# Scheme of Examination and Syllabus for Undergraduate Program Course: Economics (Sem-I to IV) Multiple Entry-Exit, Internship and CBCS-LOCF in accordance to NEP-2020 w.e.f. the session 2022-23 in phased manner in IIHS.

## **Division of Marks**

Maximun	150 Marks				
Internal As	50% (75 Marks)				
<ol> <li>Attendance and Class particip</li> <li>Mid-term Exam of 2 hours I syllabus</li> <li>Assignments- presentations</li> <li>Evaluation Scale:</li> </ol>	10% (15 marks) 30%(45 marks) 10%(15 marks)				
SCALE					
1	1 < 30%				
2	30-59%				
3					
4					
End terr Duration of End T	50% (75 Marks)				

## Scheme of examination of the Course alongwith POs, PSOs, COs and Mapping Matrix

### **PROGRAMME OUTCOMES (POs):-**

PO 1: Demonstrate a detailed knowledge and understanding of selected fields of study in core disciplines in the humanities, social sciences and languages;

PO 2: Apply critical and analytical skills and methods to the identification and resolution of problems within complex changing social contexts.

PO 3: Demonstrate a general understanding of the concepts and principles of selected areas of study outside core disciplines of the humanities, social sciences and languages;

PO 4: Apply an independent approach to knowledge that uses rigorous methods of inquiry and appropriate theories;

PO 5: Articulate the relationship between diverse forms of knowledge and the social, historical and cultural contexts that produced them;

PO 6: Communicate effectively and show ability to read, write, listen to and speak in a chosen language/s with fluency;

PO 7: Act as informed and critically discerning participants within the community of scholars, as citizens and in the work force;

PO 8: Work with independence, self-reflection and creativity to meet goals and challenges in the workplace and personal life.

## PROGRAMME SPECIFIC OUTCOMES (PSOs):-

PSO 1: Students will be able to understand economic vocabulary, theories, methodologies, tools and analysis procedures.

PSO 2: Students will learn to apply economic theories and concepts to contemporary social issues, as well as analysis of policies.

PSO 3: Students will be able to understand the impact of government policies and will be able to assess the consequences of the policies on the parties involved.

PSO 4: Ability to identify, formulate and solve problems related to global, national and local socio-economic development

# Scheme of Examination and Syllabus for Undergraduate Program Course: Economics Multiple Entry-Exit, Internship and CBCS-LOCF in accordance to NEP-2020 w.e.f. the session 2022-23 in phased manner in IIHS.

Sem.	Course	Paper	Nomenclature of Paper	Credits	Time	Internal	External	Total	Time
				(5+1)*	Contact	Marks	Marks	Marks	
				(4+2)**	hrs				
					Theory+				
					Tutorial				
	CC-1	B-ECO-	BASIC	6	5+1	75	75	150	3 Hrs
Ι	Economics	N-101	MICROECONOMICS-I						
II	CC-2	B-ECO-	BASIC	6	5+1	75	75	150	3 Hrs
	Economics	N-201	MACROECONOMICS-I						
III	CC-3	B-ECO-	BASIC	6	5+1	75	75	150	3 Hrs
	Economics	N-301	MICROECONOMICS-II						
IV	CC-4	B-ECO-	BASIC	6	5+1	75	75	150	3 Hrs
	Economics	N-401	MACROECONOMICS-II						

\*Distribution of Credits of Course with Practical (Theory-5 Credits + Tutorial- 1 Credits) \*\*Distribution of Credits of Course without Practical (Theory-4 Credits + Tutorial- 2 Credits)

### Semester I Core Course (CC-I) Code: B-ECO-N-101

### **BASIC MICROECONOMICS-I**

Total Marks:	150
<b>Internal Marks:</b>	75
<b>External Marks:</b>	75
Time:	3 Hours
Credit-	5:1:0=6

#### Course Outcomes (COs):-

B-ECO-N-101.1	To understand the Nature and Scope of Economics, Role of an Economist and Economic Systems.
B-ECO-N-101.2	To understand about the Firms and Household and their interrelation. To know about Demand and Supply as well as their determinants.
B-ECO-N-101.3	To understand the concept of Elasticity, it's types and its Measurement. To know about Consumer Equilibrium as per cardinal and ordinal analysis.
B-ECO-N-101.4	To understand Production, Cost and Revenue Analysis.

