MANAV RACHNA INTERNATIONAL INSTITUTE OF RESEARCH AND STUDIES
(Deemed to be University under section 3 of the UGC Act, 1956)

Centre for Distance and Online Education

CURRICULUM AND SCHEME OF EXAMINATION

M.A. ECONOMICS

ONLINE DEGREE PROGRAMME

BATCH: 2023-25

PREAMBLE

The Centre for Distance and Online Education adopted the curriculum that has relevance to the local, national, regional and global developmental needs with well-defined Program Educational Objectives (PEOs), Program Objectives (POs) and Program Specific Objectives (PSOs) at the program level and Course Outcomes (COs) at individual course level.

The unique and vibrant curriculum of undergraduate, postgraduate and doctoral programs offered by the Centre for Distance and Online Education is committed to a liberal education philosophy and promotes quality teaching as well as research on the contemporary demand. The vision of the department is to attain the standard of excellence by imparting knowledge in areas of fundamental importance and pushing frontiers of research to address emerging global challenges through holistic development of Learners into ethical and socially responsible competent economists. The mission of the department is to offer curriculum which prepares Learners for acquiring theoretical knowledge and applied skills to deal with the economic enquiries; engage Learners in research on economic and public-policy issues for attaining development in a sustainable manner and to impart holistic education by producing socially responsible and internationally competitive economists.

The Economics PEOs and POs aim to create globally competent economists by extending frontiers to meet the current and future needs, introduce research for addressing the economic challenges to build up a sustainably developed world. It will help inculcate national ethos and values to the ignited minds for serving community on economic or policy issues. The curriculum will enable Learners to apply analytical framework for economic enquiry and decision-making by appropriate consideration of social and environmental welfare at local, regional, national and global level. The curriculum is regularly reviewed for any revisions or new courses which will help address the need of the academics, industry and society. Regular feedback on the curriculum is taken from all stakeholders' i.e. Learners, parents, faculties and industry experts. The curriculum is benchmarked with reputed national and international institutions/Universities.

The robust curriculum aims to narrow down the gap between academics and industry to increase employment opportunities and at the same time aims at pushing frontiers of research to meet the local, regional, national and global demand for new forms of knowledge.The content of the curriculum as well as the teaching learning process is therefore planned and implemented to meet both local and regional demand for education.

INDEX

MANAV RACHNA INTERNATIONAL INSTITUTE OF RESEARCH and STUDIES
(Deemed to be University under section 3 of the UGC Act1956)
Centre for Distance and Online Education

VISION

Through online education, Manav Rachna stands tall to bring the most efficacious environment for providing higher quality academic and research oriented education to the aspirants. Manav Rachna Online Education facilitate the goal of increasing access to enduring learning prospects to students and providing opportunities to make efficient use of scarce resources in light of the new economic realities of higher education**.**

MISSION

To provide an exclusive learning environment to students with flexible and meticulous online learning opportunities that will guide students to acquire the knowledge and skills as per the requirements of society at large. The aim of Manav Rachna Online Education is:

- To develop emerging skills through online learning methodologies to pursue their Academic and Professional goals.
- To impart profound knowledge and understanding of conceptual aspects of multidisciplinary learning.

ABOUT THE DEPARTMENT:

The ultimate touchstone of quality education is the quality culture permeating in any education Institution. In today's world of digitization, technical education stands at the crossroads of keeping pace with the emerging needs of humankind along with fast changing trends in governance and scientific development. The global transformation, trend of learning by doing, relevance to people and nation development – Manav Rachna International Institute of Research and Studies is the right place to gear up with a world class competitive edge. We are trusted to nurture juvenile minds and prepare them to deal with challenges of their future endeavors. Continuing the Legacy of our Founder Dr. O.P Bhalla, Manav Rachna has launched "Manav Rachna Centre for Distance and Online Education" to provide quality programmes to those students who are not able to draw benefits from conventional systems of Education. Seven programmes in different streams namely Computer Applications, Management, Commerce, Business Administration and Economics will be offered by University in online mode with specialization in different domains.

In Today's opportunistic world specialized education is essential for successful professional life.
Manav Rachna Centre for Distance and Online Education has collaboration with prominent industry partners to provide global career opportunities to the students and prepare the students to acquire the increased technology intensive needs of today.

In addition, Manav Rachna Centre for Distance and Online Education provides a multidisciplinary approach for the students to shape their career inside and outside their domain of education and to meet the evolving needs of the society. The commitment of multidisciplinary education is to broaden the participation of students in higher education and leads to a more diverse community. In a multidisciplinary approach, students are inspired to select diverged courses from different disciplines to expand their knowledge, discover themselves through creative thinking and learn the skills of collaboration. The online programmes will help the students to achieve an academic degree along with flexibility and relaxation. These online programs hold equal academic value to as on-campus degree and help students in developing themselves into an industry ready as equivalent to a conventional degree. Students can perfectly reshape their career and future through impeccably designed online programmes. The renowned faculty, cutting – edge advanced curriculum, technology driven and a remarkable content delivery will be helpful in the successfully implementation of online programs.

