Three balls are drawn at random. Obtain the probability distribution of the number white balls drawn. Find the expected value and variance.	07	02										

B	<p>Let <math>(X, Y)</math> be a pair of discrete random variables each taking three values, <math>-1, 0, 1</math> with joint distribution given in the following table. Find the marginal probability distribution of <math>X</math> and <math>Y</math>. Hence, find <math>var(2X), E(Y)</math> and <math>E(X + 2Y)</math>.</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td><math>Y \downarrow / X \rightarrow</math></td> <td>-1</td> <td>0</td> <td>1</td> </tr> <tr> <td>-1</td> <td>3/30</td> <td>4/30</td> <td>2/30</td> </tr> <tr> <td>0</td> <td>5/30</td> <td>3/30</td> <td>1/30</td> </tr> <tr> <td>1</td> <td>4/30</td> <td>6/30</td> <td>2/30</td> </tr> </table>	$Y \downarrow / X \rightarrow$	-1	0	1	-1	3/30	4/30	2/30	0	5/30	3/30	1/30	1	4/30	6/30	2/30	08	02
$Y \downarrow / X \rightarrow$	-1	0	1																
-1	3/30	4/30	2/30																
0	5/30	3/30	1/30																
1	4/30	6/30	2/30																
OR																			
C	<p>A factory tested 1500 LED bulbs and found that their lifetimes follow a normal distribution with mean is 1800 hours and standard deviation is 50 hours. Estimate how many bulbs are expected to burn:</p> <p>a. More than 1880 hours b. Less than 1720 hours</p>	07	03																
D	<p>A population consists of four numbers <math>(1, 1, 4, 2)</math>. Consider all the possible samples of size two which can be drawn with replacement from this population. Calculate the standard error of sample mean.</p>	08	03																
Q.3	Answer the following questions																		
A	<p>A sample of 200 is taken with mean 5 and standard deviation is 2.5. Find 95% and 99% of confidence interval for the population. Suppose the sample size reduces to 50, determine the 99% confidence interval and when the sample size increases to 700 determine the confidence interval. State your observation.</p> <p>(Critical value, <math>Z_{0.05} = 1.96</math> or <math>Z_{0.01} = 2.58</math>)</p>	08	03																
B	<p>A sample mean of 100 iron bars is said to be drawn from a large number of bars whose lengths are normally distributed with mean 4ft and standard deviation 0.6ft. If sample mean is 4.2ft, can the sample be regarded as a truly random sample?</p> <p>(Critical value, <math>Z_{0.05} = 1.96</math> or <math>Z_{0.01} = 2.58</math>)</p>	07	04																
OR																			
C	<p>The following table gives the number of aircraft accidents that occurred during the various days of the week. Find whether the accidents are uniformly distributed over the week. (Hint: use chi-square, <math>Chi - sq_{0.05} = 12.592</math>)</p>	08	04																



	Days	Sun	Mon	Tue	Wed	Thu	Fri	Sat		
	No. of Accident s	14	16	8	20	11	9	14		
D	The mean weekly sales of the chocolate bar in candy stores was 146.3 bars per stores. After an advertising campaign the mean weekly sales in 22 stores for a typical week increased to 153.7 and showed a standard deviation of 17.2. Was the advertising campaign successful? ( $t_{0.05} = 1.721$ )								07	04
Q.4	Explain the Following with appropriate examples (any three)								15	
A	Statistic Vs. Parameter									03
B	Find the probability that in 5 tossing, a perfect coin turns up head at least 3 times in succession.									01
C	Proof that a. $E(2X + 55) = 2E(X) + 55$ b. $Var(2X + 55) = 4Var(X)$									02
D	Type I Vs. Type II errors									03
E	Level of Significance									04