**Note:** - The Paper setter shall set 8 questions, 15 Marks each from all four units of the syllabus giving internal choice. However, one compulsory question in addition is to be set under fifth unit based on entire syllabus. This compulsory question would comprise five parts, 3 marks marks each. Such way, the examinees have to attempt five questions in all.

#### UNIT-I

#### **Nature and Scope of Economics**

- Meaning of Economics
- Nature of Economics
- Scope of Economics
- Methods of Economics
- Why Study Economics?

#### **Role of an Economist**

- Thinking Like an Economist
- The Economist as Scientist
- The Economist as Policy Adviser
- Economic Policy

#### **Economic System**

- Types of Economic Activities
- Organisation of Economic Activities
- Circular Flow of Economic Activities
- Evolution of the Present Economic Systems

### UNIT-II

#### **Firms and Household**

- Meaning of Firms and Household
- Relationship Between Firms and Household
- Input Markets
- Output Markets

#### **Demand and Supply**

- Individual Demand
- Market Demand
- Law of Demand
- Types of Goods (Normal, Inferior and Giffen)
- Demand Determinants
- Law of Supply
- Supply and its Determinants
- Market Equilibrium

#### UNIT-III

#### Elasticity and its Measurement

- Types of Elasticity of Demand
- Price, Income and Cross Elasticities
- Measurement of Elasticity of Demand
- Determinants of Elasticity of Demand

#### **Consumer Equilibrium**

- Cardinal utility analysis(Law of diminishing marginal utility, Law of equi-marginal utility)
- Ordinal utility analysis (Indifference Curve, properties of indifference curve, Budget line, equilibrium of consumer

#### UNIT-IV

#### **Production Analysis**

- Production Function- Short Run and Long Run
- Total Product
- Marginal Product
- Average Product
- Law of returns to factor
- Law of returns to scale

### Cost and Revenue Analysis

- Cost in the Short run
- Fixed Costs and Variable Costs
- Marginal Costs
- Long run and MC
- TR,MR, AR and relationships

#### **Basic Reading List**

- Koutsoyiannis, A. (1979), Modern Microeconomics, (2nd Edition), Macmillan Press, London.
- Salvatore D(2006), Microeconomics-Theory and Applications, Oxford University Press
- Varian, H. (2003), Intermediate Microeconomics, East-West Press.
- Ahuja,H.L (2012) :Ucchatar Arthik Siddhantl, S.Chand & Company, New Delhi.
- Dwivedi, D.N (2011) : Microeconomics-Theory & Applicationsl, Pearson.

# Mapping Matrix of Course B-ECO-N-101

**Mapping:** Mapping is a process of representing the correlation between COs and POs, COs and PSOs in the scale of 1 to 3 as follows (Table 1):

## Table 1: Scale of mapping between COs and POs

Scale	
1	If the contents of course have low correlation (i.e. in agreement with the particular PO to a small extent) with the particular Programme outcome
2	If the contents of course have medium correlation (i.e. in agreement with the particular PO to a reasonable extent) with the particular Programme outcome
3	If the contents of course have strong correlation (i.e. in agreement with the particular PO to a large extent) with the particular Programme outcome

Same scale may be used to define the correlation between Cos and PSOs

# Mapping of Course Outcomes to Programme Outcomes : (CO-PO Mapping Matrix)

Table2 shows the CO-PO mapping matrix for a course (B-ECON-101) assuming that there are 08 POs and 4COs.

СО	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8
B-ECO-N-101.1	3	3	3	2	2	2	2.5	2.5
B-ECO-N-101.2	3	3	3	2	2	2	2.5	2.5
B-ECO-N-101.3	3	3	3	2	2	2	2.5	2.5
B-ECO-N-101.4	3	3	3	2	2	2	2.5	2.5
Average	3	3	3	2	2	2	2.5	2.5

Table 2: CO-PO Matrix for the Course B-ECO-N-101

Note: It is not necessary that each CO has a correlation with all the POs.