PROGRAM EDUCATIONAL OBJECTIVES (**PEO'S**)

PEO-1: Create globally competent economists by extending frontiers to meet the current and future needs

PEO-2: Introduce research for addressing the economic challenges to build up a sustainably developed world

PEO-3: Pursue lifelong learning to holistically prepare Learners for a variety of careers as proficient economist

PEO-4: Inculcate national ethos and values to the ignited minds for serving community on economic or policy issues

PROGRAM OBJECTIVES (**PO'S**)

PO-1: Gain a firm grasp of knowledge on economics for insight into the complexities, dynamics and challenges of current economic scenarios

PO-2: Comprehend with the empirical applications using relevant quantitative techniques to support contemporary economic arguments

PO-3: Apply analytical framework for economic enquiry and decision-making by appropriate consideration of social and environmental welfare

PO-4: Analyze the economic issues and articulate policy options by engage in reflective and independent thinking

PO-5: Evaluate new economic ideas in life-long process of learning through research and development

PO-6: Model the perspective of economic thought by aiding in disciplinary growth and policy making.

POSTGRADUATE PROGRAM SPECIFIC OBJECTIVES (**PSO'S**)

PSO-1: Equip Learners with comprehensive and advanced knowledge to explore

complex problems of economics;
PSO-2: Apply analytical skills and modern quantitative techniques for reflective economic research embedded in sustainable outlook;
PSO-3: Engage in lifelong learning to lead on economic policy decisions for meeting global challenges of resource efficiency.

Articulation Matrix (mapping is labeled as strongly with 3, moderately with 2 or low with 1)

	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PSO-1	PSO-2	PSO-3
PEO-1	3	3	3	3	2	3	3	3	3
PEO-2	3	3	3	3	2	3	3	3	2
PEO-3	3	3	3	2	3	2	3	3	2
PEO-4	2	2	3	3	3	3	2	2	3

SEMESTER AND CHOICE BASED CREDIT SYSTEM

Economics postgraduate is a eighty-four-credits program comprising four semesters under the credit based system of study. In this programme, Learners' performance is measured by the number of credits they earned/ completed. Based on the course credits and grade obtained by the Learner, grade point average is calculated.

(a) Course credits assignment

Each course has a certain number of credits assigned to it depending upon its duration in periods for lecture, tutorial and practical/field practice in a week. A few courses/activities may have without credit(s) and are referred to as Audit Pass courses, which are mandatory to pass as a partial fulfillment of award of the degree.

(b) Earning of credits

At the end of every course, a grade shall be awarded in each course for which a student has registered. On obtaining a minimum Pass-grade, students shall accumulate the course credits as Earned Credits. A student's performance shall be measured by the number of credits that he/she has earned and by the weighted grade point average. Grades obtained in the audit courses shall not be counted for computation of grade point average, however shall be mandatory to pass as a partial fulfillment of award of degree.

For the Award of Degree of M.A. in Economics, he/she has to earn a minimum 84 credits during the 2 year duration of the programme in 4 semesters. The total credits required to be earned have been further classified under two baskets of courses: 'Compulsory Courses' and 'Elective Courses'. Total 72 credits are required to be earned

under Compulsory Courses basket and 12 credits under Elective Courses basket.

All courses under the Compulsory Courses basket are required to be qualified and cleared/passed by each and every student enrolled under the program, and the same are semester-wise listed in the study scheme along with credits assigned to each course.

- Under Elective Courses Basket, there will be three types of courses:
- Semester-wise Discipline-specific/Inter-disciplinary/Generic courses offered by the department itself.
- Open/inter-disciplinary courses offered at the level of Institute/University, and notified from the office of Dean- Academics.
- Massive Open Online Courses (MOOCs) available on SWAYAM platform or any other platform as recommended by UGC/AICTE and notified from the office of Dean-Academics.

Each course shall have credits assigned to it. Student shall be required to register courses every semester for as many courses/credits specified under Elective Courses basket depending upon his/her interest, capability/pace of learning and availability of time slot (without any clash in time table) so as to earn all required total credits under the Elective Courses basket during the entire program duration.

However, for registration of courses [including courses under Compulsory Courses basket, Elective Courses basket and Previous Semester Courses (wherein he/she was declared in-eligible on the basis of attendance or he/she could not clear the course within permissible given chances), if any, the maximum limit in a semester shall be 30 credits.