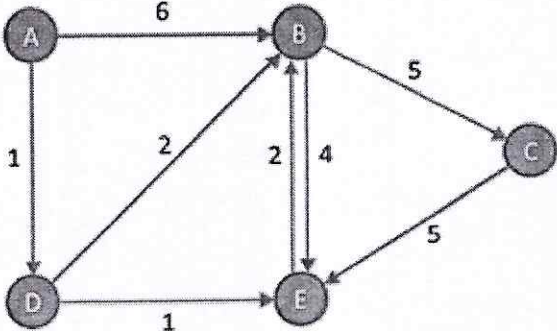


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<b>Semester (November / December 2024 )</b>		
<b>Examination: End Semester Examination (PG Programmes)</b>		
<b>Programme code: 26</b>	<b>Class: FY</b>	<b>Semester: I</b>
<b>Programme: MA-Economics</b>		
<b>Name of the Constituent College:</b> S K Somaiya College		<b>Name of the Department : Economics</b>
<b>Course Code: 231P26C104</b>	<b>Name of the Course: Mathematical Economics</b>	
<b>Duration : 2 Hrs.</b>	<b>Maximum Marks : 60</b>	
<b>Instructions: 1) All questions are compulsory 2) Figures to the right indicate full marks.</b>		
<b>3) Use of Simple calculators allowed</b>		

		Max Marks	CO PO Mappin g
Q1		(15M)	
A)	1) Illustrate types of sets. 2) Define the determinant of the matrix. State its properties	04 03	1
B)	i) Find inverse using adjoint method : $A = \begin{bmatrix} 1 & 0 & 3 \\ 2 & 1 & -1 \\ 1 & -1 & 1 \end{bmatrix}$ ii) consider the following sets : $A = \{x : x \in \mathbb{N} \mid 13 \leq x \leq 20\}$ $B = \{x : x \in \mathbb{U} \mid 10 < x < 20\}$ $C = \{x : x \in \mathbb{N} \mid x \text{ is divisible by 2 and less than 15} \}$ Answer the following : a. Write A, B and C in roaster form b. Find $(A \cap B)^c$ c. Draw Venn diagram for $(A \cup B) \cup C$	04       02 01 01	1
<b>OR</b>			
C)	i) Let $f(x) = ((4x - 3))/((5x + 1))$ , $x \in \mathbb{R}$ . Find: $f(-1)$ , $f(1)$ , $f(-1) + f(1)$ , $f(2)$ ii) Given $f(x) = 4x + 7$ , draw graph of $f(x)$	04 03	1
D)	i) Elaborate on three types of equations in economic applications.  ii) Find X and Y if $X+Y = \begin{bmatrix} 7 & 0 \\ 3 & 5 \end{bmatrix}$ and $X-Y = \begin{bmatrix} 3 & 0 \\ 0 & 4 \end{bmatrix}$	04  03	1
Q2		(15M)	
A)	1) Solve by Cramer's rule : $8x+y = -16$ ; $-3x+y = -5$ 2) State rules of derivatives (any two).	05 02	2
B)	1) Find $dy/dx$ : (State the rules used) i) $(x+3 \log x) (x^3 + x^{3/2})$ ii) $\frac{(5x+10)}{x^3 + 2}$ 2) Find $\frac{d^2y}{dx^2}$ : $e^x + 1/x + \log 2$	06  02	2