## Mapping of Course Outcomes to Programme Specific Outcomes :(CO-PSO Mapping Matrix)

Table3 shows the CO-PSO mapping matrix for a course (B-ECO-N-101) assuming that there are 4 PSOs and 4COs.

### Table 3: CO-PSO Matrix for the Course-ECO-N-101

СО	PSO 1	PSO 2	PSO 3	PSO 4
B-ECO-N-101.1	3	3	3	3
B-ECO-N-101.2	3	3	3	3
B-ECO-N-101.3	3	3	3	3
B-ECO-N-101.4	3	3	3	3
Average	3	3	3	3

### Semester II Core Course (CC-2) Code: B-ECO-N-201 BASIC MACROECONOMICS-I

<b>Total Marks:</b>	150
Internal Marks:	75
<b>External Marks:</b>	75
Time:	3 Hours
Credit-	5:1:0=6

#### **Course Outcomes (COs):-**

B-ECO-N-201.1	To introduce students with the basic concepts of Macroeconomics especially national income.
B-ECO-N-201.2	Students will understand, explain and relate Classical and Keynesian theory of income and employment.
B-ECO-N-201.3	Students will learn various consumption functions and their applications.
B-ECO-N-201.4	Students will understand the investment theory.

**Note:** - The Paper setter shall set 8 questions, 15 Marks each from all four units of the syllabus giving internal choice. However, one compulsory question in addition is to be set under fifth unit based on entire syllabus. This compulsory question would comprise five parts, 3 marks each. Such way, the examinees have to attempt five questions in all.

### UNIT-I

- Nature and scope of Macro Economics
- Importance of Macro Economics
- Concepts, Measurement and limitation of national income Statistics
- Circular flow of Income in Two, Three and Four Sector Economy

## UNIT-II

- Say's law of Market
- Classical Theory of Income and Employment
- Principle of Effective Demand
- Comparison between Classical and Keynesian theory

### **UNIT-III**

• Consumption Function: Meaning and Technical Attributes.

- Concepts of MPC & MPS and APC & AP
- Keynesian Psychological Law of Consumption
- Short run & Long run Consumption function
- Income Consumption relationship through Absolute and relative Income Hypothesis

# UNIT-IV

- Investment and Saving Function
- Type of Investment
- Determinants Factor of Investment
- Relationship between MEC and MEI
- Factor affecting to investment

# **Suggested Readings:**

- R.T FROYEN (2008) Macroeconomics, Theroy and policies, Prentice Hall
- Case,karle.& R.C.Fair(2007),Principles of Economics,Pearson Education,inc.
- Paul Samuelson and Nordhaus(2005)-Economics(18<sup>th</sup> Ed.) Tata Hill Publishing.company New York
- Eugene Diulio(2004) 'Macro Economics' Pearson Education
- Shapiro,E(2003) Macroeconomics Analysis,Galgotia Publication,new Delhi
- N.Gregory Mankiw (2002) Principles of Economics Thomson DELHI
- Lipsey R.G. and K.A. Chrystal (2007) Economics, Oxford University Press,

# Mapping Matrix of Course B-ECO-N-201

**Mapping:** Mapping is a process of representing the correlation between COs and POs, COs and PSOs in the scale of 1 to 3 as follows (Table 1):

## Table 1: Scale of mapping between COs and POs

Scale	
1	If the contents of course have low correlation (i.e. in agreement with the particular PO to a small extent) with the particular Programme outcome
2	If the contents of course have medium correlation (i.e. in agreement with the particular PO to a reasonable extent) with the particular Programme outcome
3	If the contents of course have strong correlation (i.e. in agreement with the particular PO to a large extent) with the particular Programme outcome

Same scale may be used to define the correlation between Cos and PSOs

## Mapping of Course Outcomes to Programme Outcomes :( CO-PO Mapping Matrix)

Table2 shows the CO-PO mapping matrix for a course (B-ECO-N-201) assuming that there are 08 POs and 4COs.

СО	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8
B-ECO-N-201.1	3	3	2	3	3	3	2	3
B-ECO-N-201.2	3	3	2	3	3	3	2	3
B-ECO-N-201.3	3	3	2	3	3	3	2	3
B-ECO-N-201.4	3	3	2	3	3	3	2	3
Average	3	3	2	3	3	3	2	3

### Table 2: CO-PO Matrix for the Course B-ECO-N-201

Note: It is not necessary that each CO has a correlation with all the POs.