MANAV RACHNA INTERNATIONAL INSTITUTE OF RESEARCH AND STUDIES
(Deemed to be University under section 3 of the UGC Act 1956)

CENTRE FOR DISTANCE AND ONLINE EDUCATION
SEMESTER WISE STUDY SCHEME WITH CONTACT HOURS, ASSIGNED CREDITS & DISTRIBUTION OF MARKS

SEMESTER- 1							
Course Type	**Course Code**	**Title of Course**	**Marks**			**Duration of Exam**	**Credits**
			Internal Assessment	**End Term External**	**Total**		
Compulsory Courses							
Core	OMECO-DS-101A	Modern Microeconomics	30	70	100	3 hrs.	4
	OMECO-DS-102A	Development of Macroeconomics	30	70	100	3 hrs.	4
	OMECO-DS-103A	Mathematical Applications in Economics	30	70	100	3 hrs.	4
	OMECO-DS-104A	Theory of Growth and Development	30	70	100	3 hrs.	4
	OMECO-DS-105	Quantitative Data Analysis	30	70	100	3 hrs.	4
Foundation	OMECO-DS-106A	Basic Principles of Economics	15	35	100	2hrs.	2
TOTAL CREDITS							22

SEMESTER- 2							
Course Type	**Course Code**	**Title of Course**	**Marks**			**Duration of Exam**	**Credits**
			Internal Assessment	**End Term External**	**Total**		
Compulsory Courses							
Core	OMECO-DS-207	Indian Economic Development	30	70	100	3 hrs.	4
	OMECO-ID-006A	Public Budget and Fiscal Policy	30	70	100	3 hrs.	4
	OMECO-DS-202A	Theory of International Economics	30	70	100	3 hrs.	4
	OMECO-DS-206	Environmental Economics	30	70	100	3 hrs.	4
	OMECO-DS-205A	Theory of Basic Econometrics	30	70	100	3 hrs.	4
Elective* (Any one)	OMECO-DS-001A	Agricultural Economics	30	70	100	3 hrs.	4
	OMECO-DS-008	Theory of Behavioural Economics	30	70	100	3 hrs.	
TOTAL CREDITS							24

SEMESTER- 3							
Course Type	**Course Code**	**Title of Course**	**Marks**			**Duration of Exam**	**Credits**
			Internal Assessment	**End Term External**	**Total**		
Compulsory Courses							
Core	OMECO-DS-305	Research Methods for Social Sciences	30	70	100	3 hrs.	4
	OMECO-DS-306	Data Analysis through Excel and STATA	30	70	100	3 hrs.	4
	OMECO-DS-307	International Finance	30	70	100	3 hrs.	4
	OMECO-DS-453A	Internship	30	70	100	Practical	4
Elective* (Any one)	OMECO-DS-002A	Time Series Econometrics	30	70	100	3 hrs.	4
	OMECO-DS-008	Introduction to Game Theory	30	70	100	3 hrs.	
TOTAL CREDITS							20

SEMESTER- 4							
Course Type	**Course Code**	**Title of Course**	**Marks**			**Duration of Exam**	**Credits**
			Internal Assessment	**End Term External**	**Total**		
Compulsory Courses							
Core	OMECO-DS-352A	Dissertation	30	70	100	Viva	4
	OMECO-DS-003A	Monetary Theory and Policy	30	70	100	3 hrs.	4
	OMECO-DS-403	Financial Economics	30	70	100	3 hrs.	4
	OMECO-DS-404	Labour Economics	30	70	100	3 hrs.	4
Elective* (Any one)	OMECO-DS-003A	Econometric Methods	30	70	100	3 hrs.	4
	OMECO-DS-006	Data Analysis through R	30	70	100	3 hrs.	
	OMECO-DS-002A	Industrial Economics	30	70	100	3 hrs.	
TOTAL CREDITS							20

*** Under Elective Courses, beside the mentioned Domain Specific Elective Courses, other Inter-disciplinary, Generic, on-line Courses (MOOCs etc) and other approved courses shall be offered, which shall be notified well before start of the semester. The Learner shall be required and allowed to opt the courses out of offered courses as per prescribed limit for maximum credits in a semester and for the category of Elective Courses under University Rules.**

MANAV RACHNA INTERNATIONAL INSTITUTE OF RESEARCH AND STUDIES (**MRIIRS**)

(Deemed to be University under Section 3 of the UGC Act 1956)

OMECO-DS-101A: MODERN MICROECONOMICS

Periods/week Credits 4 | Maximum marks:100
Continuous Evaluation: 30
Duration of examination: 3 Hrs | End Semester Examination:70
Pre-requisites: NIL
Course Type: Core

