University of Kerala

Discipline	Mathematics				
Course Code	UK1MDCMAT100				
Course Title	Numerical Ability - I				
Type of Course	MDC				
Semester	I				
Academic Level	100-199				
Course Details	Credit	Lecture per week	Tutorial per week	Practical per week	Total Hours per week
	3	3			3
Pre-requisites	Basic Mathematical Operations				
Course Summary	This course is primarily meant for students who have not undergone a Mathematics course beyond their secondary school. The course is expected to improve the student's basic mathematical skills and to understand the mathematics used in their respective fields better.				

Detailed Syllabus

Module	Unit	Contents	Hrs
I		**HCF, LCM, Percentage**	**10**
	1	Highest Common Factor, Methods of finding HCF, Least Common Multiple, Methods of finding LCM, Problems involving HCF and LCM. *(Chapter 2 of Text [1])*	
	2	Percentage, Problems involving percentage. *(Chapter 5 of Text [1])*	
II		**Average, Ratio and Proportion**	**10**
	3	Average, Problems involving average. *(Chapter 6 of Text [1])*	
	4	Ratio, Types of Ratios, Proportion, Problems involving Ratio and Proportion. *(Chapter 7 of Text [1])*	
III		**Profit and loss,Time, Work and Wages**	**9**

Module	Unit	Contents	Hrs
	5	Profit and Loss, Problems involving profit and loss. *(Chapter 9 of Text [1])*	
	6	Problems involving Time, Work and Wages. *(Chapter 10 of Text [1])*	
IV	**Time and Distance, Boats and Streams**		**10**
	7	Problems involving Time and Distance. *(Chapter 12 of Text [1])*	
	8	Problems involving Boats and Streams. *(Chapter 13 of Text [1])*	
V	**Suggestions for the teacher designed module**		**6**
	9	Partnership, Problems involving partnership. *(Chapter 8 of Text [1])*	
	10	Problems involving Pipes and Cisterns. *(Chapter 11 of Text [1])*	

Textbook

1. Dinesh Khattar, *Quantitative Aptitude for Competitive Examinations*, Fourth Edition, Pearson, 2016

References

1. H Kruglak, JT Moore, RA Mata-Toledo, *Schaum's outline of theorey and problems of Basic Mathematics, with Applications to Science and Technology*, Second Edition, McGraw-Hill, 1998.

2. Rajesh Verma, *Fast Track Objective Arithmetic*, Arihant, 2018.

Course Outcomes

CO No.	Upon completion of the course the graduate will be able to	PO/PSO	Cognitive Level	Knowledge Category	Lecture(L) Tutorial (T)	Practical (P)
CO 1	Understand basic level mathematics used in real life situations	PSO1, PSO2, PSO3, PO1, PO2, PO5	U, An, E	C, P	L	
CO 2	Do maths problems quickly using ready to use formulae	PSO3, PO2	R, Ap	P	L	
CO 3	Understand the concepts of Ratio and Percentage	PSO1, PO1, PO2, PO5	U, E	P	L	
CO 4	Understand the concepts of direct proportion and inverse proportion	PSO1, PO1	U, E	P	L	

(R-Remember, U-Understand, Ap-Apply, An-Analyse, E-Evaluate, C-Create)
(F-Factual, C-Conceptual, P-Procedural, M-Metacognitive)

Mapping of CO with PSOs and POs

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	3	2	3	-	-	-	2	1	-	-	1	-	-	-
CO2	-	-	3	-	-	-	-	1	-	-	-	-	-	-
CO3	2	-	-	-	-	-	2	1	-	-	1	-	-	-
CO4	2	-	-	-	-	-	2	-	-	-	-	-	-	-

(- -Nil, 1-Slightly/Low, 2-Moderate/Medium, 3-Substantial/High)

Assessment Rubrics

- Quiz/Assignment/Discussion/Seminar
- Midterm Exam