### Mapping of Course Outcomes to Programme Specific Outcomes :( CO-PSO Mapping Matrix)

Table3 shows the CO-PSO mapping matrix for a course (B-ECO-N-201) assuming that there are 4 PSOs and 4COs.

СО	PSO 1	PSO 2	PSO 3	PSO 4
B-ECO-N-201.1	3	3	3	3
B-ECO-N-201.2	3	3	3	3
B-ECO-N-201.3	3	3	3	3
B-ECO-N-201.4	3	3	3	3
Average	3	3	3	3

#### Table 3: CO-PSO Matrix for the CourseB-ECO-N-201

### Semester III Core Course (CC-3) Code: B-ECO-N-301 BASIC MICROECONOMICS-II

Total Marks:	150
<b>Internal Marks:</b>	75
<b>External Marks:</b>	75
Time:	3 Hours
Credit-	5:1:0=6

#### Course Outcomes (COs):-

B-ECO-N-301.1	To understand the concepts in consumer and producer theory like surplus, economies, isoquants, iso-cost lines etc.
B-ECO-N-301.2	To understand market conditions of perfect competition, monopoly and monopolistic competition.
B-ECO-N-301.3	To understand the few models of oligopoly.
B-ECO-N-301.4	To understand how factor prices are determined.

**Note:** - The Paper setter shall set 8 questions, 15 Marks each from all four units of the syllabus giving internal choice. However, one compulsory question in addition is to be set under fifth unit based on entire syllabus. This compulsory question would comprise five parts, 3 marks each. Such way, the examinees have to attempt five questions in all.

#### UNIT-I

#### **Concepts in Consumer and producer Theory**

- Consumer Surplus
- Producer Surplus
- Income and Substitution Effects
- Economies and Diseconomies of Scale
- Isoquant and iso-cost lines
- Costs in the long run

#### **UNIT-II**

#### **Market conditions**

- Perfect competition (Meaning, Equilibrium of firm and industry )
- Role of time element in price determination
- Monopoly (Meaning, Equilibrium of firm and industry )
- Price discriminating monopoly (first, second & third degree Price Discrimination

### UNIT-III

#### Market conditions

- Monopolistic Competition (Meaning, Equilibrium of firm and industry)
- Cournot's duopoly Model,
- Kinked Demand Model
- Cartels Price Leadership Model

### UNIT-IV

### **Factor Pricing**

- Ricardian Theory of Rent
- Modern theory of rent, Quasi rent
- Wage( Demand and supply of labour, Marginal Productivity Theory)
- Interest(Classical and Keynesian)

### **Basic Reading List**

- Koutsoyiannis, A. (1979), Modern Microeconomics, (2nd Edition), Macmillan Press, London.
- Salvatore D(2006), Microeconomics-Theory and Applications, Oxford University Press
- Varian, H. (2003), Intermediate Microeconomics, East-West Press.
- Ahuja,H.L (2012) :Ucchatar Arthik Siddhantl, S.Chand & Company, New Delhi.
- Dwivedi, D.N (2011) :Microeconomics-Theory & Applications, Pearson.

# Mapping Matrix of Course B-ECO-N-301

Mapping: Mapping is a process of representing the correlation between COs and POs, COs and PSOs in the

scale of 1 to 3 as follows (Table 1):

Scale	
1	If the contents of course have low correlation (i.e. in agreement with the particular PO to a small extent) with the particular Programme outcome
2	If the contents of course have medium correlation (i.e. in agreement with the particular PO to a reasonable extent) with the particular Programme outcome
3	If the contents of course have strong correlation (i.e. in agreement with the particular PO to a large extent) with the particular Programme outcome

### Table 1: Scale of mapping between COs and POs

Same scale may be used to define the correlation between Cos and PSOs

## Mapping of Course Outcomes to Programme Outcomes :( CO-PO Mapping Matrix)

Table2 shows the CO-PO mapping matrix for a course (B-ECO-N-301) assuming that there are 08 POs and 4COs.