Course Outcomes

After completion of this course, the Learners will be able to:
OMECO-DS-101A 1 Infer advanced issues in consumer behavior theory
OMECO-DS-101A 2 Analyze modern theories of production and costs
OMECO-DS-101A 3 Develop a comprehensive understanding of risk and uncertainty theory
OMECO-DS-101A 4 Apply the different market models in the novel settings of producer behavior

Part-A

Unit 1: Consumer Theory

1.1 Axioms of preference ordering, homothetic preference, lexicographic ordering; direct versus indirect utility function

1.2 Roy's identity; additivity and separability, duality in consumption, aggregate demand and social choice

1.3 Measures of consumer surplus, linear expenditure systems; almost ideal demand system.

Unit 2: Production and Costs

2.1 Production sets, duality in production

2.2 Elasticity of substitution, productivity and efficiency, technical progress

2.3 Derivation of cost functions from production functions; economies of scale, modern theories of costs.

Part-B

Unit 3: Risk and Uncertainty

3.1 Risk-return solution: indifference curve approach

3.2 Von-Neumann Morgenstern utility: expected utility and uncertainty equivalence approaches

3.3 Risk and risk aversion (gambling and insurance); risk pooling and risk sharing; mean-variance analysis and portfolio selection.

Unit 4: Market

4.1 Market classifications; price determination: competitive and monopoly solutions (proof)

4.2 Chamberlin equilibrium under monopolistic competition

4.3 Oligopolistic interdependence and market solution in reaction curve approach (graphical and mathematical proof).

List of Suggested Text Books/Reference Books:

1. Hall Varian: Microeconomic Analysis, W W Norton
2. R Pindyck and D Rubinfeld: Microeconomics, Pearson
3. A Koutsoyiannis: Modern Microeconomics, Macmillan
4. J M Henderson and R E Quandt: Microeconomic Theory (Mathematical Approach), McGraw Hill
5. S Bikhchandani, J Hirshleifer and J Riley: The Analytics of Uncertainty and Information, CUP (selected part)

Evaluation Tools:

Assignment/Tutorials | Sessional tests | Surprise questions during lectures/Class Performance | End Semester Examination

Instructions for paper setting:

Seven questions are to be set in total. First question will be conceptual covering entire syllabus and will be

compulsory to attempt. Three questions will be set from each Part A and Part B (one from each unit). Learner needs to attempt two questions out of three from each part. Each question will be of 14 marks.

Evaluation Policy:

The evaluation will include two types of assessments:

(i) Continuous or formative assessments (in the form of end semester examination or term examination.

Weightage of assessments are as follows:

For continuous or Formative assessment (in semester): Maximum 30 percent. The categorization is:

- MCQs 30%
- Subjective (Short/Long) 40%
- Discussion/Presentation 15%
- Projects/Group Activities etc 15%

(ii) For Summative assessment (End Semester Examination or End-Term Examination):

Minimum: 70 percent. Categorization for the same is:

- Objective Type Questions: 30%
- Short/Long Questions: 70%

Course Articulation Matrix

CO Statements	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PSO-1	PSO-2	PSO-3
OMECO-DS-101A.1	3		2	2	3	2	3	2	3
OMECO-DS-101A.2	3		2	2	3	2	3	2	3
OMECO-DS-101A.3	3		2	2	3	2	3	2	3
OMECO-DS-101A.4	3	2	2	2	3	2	3	2	3

MANAV RACHNA INTERNATIONAL INSTITUTE OF RESEARCH AND STUDIES (**MRIIRS**)

(Deemed to be University under Section 3 of the UGC Act 1956)

OMECO-DS-102A: DEVELOPMENT OF MACROECONOMICS

Periods/week Credits 4 — Maximum marks:100

Continuous Evaluation: 30

Duration of examination: 3 Hrs — End Semester Examination:70

Pre-requisites: NIL

Course Type: Core

Course Outcomes

After completion of this course, the Learners will be able to:

OMECO-DS-102A 1 Illustrate the comprehensive modeling of macroeconomics

OMECO-DS-102A 2 Examine long-run models of macroeconomics

OMECO-DS-102A 3 Discuss new developments in macroeconomic models

OMECO-DS-102A 4 Evaluate the advanced growth models

Part-A

Unit-1: Macroeconomic Synthesis

1.1 IS-LM framework: derivation with mathematical equations; aggregate demand and aggregate supply curves

1.2 Output and employment in complete Keynesian model and comparison with Classical model (both graphical and mathematical)

1.3 Short run versus long run Phillips curve.

Unit-2: New Classical and New Keynesianism

2.1 Recent development in macroeconomic thought; IS-LM to rational expectations/staggered wage contracts

2.2 Micro-founded New Keynesian model (menu cost/efficiency wage/implicit contracts/explicit wage bargaining/ insider- outsider models/coordination failures)

