



St. Michael's College, Cherthala

Alappuzha, Kerala-688 539

Affiliated to University of Kerala

and Re-accredited by NAAC with 'A' Grade



ADD ON COURSE 2019-20

Name of the Programme : INTRODUCTION TO MATHEMATICAL THINKING

Name of the Department : MATHEMATICS

Course Code : MM 086



St. Michael's College

MAYITHARA P.O., CHERTHALA, ALAPPUZHA-688539

An institution with Minority Status Affiliated to the University of Kerala and
Re-accredited by NAAC with 'A' Grade

Add on Course - 2019-20

COMMERCE

Basic Corporate
Accountant
Program

MATHEMATICS

Introduction to
Mathematical
thinking

SOFTWARE DEVELOPMENT

Basics of AI

PHYSICS

Robotics

ENGLISH

Business
Benchmark

ENGLISH

Certificate Course

Remedial
Grammar and
Public
Speaking

TOURISM STUDIES

Customer
Service
Management

CHEMISTRY

Green Chemistry
and Environmental
Sustainability



Phone : 0478-2822387, 2810387

Email : michaelscherthala@gmail.com, Web : www.stmc.ac.in

NAME OF COURSE : Introduction to Mathematical Thinking

COURSE CODE : MM O86

NO OF STUDENTS ENROLLED : 36

CONTENTS

- SYLLABUS
- CLASS SCHEDULES
- ATTENDANCE STATEMENT
- QUESTION PAPER
- MARK LIST
- CERTIFICATE
- REPORT

Certificate Course in Introduction to Mathematical Thinking

Syllabus

Aim and Objectives:

Reasoning skills help candidates in improving their decision-making skills, problem-solving skills, and setting goals. These personal skills are necessary for building a stable career foundation. Most of the companies conduct a Logic Building Analysis round while organizing their recruitment drive, to check the mental ability of candidates. The course aims in making the students understand the fundamental logical reasoning and help them to prepare for competitive examinations.

Course Outcome:

After completing this course, students will be able to use their Logical thinking to solve Quantitative Aptitude problems from Company specific and other competitive tests.

Duration: 30 Hrs

Unit I

Classification, Logical alphabet and Number, Sequence Test, Coding-Decoding, Series, Logical arrangement of words, Missing Characters, Mathematical Operations, Venn Diagram, Blood Relations, Direction and Distance

Unit II

Non-Verbal Reasoning, Completion of Series, Classification, Counting of figures, Completion of figures, Cubes, Dice, Mirror image, Water Image, Figure Matrix, Square Completion

Unit III

Statement of Arguments, Statement of Assumption, Statement and Conclusion

Text Book: Verbal and Non- Verbal Reasoning, Dr. R S Aggarwal, S Chand

Reference Books:

1. A New Approach to Reasoning by B S Sijwal, Indu Siwali
2. A Modern approach to Verbal & Non-Verbal Reasoning by R. S Agarwal
3. Logical-Mathematical Reasoning for Teens by Adekola Taylor

Add-On Cell
St. Michael's College, Cherthala
Department Of Mathematics
Mathematical Thinking
Class Schedule 2019-20

Date	Day	Time	Name of Teacher	Class Room No
04-11-19	1	3.30 to 4.30	Smisha M A	A13
07-11-19	2	3.30 to 4.30	Disna Mary Joseph	A13
12-11-19	3	3.30 to 4.30	Smisha M A	A13
18-11-19	4	3.30 to 4.30	Disna Mary Joseph	A13
22-11-19	5	3.30 to 4.30	Smisha M A	A13
26-11-19	6	3.30 to 4.30	Disna Mary Joseph	A13
28-11-19	7	3.30 to 4.30	Smisha M A	A13
02-12-19	8	3.30 to 4.30	Disna Mary Joseph	A13
05-12-19	9	3.30 to 4.30	Smisha M A	A13
11-12-19	10	3.30 to 4.30	Disna Mary Joseph	A13
16-12-19	11	3.30 to 4.30	Smisha M A	A13
20-12-19	12	3.30 to 4.30	Disna Mary Joseph	A13
31-12-19	13	3.30 to 4.30	Smisha M A	A13
03-01-20	14	3.30 to 4.30	Disna Mary Joseph	A13
06-01-20	15	3.30 to 4.30	Smisha M A	A13
10-01-20	16	3.30 to 4.30	Disna Mary Joseph	A13
14-01-20	17	3.30 to 4.30	Smisha M A	A13
17-01-20	18	3.30 to 4.30	Disna Mary Joseph	A13
22-01-20	19	3.30 to 4.30	Smisha M A	A13
27-01-20	20	3.30 to 4.30	Disna Mary Joseph	A13
30-01-20	21	3.30 to 4.30	Smisha M A	A13
04-02-20	22	3.30 to 4.30	Disna Mary Joseph	A13
07-02-20	23	3.30 to 4.30	Smisha M A	A13