СО	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8
B-ECO-N-301.1	3	3	2	3	3	3	2	3
B-ECO-N-301.2	3	3	2	3	3	3	2	3
B-ECO-N-301.3	3	3	2	3	3	3	2	3
B-ECO-N-301.4	3	3	2	3	3	3	2	3
Average	3	3	2	3	3	3	2	3

Table 2: CO-PO Matrix for the Course B-ECO-N-301

Note: It is not necessary that each CO has a correlation with all the POs.

### Mapping of Course Outcomes to Programme Specific Outcomes :( CO-PSO Mapping Matrix)

Table3 shows the CO-PSO mapping matrix for a course (B-ECO-N-301) assuming that there are 4 PSOs and 4COs.

СО	PSO 1	PSO 2	PSO 3	PSO 4
B-ECO-N-301.1	3	3	3	3
B-ECO-N-301.2	3	3	3	3
B-ECO-N-301.3	3	3	3	3
B-ECO-N-301.4	3	3	3	3
Average	3	3	3	3

Table 3: CO-PSO Matrix for the CourseB-ECO-N-301

#### Semester IV Core Course (CC-4) Code: B-ECO-N-401 BASIC MACROECONOMICS-II

<b>Total Marks:</b>	150
<b>Internal Marks:</b>	75
<b>External Marks:</b>	75
Time:	3 Hours
Credit-	5:1:0=6

#### **Course Outcomes (COs):-**

B-ECO-N-401.1	Students will learn the working of multiplier and its impact in an economy.
B-ECO-N-401.2	Students will understand various aspects related to money.
B-ECO-N-401.3	Students will be able to explain the causes, impacts and theories of inflation.
B-ECO-N-401.4	Students will understand the reasons of business cycles and their impact on the economy.

**Note:** - The Paper setter shall set 8 questions, 15 Marks each from all four units of the syllabus giving internal choice. However, one compulsory question in addition is to be set under fifth unit based on entire syllabus. This compulsory question would comprise five parts, 3 marks each. Such way, the examinees have to attempt five questions in all.

## Unit-I

- Investment multiplier: Concepts
- Its working and leakages and Importance
- Relation between Multiplier, MPC and MPS
- Concepts of Acceleration and Super Multiplier

### **Unit-II**

- Concept of money and its basic functions
- Demand for Money: Quantity theory of money (Fisher's and Cambridge approach)
- Money supply: Meaning and Determinants
- Credit creation and Credit control

# Unit-III

- Concept of inflation
- Types of Inflation
- Inflationary Gap and effect of inflation
- Theories of inflation: Demand Pull and Cost Push

# Unit-IV

- Meaning, Nature and Features of Business Cycles
- Different phases of Business Cycle
- Theories of Trade Cycles (Hicks and Samuelson)
- Control of business cycles

# **Suggested Readings:**

- R.T FROYEN (2008) Macroeconomics, Theory and policies, Prentice Hall
- Case,karle.& R.C.Fair(2007),Principles of Economics, Pearson Education,inc.
- Paul Samuelson and Nordhaus(2005)-Economics(18<sup>th</sup> Ed.) Tata Hill Publishing. company New York
- Eugene Diulio(2004) 'Macro Economics' Pearson Education
- Shapiro(2003) Macroeconomics Analysis, Galgotia Publication, new Delhi
- N.Gregory Mankiw (2002) Principles of Economics Thomson DELHI
- Lipsey R.G. and K.A. Chrystal (2007) Economics, Oxford University Press,

# Mapping Matrix of Course B-ECO-N-401

**Mapping:** Mapping is a process of representing the correlation between COs and POs, COs and PSOs in the scale of 1 to 3 as follows (Table 1):

Scale	
1	If the contents of course have low correlation (i.e. in agreement with the particular PO to a small extent) with the particular Programme outcome
2	If the contents of course have medium correlation (i.e. in agreement with the particular PO to a reasonable extent) with the particular Programme outcome
3	If the contents of course have strong correlation (i.e. in agreement with the particular PO to a large extent) with the particular Programme outcome

## Table 1: Scale of mapping between COs and POs

Same scale may be used to define the correlation between Cos and PSOs

## Mapping of Course Outcomes to Programme Outcomes: (CO-PO Mapping Matrix)

Table2 shows the CO-PO mapping matrix for a course (B-ECO-N-401) assuming that there are 08 POs and 4COs.