	OR		[P.T.O]
C)	1) Define variables and illustrate various types of variables 2) Calculate all partial derivatives for $f(x,y) = 3xy^3 + 5x^4y^2$	05 02	2
D)	1) Find maximum minimum: $f(x,y) = x^3 + 3x^2 + y^3 - 3y^2$ 2) Define Total Cost, Average Cost and Marginal cost	05 03	2
Q3		(15M)	
A)	1) Find critical points and relative extrema: $f(x) = x^3 - 3x^2 - 9x - 10$ . 2) State rules of integration.	05 02	3
B)	Solve : i) $\int x^3 \sqrt{x} dx$ ii) $\int \frac{5}{e^x} + \frac{1}{x} + \frac{1}{\sqrt{x}} dx$ iii) $\int (3+x) x^3 dx$  iv) $\int (4^x + \sqrt{2x}) dx$	08	3
	OR		
C)	1) Solve the differential equation by variable separable form: $3y dx - x dy = 0$ 2) State order and degree of differential equations: (a) $2(d^3y/dx^3) - 2(dy/dx)^3 + (d^2y/dx^2) + 4 = 0$ (b) $(d^4y/dx^4) + (d^2y/dx^2)^2 + 5(dy/dx) + 1 = 0$ 3) Given $y = x^2 + 3x + 5$ find $\Delta y$ with $h = 2$	03  02  02	3
D)	Solve : i) $\int_0^1 (3x^5 + 21x^{-2}) dx$ ii) $\int_{-1}^3 (2x^7 + x^{-1}) dx$  iii) $\int_2^4 (4x^5 + x) dx$ iv) $\int_0^2 (2e^x + \sqrt[4]{x}) dx$	08	3
Q4		(15M)	
A)	1) The rate of investment is given by : $I(t) = 8t^{2/3}$ Calculate the capital growth between 3 <sup>rd</sup> and 6 <sup>th</sup> year.  2) What is dynamic programming?	05  02	4
B)	Elaborate on terminologies used in dynamic programming.	08	4
	OR		
C)	1) Suppose Marginal cost is $25 + 3Q - 9Q^2$ . Fixed cost is 55. find total cost, average cost and variable cost. 2) What is optimization?	05 02	4
D)	Consider the following network. Find the optimal path to travel from A to B using dynamic programming (give detailed steps):	08	4
	 <pre> graph TD     A((A)) -- 6 --&gt; B((B))     A -- 1 --&gt; D((D))     A -- 2 --&gt; E((E))     D -- 1 --&gt; E     D -- 2 --&gt; B     E -- 4 --&gt; B     B -- 5 --&gt; C((C))     C -- 5 --&gt; E </pre>		



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VIDYAVIHAR UNIVERSITY

November 2025		
Examination: End Semester Examination (PG Programmes)		
Programme code: Programme: MA Economics	Class: MA Part I	Semester: II
Name of the School: Somaiya School of Humanities and Social Science	Name of the Department: Economics	
Course Code:	Name of the Course: Economics of Demography	
Duration : 1 Hr.	Maximum Marks : 60	
Instructions: 1) Draw neat diagrams 2) Assume suitable data if necessary 3) Use of Calculator is allowed.		

Section		Max. Marks	CO
Q1. A.	How does population growth influence economic development in developing countries?	7	CO 1
B.	Explain how migration patterns affect regional development.	8	CO 1
	<b>OR</b>	7	CO 1
C.	Explain the stages of the demographic transition theory.		
D.	How do fertility and mortality rates influence age composition?	8	CO 1
Q2. A.	What is meant by the term nuptiality? Explain Singulate Mean Age at Marriage (SMAM), and why is it important in demographic analysis?	7	CO 2
B.	How is SMAM calculated from census or survey data?	8	CO 2
	<b>OR</b>		
C.	What is Davis's Intermediate Variables Framework of fertility?	7	CO 2
D.	What is meant by the age pattern of fertility? Explain in detail?	8	CO 2
Q3. A.	What is meant by morbidity? What are the common measures used to analyze morbidity in a population?	7	CO 3
B.	How is the Standardized Mortality Ratio (SMR) calculated and interpreted?	8	CO 3
	<b>OR</b>		
C.	Discuss the interrelationship between fertility, mortality, and population growth.	7	CO 3
D.	Explain the determinants and differentials of mortality?	8	CO 3
Q4. A.	Explain the various patterns of migration observed in developing countries.	7	CO 4

B.	Discuss the major measures of migration and their significance in demographic studies.	8	CO 4
<b>OR</b>			
C.	What are the main components considered in the cohort-component method?	7	CO 4
D.	Explain the arithmetic, geometric, logistic and exponential methods of population projection.	8	CO 4