

Syllabus Workshop on 04-09-2014
University of Kalyani
Department of Computer Science & Engineering
Proposed syllabus for M.C.A. (Master in Computer Applications)
with effect from September 2014.

Part I, 1st Semester

Paper Code	Paper Name	Weekly Contact Period (WCP)				Credit	Marks			
		Lecture	T	P	Total		S	Exam.	Total	
Theoretical										
MCA 101	Mathematical Foundation - 1	3	1	-	4	4	30	70	100	
MCA 102	Introduction to Computing & C	3	1	-	4	4	30	70	100	
MCA 103	Basic Electronics & Digital Logic	3	1	-	4	4	30	70	100	
MCA104	Introduction to Management Functions	3	1	-	4	4	30	70	100	
MCA 105	Communicative English & Business Presentation	2	2	-	4	4	10	40 (Gr. A)	100	
							10	40 (Gr. B)	(A+B)	
Practical										
MCA 101L	C Programming Lab.	0	1	3	4	3	20	,P-60,V-20	100	
MCA 102L	Digital Logic Lab.	0	1	3	4	3	20	,P-60,V-20	100	
MCA 103L	Unix & Shell Programming Lab.	0	1	3	4	3	20	,P-60,V-20	100	
Total Credit: 29							Total Marks: 800			

Part I, 2nd Semester

Paper Code	Paper Name	Weekly Contact Period (WCP)				Credit	Marks			
		Lecture	T	P	Total		S	Exam.	Total	
Theoretical										
MCA 201	Data Structures	3	1	-	4	4	30	70	100	
MCA 202	Numerical & Statistical Computing	3	1	-	4	4	30	70	100	
MCA 203	Computer Organization & Architecture	3	1	-	4	4	30	70	100	
MCA 204	Microprocessor	3	1	-	4	4	30	70	100	
MCA 205	Mathematical Foundation II	3	1	-	4	4	30	70	100	
Practical										
MCA 201L	Data Structures Lab.	0	1	3	4	3	20	,P-60,V-20	100	
MCA 202L	Numerical Lab.	0	1	3	4	3	20	,P-60,V-20	100	
MCA 203L	Microprocessor Lab.	0	1	3	4	3	20	,P-60,V-20	100	
Total Credit: 29							Total Marks: 800			

Part II, 1st Semester

Paper Code	Paper Name	Weekly Contact Period (WCP)				Credit	Marks			
		Lecture	T	P	Total		S	Exam	Total	
Theoretical										
MCA 301	Database Management Systems	3	1	-	4	4	30	70	100	
MCA 302	Operating Systems	3	1	-	4	4	30	70	100	
MCA 303	Theory of Computing	3	1	-	4	4	30	70	100	
MCA 304	Object Oriented Programming	3	1	-	4	4	30	70	100	
MCA 305	Analysis & Design of Algorithm	3	1	-	4	4	30	70	100	
Practical										
MCA 301L	DBMS Lab	0	1	3	4	3	20	P-60,V-20	100	
MCA 302L	OOPs Lab..	0	1	3	4	3	20	P-60,V-20	100	
MCA 303L	System Software Lab	0	1	3	4	3	20	P-60,V-20	100	
Total Credit:29							Total Marks: 800			

Part II, 2nd Semester

Paper Code	Paper Name	Weekly Contact Period (WCP)				Credit	Marks			
		Lecture	T	P	Total		S	Exam	Total	
Theoretical										
MCA 401	Computer Graphics	3	1	-	4	4	30	70	100	
MCA 402	Java & Web Technology	3	1	-	4	4	30	70	100	
MCA 403	Computer Networks	3	1	-	4	4	30	70	100	
MCA 404	Software Engineering	3	1	-	4	4	30	70	100	

MCA 405	Artificial Intelligence	3	1	-	4	4	30	70	100
Practical									
MCA 401L	Graphics Lab.	0	1	3	4	3	20	P-60,V-20	100
MCA 402L	Java & Web Technology Lab.	0	1	3	4	3	20	P-60,V-20	100
MCA 403L	AI Lab.	0	1	3	4	3	20	P-60,V-20	100
								Total Credit:29	Total Marks: 800

Part III, 1st Semester

Paper Code	Paper Name	Weekly Contact Period (WCP)				Credit	Marks		
		Lecture	T	P	Total		S	Exam	Total
Theoretical									
MCA 501	Digital Image Processing	3	1	-	4	4	30	70	100
MCA 502	Elective I	3	1	-	4	4	30	70	100
MCA 503	Elective II	3	1	-	4	4	30	70	100
MCA 504	Elective III	3	1	-	4	4	30	70	100
MCA 505	Elective IV	3	1	-	4	4	30	70	100
Practical * R-Report, P- Presentation, V - Viva									
MCA 501L	Image Processing lab.	0	1	3	4	3	20	,P-60,V-20	100
MCA 502L	Web based DBMS Lab.	0	1	3	4	3	20	,P-60,V-20	100
MCA 503P	Project I(Minor)	0	0	4	4	3		P-60,V-20	100
								Total Credit:29	Total Marks: 800

Part III, 2nd Semester

Paper Code	Paper Name	Weekly Contact Period (WCP)				Credit	Marks				
		Lecture	T	P	Total		Report	Presentation	Viva	Total	
Dissertation											
MCA-CS-601	Project II (Project Work & Presentation + Viva)	-	-	24	24	16	200	100	100	400	
MCA-IT-601	Grand Viva	-	-	-	-	8	-	-	200	200	
							Total Credit: 24	Total Marks: 600			

Total Marks for Three Year M.C.A. (6-Semesters) Course is 4600, Total Credit is 169.

For sessional at least two intermediate examinations are to be taken, average mark will be the sessional marks for each subject. Corrected paper of these intermediate exams are to be returned to the respective students.

T – Tutorial, P – Practical, S – Sessional, Th – Theory, A – Assignment, R-Report, P- Presentation, V - Viva

<p>Elective Papers</p> <ul style="list-style-type: none"> • MCA-E/01 Soft Computing • MCA-E/02 Pattern Recognitions • MCA-E/03 Advanced DBMS • MCA-E/04 Parallel Processing • MCA-E/05 Embedded System Design • MCA-E/06 Simulation & Modeling • MCA-E/07 Mobile Computing 	<p>Elective Papers</p> <ul style="list-style-type: none"> ▪ MCA-E/08 VLSI Design ▪ MCA-E/09 Managerial Economics ▪ MCA-E/10 Computational Geometry ▪ MCA-E/11 Data Mining ▪ MCA-E/12 Distributed Computing ▪ MCA-E/13 Compiler Design ▪ MCA-E/14 Graph Algorithm 	<p>Elective Papers</p> <ul style="list-style-type: none"> ▪ MCA-E/15 Advance Data Structure ▪ MCA-E/16 Network Programming ▪ MCA-E/17 Remote Sensing & GIS Applications ▪ MCA-E/18 Network Security ▪ MCA-E/19 Real Time Operating Systems ▪ MCA-E/20 Multi Object Optimization Technique ▪ MCA-E/21 Computer Communication Principles ▪ MCA-E/22 Managerial Economics ▪ MCA-E/23 Managerial Accounting ▪ MCA-E/24 E-Commerce ▪ MCA-E/25 Values & Professional Ethics ▪ MCA-E/26 Business Intelligence ▪ MCA-E/27 Software Architecture ▪ MCA-E/28 Cloud Computing ▪ MCA-E/29 Green Computing ▪ MCA-E/30 Advanced Programming ▪ MCA-E/31 Operation Research
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