СО	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8
B-ECO-N-401.1	3	3	2	3	2	3	2	3
B-ECO-N-401.2	3	3	2	3	2	3	2	3
B-ECO-N-401.3	3	3	2	3	2	3	2	3
B-ECO-N-401.4	3	3	2	3	2	3	2	3
Average	3	3	2	3	2	3	2	3

Table 2: CO-PO Matrix for the Course B-ECO-N-401

Note: It is not necessary that each CO has a correlation with all the POs.

### Mapping of Course Outcomes to Programme Specific Outcomes:(CO-PSO Mapping Matrix)

Table3 shows the CO-PSO mapping matrix for a course (B-ECO-N-401) assuming that there are 4 PSOs and 4COs.

СО	PSO 1	PSO 2	PSO 3	PSO 4
B-ECO-N-401.1	3	2	3	3
B-ECO-N-401.2	3	2	3	3
B-ECO-N-401.3	3	2	3	3
B-ECO-N-401.4	3	2	3	3
Average	3	2	3	3

Table 3: CO-PSO Matrix for the CourseB-ECO-N-401

## Table 4: Mapping of COs, POs and PSOs (Sociology)

Course Code	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3	PSO4
B-ECO-N-101	3	3	3	2	2	2	2.5	2.5	3	3	3	3
B-ECO-N-201	3	3	2	3	3	3	2	3	3	3	3	3
B-ECO-N-301	3	3	2	3	3	3	2	3	3	3	3	3
B-ECO-N-401	3	3	2	3	2	3	2	3	3	2	3	3

Note: - \*Course Code of Generic Elective Paper will be decided after opting the same by the student Attainment of COs:

**\*\*MOOC** Courses from Swayam Portal can be opted only when University approves the same from time to time.

The attainment of COs can be measured on the basis of the results of internal assessment and semester examination. The attainment is measured on scale of 3 after setting the target for COs attainment. **Following table** shows the CO attainment levels assuming the set target of 60% marks:

Attainment Level	
1 (low level of attainment)	60% of students score more than 60% of marks in class tests of a course.
2 (Medium level of attainment)	70% of students score more than 60% of marks in class tests of a course.
3 (High level of attainment)	80% of students score more than 60% of marks in class tests of a course.

#### CO Attainment Levels for internal assessment

*Note:* In the above table, the set target is assumed as 60%. It may vary in different departments/institutes. The staff councils of the Departments/institutes may finalize the set target.

A proper mapping of course outcomes with assessment methods should be defined before measuring the attainment level. The questions in tests for internal assessment are based on COs. Here it is assumed that class test-I is based on first two COs (i.e. B—ECO-N-101.1 and B—ECO-N-101.2) of a course with equal weightage given to both COs. Similarly, class test-II is based on next two COs (i.e. B—ECO-N-101.3 and B—ECO-N-101.4) of a course with equal weightage given to these two COs.For each internal assessment test, the percentage of students attaining the target level of CO is estimated and average percentage will decide the attainment level of COs. For lowing steps may be followed for determining the attainment level in internal assessment of a course.

- (i) Estimate the %age of students scoring set target (say 60%) or more in the question(s) of test -I based on first CO i.e. **B**—**ECO-N-101.1.**
- (ii) Estimate the %age of students scoring set target (60%) or more in the question(s) of test-I based on second CO i.e. **B**—**ECO-N-101.2.**
- (iii)Estimate the %age of students scoring set target (60%) or more in the question(s) of test-II based on third CO i.e. **B**—**ECO-N-101.3.**
- (iv)Estimate the %age of students scoring set target (60%) or more in the question(s) of test-II based on the fourth CO i.e. **B—ECO-N-101.4.**
- (v) Take average of the percentages obtained above.
- (vi)Determine the attainment level i.e. 3, 2 or 1 as per scale defined in **the above table**.

Note: In the above steps, it is assumed that internal assessment is based on two tests only. However, if internal assessment is based on more than two tests and/or on assignments then same may by incorporated to determine the COs attainment level. There may be more than four COs for a course. The set target may also be different for different COs. These issues may be resolved by the staff councils of the departments/institutes.