2.3 New Keynesian Phillips curve analysis.

Part-B

Unit-3: Long-run Macroeconomics

3.1 Review of neoclassical growth model: Solow-Swan (fundamental equation, steady-state versus transitional dynamics)

3.2 Framework of endogenous growth: A K model with CD/CES production function

3.3 Harrod-Domar model with knife-edge problem.

Unit-4: Advanced Growth Model

4.1 Ramsey growth model; two-sector model of endogenous growth (with special reference to human capital)

4.2 Technological change: Romer model and Schumpeterian model

4.3 Real-business-cycle model.

List of Suggested Text Books/Reference Books:

1. O Blanchard: Macroeconomics, Pearson
2. N G Mankiw: Macroeconomics, Worth Publishers (Macmillan)
3. D Romer: Advanced Macroeconomics, McGraw-Hill
4. R J Barro and X Sala-i-Martin: Economic Growth, MIT Press

Evaluation Tools:

Assignment/Tutorials | Sessional tests | Surprise questions during lectures/Class Performance | End Semester Examination

Instructions for paper setting:

Seven questions are to be set in total. First question will be conceptual covering entire syllabus and will be compulsory to attempt. Three questions will be set from each Part A and Part B (one from each unit). Learner needs to attempt two questions out of three from each part. Each question will be of 14 marks.

Evaluation Policy:

The evaluation will include two types of assessments:

(i) Continuous or formative assessments (in the form of end semester examination or term examination.

Weightage of assessments are as follows:

For continuous or Formative assessment (in semester): Maximum 30 percent. The categorization is:

- MCQs 30%
- Subjective (Short/Long) 40%
- Discussion/Presentation 15%
- Projects/Group Activities etc 15%

(ii) For Summative assessment (End Semester Examination or End-Term Examination):

Minimum: 70 percent. Categorization for the same is:

- Objective Type Questions: 30%

Short/Long Questions: 70%

Course Articulation Matrix

CO Statements	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PSO-1	PSO-2	PSO-3
OMECO-DS-102A.1	3	2	2		2	2	3		2
OMECO-DS-102A.2	3	2	2	2	2	2	3	2	2
OMECO-DS-102A.3	3	2		3	2	2	2	2	3
OMECO-DS-102A.4	3	3	2	2	2	2	2	3	2

MANAV RACHNA INTERNATIONAL INSTITUTE OF RESEARCH AND STUDIES (**MRIIRS**)

(Deemed to be University under Section 3 of the UGC Act 1956)

OMECO-DS-103A: MATHEMATICAL APPLICATIONS IN ECONOMICS

Periods/week Credits 4 — Maximum marks:100

Continuous Evaluation: 30

Duration of examination: 3 Hrs — End Semester Examination:70

Pre-requisites: NIL

Course Type: Core

Course Outcomes

After completion of this course, the Learners will be able to:

OMECO-DS-103A. 1 Evaluate basic mathematics used in economic analysis

OMECO-DS-103A. 2 Familiarize interlinkage of economic theories with mathematics

OMECO-DS-103A. 3 Develop foundation of mathematical modelling for economic theories

OMECO-DS-103A. 4 Analyze advanced economic problems with graphical solutions

Part-A

Unit-1: Basic Mathematics

1.1 General polynomial form of function (with linear/non-linear forms, exponential/logarithm function)

1.2 Set operations (including Venn diagram)

1.3 Linear algebra: matrix and determinant, inverse matrix for solution of linear equation system

1.4 Derivatives (including partial and total differentiations) and basic integration (with determination of area under curve).

Unit-2: Optimization

2.1 Single/multiple variables optimization; maxima/minima of function; constrain optimization problem

2.2 Applications: consumer equilibrium, indirect utility and demand function; differential and difference equations (first order): linear/non-linear equations, stability theory, phase diagrams and time path

2.3 Application: multiplier-accelerator interaction model.

Part-B

Unit-3: Linear Programming and Game Theory

3.1 Linear programming problem: dual versus primal with interpretation, solution; shadow prices

3.2 Game concepts: zero/non-zero sum, cooperative/noncooperative game, static/dynamic game, minimax/maximin strategies

3.3 Game solution: dominant strategy, mixed strategy and Nash equilibrium.

Unit-4: Input-Output Analysis

4.1 Introduction to Leontief input-output model

4.2 Static input-output analysis: open and closed models

4.3 Dynamic input-output analysis.

List of Suggested Text Books/Reference Books:

1. R G D Allen: Mathematical Analysis for Economics, Trinity
2. A C Chaing and Wainwright: Fundamental Methods of Mathematical Economics, McGraw Hill
3. G C Archibald and R Lipsey: Introduction to Mathematical Treatment of Economics, AITBS Publishers
4. Dorfman, Samuelson and Solow: Linear Programming and Economic Analysis, McGraw Hill (selected part)
5. R Gibbons: Game Theory for Applied Economists, Princeton (selected part)

Evaluation Tools:

Assignment/Tutorials | Sessional tests | Surprise questions during lectures/Class Performance | End Semester Examination

Instructions for paper setting:

Seven questions are to be set in total. First question will be conceptual covering entire syllabus and will be compulsory to attempt. Three questions will be set from each Part A and Part B (one from each unit). Learner needs to attempt two questions out of three from each part. Each question will be of 14 marks.

