

पूर्णाङ्क : 75

समय : 3 hour

SN	Contents	Knowle dge	Underst anding	Applica tion	Higher Ability	Total	Total Marks
		each of 1 marks	each of 2 marks	each of 3 marks	each of 4 marks		
1.	बीजगणित (Algebra)	2	2	2	1	7	16
2.	सीमान्त मान र निरन्तरता (Limit and continuity)	1		1		2	4
3.	मेट्रिक्स (Matrix)	1	1	1		3	6
4.	निर्देशाङ्क ज्यामिति (Co-ordinate Geometry)	2	1	1	1	5	11
5.	त्रिकोणमिति (Trigonometry)	2	2	3		7	15
6.	भेक्टर (vector)	1	1		1	3	7
7.	स्थानान्तरण (Transformation)	1		1	1	3	8
8.	तथ्याङ्क शास्त्र (Statistics)		1	2		3	8
	जम्मा प्रश्न सङ्ख्या (Total questions)	10	8	11	4	33	75
	अङ्कभार (Weight)	10	16	33	16	75	

## आन्तरिक मूल्याङ्कनका लागि

आन्तरिक मूल्याङ्कनका लागि आन्तरिक मूल्याङ्कनका लागि मूल्याङ्कनका आधारहरू निम्नानुसार रहेका छन् :

क्र.स.	आन्तरिक मूल्याङ्कनका आधारहरू	अङ्कभार
१.	सहभागिता (उपस्थिति र सिकाइ क्रियाकलापमा सक्रियता र सहभागिता)	३
२.	प्रयोगात्मक तथा परियोजना कार्य	१६
३.	त्रैमासिक परीक्षा	६
	जम्मा	२५

नोट : विद्यार्थीको आन्तरिक मूल्याङ्कन गर्दा अनिवार्य गणित विषयमा प्रयोग गरिने आन्तरिक मूल्याङ्कनका साधन नै प्रयोग गर्नुपर्ने छ ।

**First Terminal Examination**

Units	Topics	per iods	Teaching Materials	Teaching Methods	Evaluation Procedure	Rem arks
Algebra	Functions (composite function and inverse function)	8	Graph paper, GeoGebra	Explanation Demonstration Problem solving	Class test, Unit test and Assignments	Constructive Feedback
	Polynomials. (Remainder theorem, factor theorem, rational root theorem and roots of cubic equation)	6				
Matrix	Matix (transpose of matrix, multiplication of matrices Up to $2 \times 2$ matrices, Determinant of matrix, singular and nonsingular matrix, inverse matrix	8		Group discussion, Problem solving	Oral/written Class test, Unit test and Assignments	
Trigonometry	Compound angles	8	Formula chart	Demonstration, Question Answer, Formula derivation	Class test, Unit test and Assignments	
Coordinate Geometry	Equation of straight line passes through two points. Angles between two lines	5	GeoGebra, Graph paper	Demonstration, Explanation, Problem solving	Class test, Unit test and Assignments	
		5				
Statistics	Five numbers summery and box – whisker plot	4		Problem solving, group		Support for needy students

**Mid Terminal Examination**

Units	Topics	per iods	Teaching Materials	Teaching Methods	Evaluation Procedure	Rem Arks
Algebra	Equation and inequality (linear inequalities, quadratic equation and solving quadratic equation by using graph)	6	Graph, GeoGebra,	Demonstration Problem solving	Class Test, Unit Test, Assignments	
Limit and Continuity	Limit and Continuity	4	Graph, GeoGebra,	Demonstration Problem solving	Class Test, Unit Test, Assignments	
Coordinate Geometry	Conic section Circle	6	Solid objects, chart papers	Demonstration, discussion, Problem solving	Class test, Unit test and Assignments Projects	
Trigonometry	Multiple angles and sub – multiple angle	10	Formula Chart	Problem solving	Class Test, Unit Test, Assignments	
Vector	Scalar Product of two vectors	4	Graph, Chart papers	Group discussion, Demonstration	Class Test, Unit Test, Assignments Projects	
	Vector Geometry	10				
Statistics			Primary / secondary Data	Problem solving	Class Test, Unit Test, Assignments Projects	
	Mean deviation	4				
	Standard deviation	4				

**Pre-Qualifying Examination****Opt I Mathematics**

Units	Topics	per iods	Teaching Materials	Teaching Methods	Evaluation Procedure	Rem arks
Coordinate	Conic section	2	Solid objects, chart papers	Demonstration, discussion, Problem solving	Class test, Unit test and Assignments Projects	
	circle	8				
Trigonometry	Conditional trigonometry Height and Distance	6 6			Class test, Unit test and Assignments Projects	
Transformation	Combined Transformation	8	Formula Chart, Graph, GeoGebra	Demonstration, Explanation Problem solving	Class test, Unit test and Assignments Projects	
	Matrix Transformation	4				
		34				

Unit	Content (Topics)	V.S.Q.	S.Q.	L.Q.	T.N.Q	T.M.	Total Time
1	Revenue and Cost Curves	2	1		3	7	
2	Exchange/ Product Pricing	1	1		2	6	
3	Distribution/ Theory of factor Pricing	1	1		2	6	
4	Money Banking and Non Banking Financial institutions	2		1	3	10	
5	Public Finance	1		1	2	9	
6	Development Economics	1	1		2	6	
7	Foreign trade of Nepal	2	1		3	7	
8	Economic Planning		1		1	5	
9	Statistical Works	1	2		3	11	
10	Statistical tools			1	1	8	
	<b>Total</b>	<b>11</b>	<b>8</b>	<b>3</b>	<b>22</b>	<b>75</b>	

**Evaluation Scheme:**

S.N.	Nature of questions	No of questions to be asked	No of questions to be answered	Marks	Time
1.	<b>Very short answer questions</b>	<b>11</b>	<b>11</b>	<b>11x1=11</b>	<b>10x2= 20 min</b>
2.	<b>Short answer questions</b>	<b>8</b>	<b>8</b>	<b>8x5 =40</b>	<b>12x8.33=100 min</b>
3.	<b>Long answer questions</b>	<b>3</b>	<b>3</b>	<b>3x8 =24</b>	<b>3x20 = 60 min</b>
	<b>Total</b>	<b>22</b>	<b>22</b>	<b>75</b>	<b>180 min</b>

**Teaching/Learning process**

In the process of teaching economics, the teacher needs to emphasize more on the practical implementation of the concepts, knowledge, skill, laws and theories of economic. The following teaching methods should be adopted for effective learning process of economics.

- Teacher - centered techniques
- Student - centered techniques.
- Questions - answer method.
- Individual/group discussion method.
- Problem solving method.
- Demonstration method
- Report presentation
- Field/project work
- Research/web based methods.

**Process of evaluation:**

The following evaluation methodology should be adopted to make constructive evaluation of students.

- To observe the change and improvements of their activities.
- Participation of students on class work and other activities.
- Application of knowledge of economics in practice.
- Written work (Class work, Home work) and practical work.
- Oral test and written exams.

The teacher needs to construct questions paper strictly on the basis of specification grid for conducting the written exams. The SEE will be held as per the mentioned specification grid.