For determining the attainment levels for end semester examination, it is assumed that questions in the end term examination are based on all COs of the course. Attainment levels for end semester examination of a course can be determined after the declaration of the results. The CO attainment levels for end semester examination are given **in the following Table.** 

CO Attainment Levels for End Semester Examination (ESE)

Attainment Level	
1	60% of students obtained letter grade of A or above (for CBCS programmes) or
(Low level of attainment)	score more than 60% of marks (for non-CBCS programmes) in ESE of a course.
2	70% of students obtained letter grade of A or above (for CBCS programmes) or
(Medium level of attainment)	score more than 60% of marks (for non-CBCS programmes) in ESE of a course.
3	80% of students obtained letter grade of A or above (for CBCS programmes) or
(High level of attainment)	score more than 60% of marks (for non-CBCS programmes) in ESE of a course.

*Note:* In the above table, the set target is assumed as grade A for CBCS courses and 60% for non-CBCS Courses. It may vary in different departments/institutes. The staff councils of the departments/institutes may finalize the set target.

### **Overall CO Attainment level of a Course:**

The overall CO attainment level of a course can be obtained as:

Overall CO attainment level = 50% of CO attainment level in internal assessment + 50% of CO attainment level in end semester examination.

The overall COs attainment level can be obtained for all the courses of the programme in a similar manner.

### **Attainment of POs:**

The overall attainment level of POs is based on the values obtained using direct and indirect methods in the ratio of 80:20. The direct attainment of POs is obtained through the attainment of COs. The overall CO attainment value as estimated above and CO-PO mapping value as shown in **Table 3** are used to compute the attainment of POs.PO attainment values obtained using direct method can be written as shown in **the following Table.** 

Course Code	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
B-ECO-N-101								
B-ECO-N-201								
B-ECO-N-301								
B-ECO-N-401								
Direct PO attainment	Average of above values	Average of above values	Average of above values					Average of above values

PO Attainment Values using Direct Method

The PO attainment values to be filled in above table can be obtained as follows:

### For B—ECO-N-101-PO1 Cell:

PO1 attainment value = (Mapping factor of **B**—**ECO-N-101**-PO1 from **Table 3** × Overall CO attainment value for the course **B**—**ECO-N-101**)/3

### For B—ECO-N-201-PO1 Cell:

PO1 attainment value = (Mapping factor of **B**—ECO-N-201-PO1 from Table  $3 \times$  Overall CO attainment value for the course **B**—ECO-N-201)/3

Similarly, values for each cell of the above table can be obtained. The direct attainment of POs is average of

individual PO attainment values.

In order to obtain the PO attainment using indirect method, a student exit survey based on the questionnaire of POs may be conducted at end of last semester of the program. The format for the same is given **in the following table**. Average of the responses from the outgoing students for each PO is estimated.

The overall PO attainment values are obtained by adding attainment values estimated using direct and indirect methods in the proportion of 80:20 as follows:

Overall attainment value for PO1 =

 $0.8 \times$  average attainment value for PO1 using direct method (from above table) +

 $0.2 \times$  average response of outgoing students for PO1

Similarly, overall attainment value can be obtained for each PO.

#### **Questionnaire for indirect measurement of PO attainment (For outgoing students)**

At the end of my degree programme I am able to do:

	Please tick any one				
Statement of PO1	3	2	1		
Statement of PO2	3	2	1		
Statement of PO3	3	2	1		
Statement of PO4	3	2	1		
Statement of PO5	3	2	1		
Statement of PO6	3	2	1		
Statement of PO7	3	2	1		
Statement of PO8	3	2	1		
3: Strongly Agree; 2: Agree; 1: Average					

Overall PO attainment values can be written as shown in the following Table.

#### **Overall PO attainment Values**

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
Direct PO								
attainment								
Indirect PO								
attainment								
Overall PO								
attainment								
Target	2	2	2	2	2	1.5	2	2

The overall PO attainment values obtained above are compared with set target. The set target for each PO may be different and can be finalized by the staff councils of the departments/institutes. If overall PO attainment value is less than the set target value then an action plan may be prepared for improvement in the subsequent academic session.

The overall PSO attainment level based on CO-PSO mapping values and overall CO attainment values can be obtained in a similar manner.