FIRST-YEAR OF BACHELOR OF SCIENCE MINOR MATHEMATICS REVISED SYLLABUS ACCORDING TO CBCS NEP2020

COURSE TITLE: QUANTITATIVE APTITUDE-I SEMESTER-I, W.E.F. 2023-2024

RECOMMENDED BY THE BOARD OF STUDIES IN MATHEMATICS
AND
APPROVED BY THE ACADEMIC COUNCIL
Devrukh Shikshan Prasarak Mandal's
Nya. Tatyasaheb Athalye Arts, Ved. S. R. Sapre Commerce, and Vid. Dadasaheb Pitre Science College (Autonomous), Devrukh. Tal.Sangmeshwar, Dist. Ratnagiri-415804, Maharashtra, India

Nya. Tatyasaheb Athalye Arts, Ved. S. R. Sapre Commerce and Vid. Dadasaheb Pitre Science College, Devrukh (An Autonomous College Affiliated with University of Mumbai)

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Academic Council Item No: _____

Name of the Implementing Institute	:	Nya. Tatyasaheb Athalye Arts, Ved. S. R. Sapre Commerce, and Vid. Dadasaheb Pitre Science College (Autonomous), Devrukh. Tal. Sangmeshwar, Dist. Ratnagiri-415804,
Name of the Parent University	:	University of Mumbai
Name of the Programme	:	Bachelor of Science
Name of the Department	:	Mathematics
Name of the Class	:	First Year
Semester	:	First
No. of Credits	:	02
Title of the Course	:	Quantitative Aptitude-I
Course Code	:	MTOE101
Name of the Vertical in adherence to NEP 2020	:	Generic/ Open Elective Course
Eligibility for Admission	:	Any 12th Pass seeking Admission to Degree Programme in adherence to Rules and Regulations of the University of Mumbai and Government of Maharashtra
Passing Marks	:	40%
Mode of Assessment	:	Formative and Summative
Level	:	UG
Pattern of Marks Distribution for TE and CIA	:	60:40
Status	:	NEP-CBCS
To be implemented from Academic Year	:	2023-2024
Ordinances /Regulations (if any)		

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Syllabus for First Year of Bachelor of Science in Mathematics

(With effect from the academic year 2023-2024)

SEMESTER-I **Paper No.– -I**

Course Title: Quantitative Aptitude-I **No. of Credits - 02**

Type of Vertical: Generic/ Open Elective Course **COURSE CODE: MTOE101**

Learning Outcomes Based on BLOOM's Taxonomy:

After completing the course, the learner will be able to…		
Course Learning Outcome No.	Blooms Taxonomy	Course Learning Outcome
CLO-01	Remember	Remember the fundamental properties of numbers Percentages and Discounts
CLO-02	Understand	Understand concepts of Least Common Multiple (LCM) & Highest Common Factor, Simple and Compound Interest Profit & Loss
CLO-03	Apply	Apply shortcut methods and tricks to solve aptitude problems.

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Syllabus for First Year of Bachelor of Science in Mathematics

(With effect from the academic year 2023-2024)

SEMESTER-I   **Paper No. – -I**

Course Title: Quantitative Aptitude-I   **No. of Credits - 02**

Type of Vertical: Generic/ Open Elective Course   **COURSE CODE: MTOE101**

Module No.	Content	No. of Lectures
1	- Number System - Fundamental Operations - Least Common Multiple (LCM) & Highest Common Factor (HCF) - Calculating square roots, cube roots etc. - Simplifications - Inequality	15
2	- Percentages - Discounts - Simple and Compound Interest - Profit & Loss - Partnerships - Ratios & Proportions	15
	Total	30

Required Previous Knowledge

Basic Mathematics Knowledge is necessary before starting to learn the course.

Access to the Course

The course is available for all the students admitted for Bachelor of Science as a Generic/ Open Elective Course(OE). The students seeking admission in other disciplines may select the course as a minor considering the terms and conditions laid down by the University of Mumbai, the Government of Maharashtra, and the college, from time to time.

Forms of Assessment

The assessment of the course will be of Diagnostic, Formative and Summative type. At the beginning of the course diagnostic assessment will be carried out. The formative assessment will be used for the Continuous Internal Evaluation whereas the summative assessment will be conducted at the end of the term. The weightage for formative and summative assessment will be 60:40. The detailed pattern is as given below.

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Term End Evaluation (30 Marks)
Question Paper Pattern
Time: 1 hour

Question No.	Question Pattern	Marks
Q.1	MCQ (based on Unit I)	15
Q.2	MCQ (based on Unit II)	15
Total		**30**

Internal evaluation (20 Marks)

Sr. No.	Description	Marks
1	Mid Term Examination	10
2	Active Participation in teaching learning Process	5
3	Subject related activities as assigned by the teacher	5
	Total	**20**

Grading Scale

The grading scale used is O to F. Grade O is the highest passing grade on the grading scale, and grade F is a fail. The Board of Examinations of the college reserves the right to change the grading scale.

References:

1) Quantitative Aptitude by R.S Agarwal & S. Chand Publication for Competitive Exams
2) Oswaal Objective Quantitative Aptitude For All Competitive Examinations Chapter-wise & Topic-wise
3) The Pearson Guide to Quantitative Aptitude for Competitive Examinations
4) Teach Yourself Quantitative Aptitude for Competitive Exams – Arun Sharma
5) How to Prepare for Quantitative Aptitude for CAT – Arun Sharma
6) Practical Business Mathematics S. A. Bari New Literature Publishing Company New Delhi
7) Mathematics for Commerce K. Selvakumar Notion Press Chennai
8) Business Mathematics with Applications Dinesh Khattar & S. R. Arora S. Chand Publishing New Delhi
9) Operations Research P. K. Gupta & D. S. Hira S. Chand Publishing New Delhi

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