SOMAIYA
VIDYAVIHAR UNIVERSITY

Somaiya School of Humanities and Social Science

QUESTION PAPERS

BRANCH: Bachelor of Science (Economics)	SEM: IV
	APR-2025

Sr. No.	Subject	Available
1.	Research Methodology	
2.	Development Economics	
3.	231U081401 – Advanced Mathematical Methods	
4.	231U31C402 – Indian Economy Post Reforms	
5.		
6.		
7.		
8.		
9.		
10.		

LIBRARY

April 2025
Examination: End Semester Examination (UG Programmes)

Programme code: Programme: BSC Economics		Class: SY	Semester: IV
Name of the Constituent College: S K Somaiya College		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	Answer the following questions		
A	How Researchers select a research problem for their study?	08	01
B	What is research process explain it with flow chart?	07	01
	OR		
C	Distinguish between research method and research methodology	08	01
D	Describe a scenario where stratified sampling would be more effective than simple random sampling. (Give an appropriate example)	07	02
Q.2	Answer the following questions		
A	Examine the merits and limitations of the interview method in collecting data. Illustrate your answer with suitable examples.	08	02
B	With an example explain the difference between Convenience and purposive sampling?	07	02
	OR		
C	What is hypothesis. Explain its characteristics	07	03
D	Explain the importance of chi square test for comparing variance and nonparametric test	08	03
Q.3	Answer the following questions		
A	Explain the importance of sample distributions.	08	03
B	Why referencing is important, how many commonly used referencing method are there? Elaborate.	07	04
	OR		
C	Identify and explain the different categories of stakeholders in a research project. How do their roles and interests influence the research process and its outcomes?	08	04

D	What is bibliography and how it is different from footnotes and endnotes?	07	04
Q.4	Explain the Following (any three)	15	
A	Research design		01
B	Simple regression analysis		03
C	Common Knowledge		04
D	Measure of dispersion		03
E	Focus group discussion		02

April 2025
Examination: In Semester -_IV__ Examination (UG programmes)

Programme code:	
Programme: SYBSC	

Name of the Constituent College: S K Somaiya College (SKSC)	Name of the department/Section/Center: Economics

Duration:	Development Economics	Max. Marks: 60

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

Section		Max. Marks	CO
Q1. A.	How can PQLI and HDI be used together to provide a more comprehensive view of development?	7	CO 1
B.	How does the Capability Approach redefine the concept of poverty?	8	CO 1
	OR		
C.	What are the structural features of underdeveloped economies?	7	CO 1
D.	What does the concept of low-level equilibrium mean in the context of underdevelopment?	8	CO 1
Q2. A.	Can you provide real-world examples where a Big Push strategy has been successful in economic development?	7	CO 2
B.	What are the main arguments in favor of a balanced growth approach?	8	CO 2
	OR		
C.	How does the Lewis Model explain the transition from a traditional agrarian economy to a modern industrial economy?	7	CO 2
D.	How do high levels of poverty and inequality hinder economic growth and development?	8	CO 2
Q3. A.	How does the Solow Model incorporate technological progress as a driver of growth?	7	CO 3
B.	What is the main premise of the O-Ring Theory, and how does it explain economic development?	8	CO 3
	OR		
C	Explain the Romer and Lucas model of Endogeneous growth.	7	CO 3
D	How successful were the MDGs in addressing global poverty and inequality?	8	CO 3
Q4. A.	**Conceptual Questions: (Any three)**	15	CO 4
1.	PQLI		
2.	Vicious circle of poverty		
3.	Assumptions of Romer model		
4.	Kuznet curve		
5.	Difference between MDG and SDG		

April 2025
Examination: End Semester Examination (UG/PG Programmes)

Programme code: **Programme: B.SC Economics**	**Class:** SY.B.SC		**Semester:** IV
Name of the Constituent College: S K Somaiya	**Name of the Department**: Economics		
Course Code: 231U081401	**Name of the Course:** Advanced Mathematical Methods		
Duration : 2 Hr.	**Maximum Marks : 60**		

Instructions: 1)Draw neat diagrams 2)Assume suitable data if necessary 3)

Question No.		Max. Marks	CO
Q1	A] Compute the Hessian of $f(x, y) = X^3 - 2XY - Y^6$	7M	CO 1
	B] Determine the optimal sequence of jobs that Minimizes the total elapsed time and idle time. jobs are to be processed on three machine M1,M2 and M3 in the order M1M2M3	8M	CO 1

Machine

Jobs	M1	M2	M3
A	3	4	6
B	8	3	7
C	7	2	5
D	4	5	11
E	9	1	5
F	8	4	6
G	7	3	12

OR

C] State and prove Eulers theorem		7M	CO 2
D] The Captain of a Cricket team has to allot five middle batting positions to five batsmen. the average runs scored by each batsman at these position are as follows		8M	CO 2