St. Michael's College, Cherthala
Add-on Course Examination March 2020
Department of Mathematics
Certificate Course in Introduction to Mathematical Thinking

Time: 1 Hour

Max. Marks: 30

Section A

(Answer all questions. Each question carries 1 mark)

1. 1,6,15, ---, 45, 66, 91 Find the missing term.
2. Find odd one
a.Geometry b.Algebra c.Trigonometry d.Mathematics e.Arithmetics
3. In a certain code BEAT is written as YVZG, then what will be the code of MILD.
4. Anil Introduces Rohit as the son of the only brother of his father's wife. How is Rohit related to Anil.
5. If you are facing north east and move 10m forward, turn left and move 7.5m, what is the direction that you are facing?
6. The minimum number of colours required to paint all the side of a cube that no two adjacent faces may have the same colour is ...
7. A clock, when seen from the mirror,shows time 7:20. What is the real time?
8. Compute $(12-6) \div 3 + 5 \times 7 - 3$.
9. Draw a Venn diagram indicating week,day,year.
10. Moon: satellite :: Earth:?

(10 x 1 = 10 marks)

Section A

(Answer any 5 questions. Each question carries 2 marks)

11. If x means -, = means \div , - means \times and \div means +, the $15-2 \div 900 + 90 \times 100 = ?$
12. If in a code TRIANGLE is coded as QHZMFKD, which word would be coded as DWZLOKD.
13. If X is brother of son of Y's son. Then how is X related to Y.
14. Deepa moved a distance of 75m towards the North. She then turned to the left and walking for 25m, turned left again and walked 18m. Finally, she turned to the right at an angle of 45. In which direction was she moving finally?
15. A cube painted yellow on all faces is cut into 27 small cubes of equal size. How many small cubes are painted on one face only?
16. **Statement:** Should education be brought under the control of the central government like defence?
Argument: I :No.Education is a state subject and it should remain with the state.
II : Yes.this is the only way to establish uniformly in growth of eduction across the state.
17. Arrange the following in a logical order:

- 1.consultation 2. illness 3.Recovery 4. Docter 5.Treatment
18. M,D,T,W are sitting around a circle facing at centre. M is between T and W,D is immediate left of T, D is second to the left of M. Who is the immediate left of D?
(5 x 2 = 10 marks)

Section C

(Answer any 1 question. Each question carries 10 marks)

19. (A) A train moves at a constant speed of 120 km/hr for 1 km and at 40 km/hr for the next 1 km. What is the average speed of train?

(B) J, K, L, M, N, O, P and R are eight huts. L is 2 km east of K. J is 1 km north of K and Q is 2 km south of J. P is 1 km west of Q while M is 3 km east of P and O is 2 km north of P. R is situated right in the middle of K and L while N is just in the middle of Q and M. find Distance between K and P.

20.

A) **Statement:** Divya was advised by the Doctor that she should not take part in the dance competition

Assumption I: The Doctor did not want Divya to take part in the competition because he was afraid that she might lose

Assumption II: Divya had major surgery because of her injury

Assumption III: Divya did not have the money to go for the auditions

Analyse the problem and depict the situation

B) A cube of side 10 cm is coloured red, with a 2 cm wide green strip along all the sides on all the faces. The cube is cut into 125 smaller cubes of equal size. Answer the following questions

- 1.How many cubes have 3 green faces?
- 2.How many cubes have one face red and adjacent face green?
3. How many cubes have atleast 1 face coloured?
4. How many cubes have atleast 2 green faces?
5. How many cubes are without any colour?