Evaluation Policy:

The evaluation will include two types of assessments:

(i) Continuous or formative assessments (in the form of end semester examination or term examination.

Weightage of assessments are as follows:

For continuous or Formative assessment (in semester): Maximum 30 percent. The categorization is:

- MCQs 30%
- Subjective (Short/Long) 40%
- Discussion/Presentation 15%
- Projects/Group Activities etc 15%

(ii) For Summative assessment (End Semester Examination or End-Term Examination):

Minimum: 70 percent. Categorization for the same is:

- Objective Type Questions: 30%
- Short/Long Questions: 70%

Course Articulation Matrix

CO Statements	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PSO-1	PSO-2	PSO-3
OMECO-DS-103A.1	3	2			2	3		2	
OMECO-DS-103A.2	3	2	2		2	3		3	
OMECO-DS-103A.3	3	2	2		2	2		3	2
OMECO-DS-103A.4	3	2	3		2	2		3	

MANAV RACHNA INTERNATIONAL INSTITUTE OF RESEARCH AND STUDIES (**MRIIRS**)

(Deemed to be University under Section 3 of the UGC Act 1956)

OMECO-DS-104A: THEORY OF GROWTH and DEVELOPMENT

Periods/week Credits 4 — Maximum marks:100

Continuous Evaluation: 30

Duration of examination: 3 Hrs — End Semester Examination:70

Pre-requisites: NIL

Course Type: Core

Course Outcomes

After completion of this course, the Learners will be able to:

OMECO-DS-104A.1 Explain basic modelling of economic growth and development

OMECO-DS-104A.2 Illustrate advanced thought on development theories

OMECO-DS-104A.3 Interpret important indices of development and their measurements

OMECO-DS-104A.4 Develop analytical and critical thinking skills to evaluate appropriateness of development policies

Part-A

Unit-1: Introduction to Growth and Development

1.1 Economic growth versus development- definition and concepts. Developed versus developing and underdeveloped countries

1.2 Measuring economic growth and development: GDP and PCI as index of development and their limitations

1.3 Human development index and inequality-adjusted human development index, gender inequality index, multidimensional poverty index, green index and happiness index

1.4 Income inequality and economic growth: Kuznet's inverted-U hypothesis. Lorenz curve and Gini coefficient

1.5 Development as freedom: functioning and agency capabilities; capabilities and development

Unit-2: Theories and Models of Growth and Development

2.1 Theories of Growth: Big Push theory, Dependency theory, Innovation theory

2.2 Models of Growth: Harrod-Domar, Solow, Lewis

PART B

Unit-3: Contemporary Issues in Growth and Development

3.1 Population and Economic Growth: Measures of population growth. Malthusian theory, theory of Demographic Transition and Demographic Dividend

3.2 Education, health and development: Inter-state variation, gender disparity in educational and health outcomes

3.3 Globalization and economic growth: the impact of globalization on economic growth and development

3.4 Poverty and inequality: definitions and concepts. Measurement of poverty. Head count index, poverty gap index, poverty severity index (Foster-Greer-Thorbecke measures, Sen-Shorrocks-Thon index, Watts index)

3.5 Environmental sustainability: the role of the environment in economic growth and development. Sustainable development goals

Unit-4: Policies and Development

4.1 Economic policy: macroeconomic stabilization policies, trade policies, industrial policies, and their impact on economic growth and development

4.2 Development policy: the role of the state in economic development, poverty reduction policies in Indian context, and the Millennium Development Goals

4.3 Technology and innovation policy: policies to promote technological progress and innovation, intellectual property rights, and public-private partnerships

4.4 Evaluation of economic policies: methods for evaluating the impact of economic policies, cost-benefit analysis, and randomized controlled trials

List of Suggested Text Books/Reference Books:

1. Debraj Ray: Development Economics, Princeton University Press
2. M P Todaro and S C Smith: Economic Development, Prentice Hall
3. UNDP: Human Development Report, Oxford University Press
4. Amartya Sen: Development as Freedom, Alfred A Knopf Inc

Evaluation Tools:

Assignment/Tutorials | Sessional tests | Surprise questions during lectures/Class Performance | End Semester Examination

Instructions for paper setting:

Seven questions are to be set in total. First question will be conceptual covering entire syllabus and will be compulsory to attempt. Three questions will be set from each Part A and Part B (one from each unit). Learner needs to attempt two questions out of three from each part. Each question will be of 14 marks.

