Add-on Course

Designed and proposed by,

DEPARTMENT OF PHILOSOPHY

SAGARDIGHI KAMADA KINKAR SMRITI MAHAVIDYLAYA

For

Academic Session- 2019-20

Course Title: Logic and Logical Reasoning.

Introduction:- This addon course aims to equip students with the fundamental principles of logic and logical reasoning. By studying various aspects of logic, students will develop critical thinking skills, enhance problem-solving abilities, and sharpen their reasoning capabilities. The course will cover both theoretical concepts and practical applications of logic in different domains.

Stream: -Open for all**.**

Course fees- Nil

Mode of Teaching: -Bengali

Duration: -30 Hours.

Date and Time: -.**1st April 2020 to 11th May 2020**

Course objective and Learning outcome: -

1. Enhancing the ability to identify logical fallacies and flaws in reasoning.

2. Developing the skills to construct valid arguments and proofs.

3. Building the capacity to reason deductively and inductively.

4. Understanding the principles and concepts of rational thinking.

5. Applying logical and critical thinking to real-world situations and scenarios.

6. Improving problem-solving and decision-making skills.

Syllabus:

1. **Introduction to Logic –**
    Definition and scope of logic**.**
    Types of logic: formal and informal,
    Symbolic - Importance and applications of logical reasoning

2. **Propositional Logic –**
   Basic concepts and operators
   Propositional logic proofs and deductions

3. **Logical Connectives and Truth Functions –**
   Negation, conjunction, disjunction, implication, equivalence
   Truth tables and logical relationships

4. **Arguments and Validity –**
   Introduction to arguments
   Valid and invalid arguments
   Building and evaluating arguments using truth tables

5. **Venn Diagram:-**
   Introduction to arguments
   Valid and invalid of arguments
   Building and evaluating arguments.

6. **Predicate Logic –**
   Introduction to predicates and quantifiers
   Universal and existential quantifiers
   Predicate logic proofs and deductions

7. **Inductive Reasoning –**
   Introduction to inductive reasoning
   Inductive arguments and generalizations
   Evaluating inductive reasoning

8. **Deductive Reasoning –**
   Introduction to deductive reasoning
   Syllogisms and categorical logic
   Evaluating deductive reasoning

9. **Fallacies and Biases –**
   Common logical fallacies
   Cognitive biases and logical reasoning
   Recognizing and avoiding fallacies and biases

10. **Application of Logic in Problem-Solving –**
    Logical problem
    solving strategies
    Analyzing and constructing logical arguments
    Applying logic to real-life scenarios

Tentative schedule:-

SL. NO	TOPIC/UNIT	DATE	TIME	HOUR	ROOM NUMBER	RESOURCE PERSON
01	**Introduction to Logic**	1st April 2020	9.30 A.M to 10.30 A.M	1 Hour	Room no -4	Rajesh Gupta Assistant Professor & H.O.D Dept. of Philosophy S.K.K.S.M
		2nd April 2020	9.30 A.M to 10.30 A.M	1 Hour	Room no -4	
02	**Propositional Logic**	3rd April 2020	9.30 A.M to 10.30 A.M	1 Hour	Room no -4	Dyutikana Bajani Assistant Professor Dept. of Philosophy S.K.K.S.M
		4th April 2020	9.30 A.M to 10.30 A.M	1 Hour	Room no -4	
		6th April 2020	9.30 A.M to 10.30 A.M	1 Hour	Room no -4	
		7th April 2020	9.30 A.M to 10.30 A.M	1 Hour	Room no -4	
03	**Logical Connectives and Truth Functions**	8th April 2020	9.30 A.M to 10.30 A.M	1 Hour	Room no -4	Ahetasamuddin S.A.C.T Dept. of Philosophy S.K.K.S.M
		11th April 2020	9.30 A.M to 10.30 A.M	1 Hour	Room no -4	
		13th April 2020	9.30 A.M to 10.30 A.M	1 Hour	Room no -4	
		15th April 2020	9.30 A.M to 10.30 A.M	1 Hour	Room no -4	
04	**Arguments and Validity**		9.30 A.M to 10.30 A.M	1 Hour	Room no -4	Dr.Md.Najibur Rahman S.A.C.T Dept. of Philosophy S.K.K.S.M
		16th April 2020				
		17th April 2020	9.30 A.M to 10.30 A.M	1 Hour	Room no -4	
05	**Venn Diagram**	18th April 2020	9.30 A.M to 10.30 A.M	1 Hour	Room no -4	Ahetasamuddin S.A.C.T Dept. of Philosophy S.K.K.S.M
		20th April 2020	9.30 A.M to 10.30 A.M	1 Hour	Room no -4	
		21st April 2020	9.30 A.M to 10.30 A.M	1 Hour	Room no -4	
		22nd April 2020	9.30 A.M to 10.30 A.M	1 Hour	Room no -4	
06	**Predicate Logic**	23rd April 2020	9.30 A.M to 10.30 A.M	1 Hour	Room no -4	Dr.Md.Najibur Rahman S.A.C.T Dept. of Philosophy S.K.K.S.M
		24th April 2020	9.30 A.M to 10.30 A.M	1 Hour	Room no -4	
		25th April 2020	9.30 A.M to 10.30 A.M	1 Hour	Room no -4	
07	**Inductive**	27th April 2020	9.30 A.M to 10.30 A.M	1 Hour	Room no -4	Ahetasamuddin S.A.C.T

	Reasoning	28th April 2020	9.30 A.M to 10.30 A.M	1 Hour	Room no -4	Dept. of Philosophy S.K.K.S.M
		29th April 2020	9.30 A.M to 10.30 A.M	1 Hour	Room no -4	
08	**Deductive Reasoning**	30th April 2020	9.30 A.M to 10.30 A.M	1 Hour	Room no -4	Dyutikana Bajani Assistant Professor Dept. of Philosophy S.K.K.S.M
		2nd May 2020	9.30 A.M to 10.30 A.M	1 Hour	Room no -4	
		4th May 2020	9.30 A.M to 10.30 A.M	1 Hour	Room no -4	
09	**Fallacies and Biases**	5th May 2020	9.30 A.M to 10.30 A.M	1 Hour	Room no -4	Ahetasamuddin S.A.C.T Dept. of Philosophy S.K.K.S.M
		6th May 2020	9.30 A.M to 10.30 A.M	1 Hour	Room no -4	
		7th May 2020	9.30 A.M to 10.30 A.M	1 Hour	Room no -4	
10	**Application of Logic in Problem-Solving**	8th May 2020	9.30 A.M to 10.30 A.M	1 Hour	Room no -4	Rajesh Gupta Assistant Professor Dept. of Philosophy S.K.K.S.M
		9th May 2020	9.30 A.M to 10.30 A.M	1 Hour	Room no -4	
11.	Examination	11th May 2020	9.30 A.M to 10.30 A.M	1 Hour	Room no -4	-----

Note: - Schedule May change if required.

After successfully completed the course and ensure the pass marks of examination certificate will be issued.