Batting Position

Batsman	I	II	III	IV	V
P	40	40	35	25	50
Q	42	30	16	25	27
R	50	48	40	60	50
S	20	19	20	18	25
T	58	60	59	55	53

Find the assignment of batsmen to positions which would give the maximum number of runs

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Q 2

A] Use Simplex Method to solve the following Problem

Maximize $Z = 2X_1 + 5X_2$

Subject to $X_1 + 4X_2 \leq 24$ $3X_1 + X_2 \leq 21$ $X_1 + X_2 \leq 9$

7M   CO 3

B] M/S Motwani limited have taken up a special project consisting of 10 activities whose three point time estimates are listed below in the table

8M   CO 3

Activity	Optimistic	Most Likely	Pessimistic
1-2	3	6	9
1-3	5	6	13
2-3	6	8	10
2-5	1	4	7
3-4	2	3	10
4-5	0	0	0
5-6	1	1	1
4-6	1	2	3
6-7	2	4	12

i)   Draw network diagram and find expected completion time of project

ii) If a penalty of Rs 10,000/ per week is imposed for completion time beyond 25 weeks, what is the probability that the company will pay

a maximum penalty of Rs. 10000?

iii) For the say level of penalty , what is the probability that the company will pay a penalty of more than Rs 30,000?

OR

C] consider the following transportation problems involving minimization of cost (rupees)

Stores

Factories	1	2	3	4	Supply
A	4	6	8	13	50
B	13	11	10	8	70
C	14	4	10	13	30
D	9	11	13	8	50
Demand	25	35	105	20	

Find VAM and Modi method

D] Find feasible Solution

$Z = 8X_1 + 16X_2$

Subject to constraint

$X_1 + X_2 \leq 200$, $X_1 \leq 125$, $X_1 + 2X_2 \leq 300$

A] A project Schedule has the following Characteristics

Activity	Preceding Activity	Time (Days)
A	-	4
B	-	5
C	-	7
D	A	6
E	B	7
F	C	6
G	D	5
H	E	8

- C] ... 7M CO 3
- D] ... 8M CO 3
- Q 3 A] ... 7M CO 4

I	F	5

    i)   Draw network diagram and find critical path and project completion time

    ii)   Find EST,EFT,LST,LFT and interfering float

B] A company has 3 plants P1,P2 and P3. It supplies to 4 warehouse w1,w2 ,w3 and w4. Cost per unit and demand -supply data is as given below. Find optimal solution i) North-West method ii) least cost method

	W1	W2	W3	W4	Capacity
P1	10	12	18	22	400
P2	22	18	28	26	300
P3	30	36	52	40	300
Demand	50	150	350	450	

OR

C] we have five jobs, each of which must go through the two machine A and B in the order AB. Processing time are given in the table

Jobs	1	2	3	4	5
Machine A	5	1	9	3	10
Machine B	2	6	7	8	4

Determine a sequence for the jobs that will minimize the elapsed time T

D] Solve the following assignment problem. The matrix entries are processing time in hours Minimization Method

Jobs

Contractors	1	2	3	4
1	10	24	30	15
2	16	22	28	12
3	12	20	32	10
4	9	26	34	16

Q 4	Answer 3 out of 5	15M	
	A] CPM AND PERT		CO 1
	B] Transportation Problems		CO 2

8M — CO 4

7M — CO

8M — CO 4

	C] Zero Degree of Eulers		CO 3
	D] Simplex Method		CO 4
	E] Hungarian Method		CO 4

April 2025 **Examination: End Semester Examination (UG Programmes)**
	Programme code:30 **Programme: BSC Economics**	**Class:** SY	**Semester:** IV
	Name of the Constituent College: S K Somaiya College		**Name of the Department**: Economics
	Course Code: 231U31C402		**Name of the Course: Indian Economy Post Reforms**
	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	Elaborate on review of five year planning.	08	01
B	Discuss Privatization and Globalization as major economic reforms in 90s.	07	01
	OR		
C	What are the impact of economic reforms on labour? Discuss in detail.	08	01
D	Illustrate on performance of agricultural sector during reforms era.	07	02
Q.2	Explain the Following		
A	Explain in detail License permit quota.	07	02
B	What were major areas of reforms ,explain.	08	02
	OR		
C	How Indian financial system evolved ? elaborate with the help of history and background.	07	03
D	Write in detail about Narasimham committee Recommendation report I.	08	03
Q.3	Explain the Following		
A	Tax reforms recommendations were given by Chellaih committee which crucial at the time of reforms ,mention its follow up measures.	08	03
B	List down reforms in banking sector.	07	04
	OR		
C	What are different instruments of capital market.	08	04
D	Explain Basel III norms and why it is superior to Basel II	07	04
Q.4	Explain the Following (any three)	15	
A	Public private partnership		01
B	13th finance commission report		01
C	Sukhmoy Chkravarty committee recommendations.		02
D	Overview of capital market		03
E	Norms of Basel I		04