(1 x 10 = 10 marks)

Add-On Cell 2019-20
St. Michael's College, Cherthala
Department of Mathematics
Mark List – Introduction to Mathematical Thinking

Sl No.	Candidate Code	Name	Department	Max. Marks
1	23519136001	ANAND RAM	Chemistry	26
2	23519136003	DEEPTHI S.	Chemistry	28
3	23519136004	DINI CYRIAC	Chemistry	30
4	23519136005	GOPIKA K.	Chemistry	29
5	23519136006	JOEL JOSEPH	Chemistry	27
6	23519136009	PRECIOUS SAVIO VICTOR	Chemistry	24
7	23519136010	SREEHARI M.	Chemistry	30
8	23519136011	SREEHARI MALLAN J.	Chemistry	30
9	23519136014	ALTHAF S.	Chemistry	27
10	23519136016	ANANYA NIMMI KALYANI	Chemistry	26
11	23519136017	ANILA THOMAS	Chemistry	22
12	23519136018	APARNA K.S.	Chemistry	28
13	23519136023	PRATHAP DILEEP KUMAR	Chemistry	22
14	23519136024	SIJU K. B.	Chemistry	20
15	23519136025	SREELEKSHMI S.	Chemistry	30
16	15019136008	NEETHU KRISHNA . T. P	Economics	29
17	15019136009	NIMISHA PAUL	Economics	28
18	15019136010	RADHIKA K G	Economics	30
19	15019136011	RAHUL. B	Economics	23
20	15019136012	SINTA THOMAS	Economics	27
21	15019136016	VINAY THOMAS	Economics	30
22	15019136017	AATHIRA.S	Economics	30
23	15019136040	JOBIN JOSEPH	Economics	26
24	15019136047	NOEL K B	Economics	30
25	15019136058	SOUNDHARYA JOSEPH	Economics	30
26	23019136004	ALEENA K Y	Physics	28
27	23019136005	ALENPAUL JACOB	Physics	22
28	23019136008	BHAVIKA BABU	Physics	30
29	23019136009	HARI JOHN	Physics	30
30	23019136013	SRADHA S	Physics	30
31	23019136015	YEDUKRISHNAN A S	Physics	30
32	23019136016	ABHISURYA P PANKAJ	Physics	29
33	23019136020	JIYA JOSY	Physics	30
34	23019136023	MARIA MANUEL	Physics	29
35	23019136024	SANGEETHA. S. K	Physics	28
36	23019136025	SRUTHY S	Physics	30



ST. MICHAEL'S COLLEGE

CHERTHALA, ALAPPUZHA - 688 539

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ADD-ON COURSE CERTIFICATE

This is to certify that.....Miss. DINI CYRIAC (23519136004).....
B.Sc Chemistry 2019 Admission.....*has completed*
Certificate/Add-on course in **Introduction to Mathematical thinking (MM086)**
..... *offered by the Department of*
Mathematics during the academic year 2019-2020. He/She is awarded with **A** *Grade.*

**Head of the
Department**

**Course
Coordinator**

Principal

Department of Mathematics Certificate Course in Introduction to Mathematical Thinking

Report

Reasoning skills help candidates in improving their decision-making skills, problem-solving skills, and setting goals. These personal skills are necessary for building a stable career foundation. Most of the companies conduct a Logic Building Analysis round while organizing their recruitment drive, to check the mental ability of candidates. The course "Introduction to

Mathematical Thinking” aims in making the students understand the fundamental logical reasoning and help them to prepare for competitive examinations.

A total of 36 students from various departments joined the course. An examination of 30 marks conducted after the completion of course and everyone passed in the examination with better marks. Certificates issued by Add-on cell.



*Principal
St. Michael's College
Cherthala*