Evaluation Policy:

The evaluation will include two types of assessments:

(i) Continuous or formative assessments (in the form of end semester examination or term examination.

Weightage of assessments are as follows:

For continuous or Formative assessment (in semester): Maximum 30 percent. The categorization is:

- MCQs 30%
- Subjective (Short/Long) 40%
- Discussion/Presentation 15%
- Projects/Group Activities etc 15%

(ii) For Summative assessment (End Semester Examination or End-Term Examination):

Minimum: 70 percent. Categorization for the same is:

- Objective Type Questions: 30%
- Short/Long Questions: 70%

Course Articulation Matrix

CO Statements	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PSO-1	PSO-2	PSO-3
OMECO-DS-104A.1		2	2	1	2	1	3		
OMECO-DS-104A.2	3	2					3	2	
OMECO-DS-104A.3	2	2		3			2	2	
OMECO-DS-104A.4				2		3	2		3

MANAV RACHNA INTERNATIONAL INSTITUTE OF RESEARCH AND STUDIES (**MRIIRS**)

(Deemed to be University under Section 3 of the UGC Act 1956)

OMECO-DS-105: QUANTITATIVE DATA ANALYSIS

Periods/week Credits 4 | Maximum marks:100
Continuous Evaluation: 30
Duration of examination: 3 Hrs | End Semester Examination:70
Pre-requisites: NIL
Course Type: Core

Course Outcomes

After completion of this course, the Learners will be able to:
OMECO-DS-105 1 Define basic data analysis, moment generation functions, covariance and correlation
OMECO-DS-105 2 Discuss random variable theory and probability distributions
OMECO-DS-105 3 Analyze statistical inferences and hypothesis testing
OMECO-DS-105 4 Illustrate the concepts of ANOVA, MANOVA and ANCOVA

Part-A

Unit-1: Basic Data Analysis

1.1 Organizing simple/group data: presentation/distribution (with four properties)

1.2 Moment generating functions; bivariate data: covariance/correlation and notion of regression

1.3 Correlation coefficients: rank/partial/ total; multivariate regression: basic concept and distributive lags.

Unit-2: Random Variables and Probability Distributions

2.1 Classical probability and relative frequency; probabilistic events and mutual exclusiveness; density and distribution functions; discrete and continuous stochastic variables

2.2 Mathematical expectation (with numerical examples); population distribution: discrete and continuous variables cases

2.3 Normal distribution: properties, area and standard-normal form.

Part-B

Unit-3: Statistical Inferences

3.1 Population and samples (probability/non-probability sampling); random sampling with/without replacement and cluster/stratified random sampling

3.2 Classical statistical inference: standard error and sampling distribution (z, t, F and χ^2)

3.3 Testing of hypothesis: one and two tailed tests, level of significance, types of error, power of test; introduction to small and large sample test, non-parametric tests: one sample and two samples tests

Unit-4: Analysis of Variance

4.1 ANOVA: one-way and two-way

4.2 MANOVA and ANCOVA (conceptual)

4.3 ANOVA versus t-test

List of Suggested Text Books/Reference Books:

1. A M Mathai and P N Rathie: Probability and Statistics, Macmillan
2. I Miller and M Miller: Mathematical Statistics with Applications, Pearson/Prentice Hall
3. S C Gupta: Fundamentals of Statistics, Himalaya Publishing House
4. A M Goon, M K Gupta and B Dasgupta: Fundamentals of Statistics, World Press
5. S L Lohr: Sampling- Design and Analysis, Cengage Learning (selected part)
6. D N Gujarati: Basic Econometrics, McGraw Hill Education (selected part)

Evaluation Tools:

Assignment/Tutorials | Sessional tests | Surprise questions during lectures/Class Performance | End Semester Examination

Instructions for paper setting:

Seven questions are to be set in total. First question will be conceptual covering entire syllabus and will be compulsory to attempt. Three questions will be set from each Part A and Part B (one from each unit). Learner needs to attempt two questions out of three from each part. Each question will be of 14 marks.

Evaluation Policy:

The evaluation will include two types of assessments:

(i) Continuous or formative assessments (in the form of end semester examination or term examination.

