

**Academic Council Meeting No. and Date : 9/ July 2, 2024**

**Agenda Number : 3**

**Resolution Number : 41/ 3.3 A**

**Vidya Prasarak Mandal's**

**B. N. Bandodkar College of Science  
(Autonomous), Thane**



**Certificate Course  
Quick Calculations in Mathematics**

**With effect from Academic year  
2024-2025**

## **PREAMBLE**

“Quick Calculations in Mathematics” is introduced as a certificate course to be conducted by Department of Mathematics, VPM's B. N. Bandodkar College of Science (Autonomous), Thane.

Quick calculations are based on various ancient mathematical tricks developed by Indian Mathematicians. Solving mathematical problems quickly is the requirement of many competitive exams like CAT, CET, GMAT, UPSC etc. This course gives the tricks to solve the problems quickly.

### **OBJECTIVES OF THE COURSE:**

1. To introduce students the different methods of quick calculations in Mathematics.
2. To understand the basic mathematical techniques used in quick calculations.
3. To apply the basic mathematical techniques in various fields.

**COURSE OUTCOMES:** After completion of this course participant would be able

1. To solve the problems quickly.
2. To apply the tricks in the given time constraints.
3. To find the product and division of the two numbers quickly.
4. To find the square root of a number quickly.
5. To find cube root of a number quickly.

**ELIGIBILITY:** Any Student with interest in Mathematics.

**Course Code: BCCQC036**

**Course Title: Quick Calculations in Mathematics**

## Syllabus

UNIT	SUB-TOPICS	Lectures	Practicals
<b>I</b>	Basic Mathematical methods to find Product of two numbers, division of two numbers, square root and cube root of a number.	<b>5</b>	<b>5</b>
<b>II</b>	Digit sum method Magic squares	<b>5</b>	<b>5</b>
<b>III</b>	Dates and Calendar	<b>5</b>	<b>5</b>

### Evaluation Scheme

**Theory Examination: Suggested Format of Question paper**

**Duration: 2 Hours**

**Total Marks: 60**

**All questions are compulsory**

Q. 1	Based on Unit I	20
Q. 2	Based on Unit II	20
Q. 3	Based on Unit III	20

Note: Each question may have sub-questions of the type Objectives/True or False/Short Note/Solve the problem.

**Internal Assignments have to be submitted in the hard copy format in the department**

**Total number of assignments: 04 each carrying 10 marks Total marks: 40**

### Practical Examination

Details	Marks	Viva	Journal	Total
Practical	80	10	10	100

Course Code	Description	Marks
<b>BCCQC036</b>	Total of Internal Assignments	40

	Total of Theory Examination	60
	Total of Practical Examination	100
<b>Total</b>		<b>200</b>

### Fees

Particulars		Expenditure
Course Fee		<b>1,000/-</b>
Minimum students	<b>20</b>	20,000/-
<b>Course Fee x Minimum no. of students (Total revenue generated)</b>	<b>A</b>	<b>20,000/-</b>
Course Coordinator		2,000/-
Teacher's payment Rs. 200/- per hour	30 hrs	6,000/-
Non-Teaching Payment Rs. 50/- per hour	30 hrs	1,500/-
Total expenditure	<b>B</b>	9,500/-
<b>Balance income</b>	<b>(A – B)</b>	<b>10,500/-</b>

### Duration

Duration in terms of Hours	30
Per day	3 Hours
No. of days	10
No. of weeks	02
Course will be conducted in the month of	April/June every year