Weightage of assessments are as follows:

For continuous or Formative assessment (in semester): Maximum 30 percent. The categorization is:

- MCQs 30%
- Subjective (Short/Long) 40%
- Discussion/Presentation 15%
- Projects/Group Activities etc 15%

(ii) For Summative assessment (End Semester Examination or End-Term Examination):

Minimum: 70 percent. Categorization for the same is:

- Objective Type Questions: 30%
- Short/Long Questions: 70%

Course Articulation Matrix

CO Statements	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PSO-1	PSO-2	PSO-3
OMECO-DS-105.1	3	2			2		3	2	
OMECO-DS-105.2	3				2		3	2	
OMECO-DS-105.3	3	2	2		2		3	2	2
OMECO-DS-105.4	3	2	2		2		3	2	

MANAV RACHNA INTERNATIONAL INSTITUTE OF RESEARCH AND STUDIES (**MRIIRS**)

(Deemed to be University under Section 3 of the UGC Act 1956)

OMECO-DS-106A: BASIC PRINCIPLES OF ECONOMICS

Periods/week Credits 2 — Maximum marks:100

Continuous Evaluation: 30

Duration of examination: 3 Hrs — End Semester Examination:70

Pre-requisites: NIL

Course Type: Foundation

Course Outcomes

After completion of this course, the Learners will be able to:

OMECO-DS-106A.1 Analyse scope and coverage of economics as a discipline

OMECO-DS-106A.2 Evaluate basic concept of modelling used in economics

OMECO-DS-106A.3 Identify various propositions of micro and macro economics

OMECO-DS-106A.4 Demonstrate their understanding in real world

Part-A

Unit-1: Basic Principles of Economic Modeling

1.1 Scope of economics; concept of value (scarcity and willingness to pay: water-diamond paradox); issue of resource allocation and scarcity (what/how/whom to produce); choice tradeoffs (opportunity costs); basic economic agents and their adaptive and rational expectations; identifying output/product and input/factor markets with a simple two-sector circular flow diagram; modern economy (concept of market and its function- invisible hand theory)

1.2 Concept of efficiency and equity; positive versus normative economics; micro- versus macro-economics; constructing economic model: variables and functions (linear versus non-linear); real versus nominal variables; stock versus flow concept; static versus dynamic analysis; optimization and equilibrium, comparative statics

1.3 Partial versus general equilibrium; slopes of downward and upward sloping curves (both linear and nonlinear cases); marginal changes (concept of elasticity): point and arc elasticity; elasticity of linear downward sloping curve.

Part-B

Unit-2: Basic Principles of Microeconomics & Macroeconomics

2.1 Agents in microeconomics and their aims in neoclassical theory; household versus individual as an economic agent; firm and industry as economic agent

2.2 Concept of demand (willingness to pay) and supply (willingness to accept); change in demand versus quantity demand; demand/supply curve versus schedule; individual to market demand/supply curves; demand-supply interaction: price determination in market; cross and income elasticity (with nature of commodities); short run versus long run analysis

2.3 National income/output: basic concept (with boundaries/limitations) and measurement (production: final- output/value-added approach, income approach and expenditure approach); Gross domestic and gross national products; gross versus net domestic products as measure of national income; gross domestic products as measure of wellbeing; real versus nominal gross domestic products and concept of deflator; gross domestic products versus personal disposable income

2.4 Circular flow diagram (two/three sector closed economy, four-sector open economy with respective macroeconomic identities)

List of Suggested Text Books/Reference Books:

1. C T S Ragan and R G Lipsey: Economics, Pearson
2. N G Mankiw: Principles of Microeconomics, Cengage
3. R Pindyck and D Rubinfeld: Microeconomics, Pearson
4. R Dornbusch, S Fischer and R Startz: Macroeconomics, McGraw Hill
5. A M Mathai and P N Rathie: Probability and Statistics, Macmillan

Evaluation Tools:

Assignment/Tutorials | Sessional tests | Surprise questions during lectures/Class Performance | End Semester Examination

Instructions for paper setting:

Seven questions are to be set in total. First question will be conceptual covering entire syllabus and will be compulsory to attempt. Three questions will be set from each Part A and Part B (one from each unit). Learner needs to attempt two questions out of three from each part. Each question will be of 14 marks.

Evaluation Policy:

The evaluation will include two types of assessments:

(i) Continuous or formative assessments (in the form of end semester examination or term examination.

Weightage of assessments are as follows:

For continuous or Formative assessment (in semester): Maximum 30 percent. The categorization is:

- MCQs 30%
- Subjective (Short/Long) 40%
- Discussion/Presentation 15%
- Projects/Group Activities etc 15%

(ii) For Summative assessment (End Semester Examination or End-Term Examination):

Minimum: 70 percent. Categorization for the same is:

- Objective Type Questions: 30%
- Short/Long Questions: 70%

Course Articulation Matrix

CO Statements	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PSO-1	PSO-2	PSO-3
OMECO-DS-106A.1	3				2	2	3		2
OMECO-DS-106A.1	3	3	2				3	3	
OMECO-DS-106A.1	3			2	2		3		
OMECO-DS-106A.1	3	3	2	2	2	2	3	2	2