

1 st Year Assignment Question papers of MCA

Session: 2023-24	Max. Marks: 30
Program Name: Master of Computer Application (MCA)	
Course Code: MCA- 101(N)	Course Name: Computer Fundamental & Its Organization

SECTION -A		2*6=12 marks
Q. No.	Short answer type question (approx. 200 -300 words)	Marks
1	What is input-output Device? Explain the role of input-output device in computer system.	2
2	What are the difference between multitasking and multiprogramming operating system?	2
3	What are the differences between Magnetic disk & Magnetic Tape?	2
4	Explain the storage organization of Compact Disk ROM.	2
5	Explain the magnetic Disk storage organization.	2
6	What is Cache Memory? How it reduce the mismatch of processor and main memory speed?	2
SECTION -B		6*3=18 marks
	Long answer type question (approx. 500 -800 words)	Marks
7	Draw a block diagram of a computer. Explain the function of each of the blocks. Explain input and output devices	6
8	What are the various objectives and functions of Operating systems? . What are the major activities of an operating systems with regard to process management?	6
9	Convert the following Number System. a) $(534)_8 = ( ? )_{16}$ b) $(101011)_2 = ( ? )_8$ c) $(624)_8 = ( ? )_2$ d) $(11101)_2 = ( ? )_8$ e) $(3B1)_{16} = ( ? )_2$ f) $(AC2)_{16} = ( ? )_8$	6

Session: 2023-24	Max. Marks: 30
Program Name: Master of Computer Application (MCA)	
Course Code: MCA- 102(N)	Course Name: Discrete Mathematics

SECTION -A		2*6=12 marks
Q. No.	Short answer type question (approx. 200 -300 words)	Marks
1	Prove De Morgan's laws using truth table.	2
2	How many permutations are there for the word ASSOCIATION ?	2
3	Verify that the proposition $p \vee (P \wedge Q)$ is a tautology.	2
4	How many numbers are there between 100 and 1000 such that 7 is in the unit's place?	2
5	Construct the logic circuit and obtain the logic table for the expression $x1 \vee (x'2 \wedge x'3)$	2
6	Express the Boolean expression $xyz'+ y'z+ xz'$ in a sum of product form.	2
SECTION -B		6*3=18 marks
	Long answer type question (approx. 500 -800 words)	Marks
7	Explain the following types of relations with the help of suitable examples. <ul style="list-style-type: none"> <li>• Reflexive</li> <li>• Anti symmetric</li> <li>• Transitive</li> <li>• Equivalence</li> </ul>	6
8	What is the proposition? Explain different logical connectives used in propositions with the help for example	6
9	Draw a Venn diagram to represent followings: <ul style="list-style-type: none"> <li>i) <math>(A \cap B \cup C) \sim A</math></li> <li>ii) <math>(A \cup B \cup C) \cap (B \cap C)</math></li> </ul>	6

Session: 2023-24	Max. Marks: 30
Program Name: Master of Computer Application (MCA)	
Course Code: MCA- 103(N)	Course Name: C Programming

SECTION -A		2*6=12 marks
Q. No.	Short answer type question (approx. 200 -300 words)	Marks
1	Explain the differences between static and auto variables, with example of each.	2
2	Differentiate between structure and Union by using example	2
3	Explain the syntax of do-while statement. Also differentiate do-while from while Statement	2
4	What is recursion?	2
5	What are the logical operators in C ?	2
6	Differentiate between call by value and call by reference using example program	2
SECTION -B		6*3=18 marks
	Long answer type question (approx. 500 -800 words)	Marks
7	What are different basic data types in C ? Explain the need of different numeric data types with example of each.	6
8	What is an array? Write a C program using array to find largest and smallest number from a list of 100 given numbers	6
9	What is function ? Explain. How a function is Called in C ?	6

Session: 2023-24	Max. Marks: 30
Program Name: Master of Computer Application (MCA)	
Course Code: MCA- 104(N)	Course Name: Numerical Analysis

SECTION -A		2*6=12 marks
Q. No.	Short answer type question (approx. 200 -300 words)	Marks
1	What is the order of convergence of Newton-Raphson methods if the multiplicity of the root is one	2
2	State the principle used in Gauss-Jordan method.	2
3	State the Lagrange's interpolation formula. What are the advantages of Lagrange's formula?	2
4	What are the errors in Trapezoidal rule of numerical integration	2
5	State the third order R.K method algorithm to find the numerical solution of the first order differential equation	2
6	State the disadvantages of Taylor series method.	2
SECTION -B		6*3=18 marks
	Long answer type question (approx. 500 -800 words)	Marks
7	Describe the merits of Newton's method of iterations. State the Newton Raphson formula and the criteria for convergence	6
8	Solve by Gauss Elimination method $x + y = 2$ and $2x + 3y = 5$ . State the condition for Convergence of Iteration method.	6
9	Which is better Taylor's method or R. K. Method?(or) State the special advantage of Runge-Kutta method over Taylor series method. Compare Runge-Kutta methods and predictor –corrector methods for solution of initial value problem.	6

Session: 2023-24	Max. Marks: 30
Program Name: Master of Computer Application (MCA)	
Course Code: MCA- 105(N)	Course Name: Computer Organization

SECTION -A		2*6=12 marks
Q. No.	Short answer type question (approx. 200 -300 words)	Marks
1	What is flip flop? Explain at least two flip-flops with excitation table.	2
2	Differentiate between asynchronous sequential circuits and synchronous sequential circuits	2
3	Explain Memory hierarchy with suitable diagram.	2
4	Explain the functionality of RAM	2
5	What do you understand by floppy disks?	2
6	Explain any five characteristics of RISC Machine	2
SECTION -B		6*3=18 marks
	Long answer type question (approx. 500 -800 words)	Marks
7	What are logic gates? Explain the different types of logic gates with truth table and logic circuit diagram. Explain Boolean algebra with law	6
8	What is binary adder? Explain its type also. Explain half adder circuit diagram and truth table.	6
9	Explain the following 8085 microprocessor instruction with the help of an example Each DAA PUSH LDS STD XCHG	6

Session: 2023-24	Max. Marks: 30
Program Name: Master of Computer Application (MCA)	
Course Code: MCA-OBN	Course Name: Organizational Behavior

SECTION -A		2*6=12 marks
Q. No.	Short answer type question (approx. 200 -300 words)	Marks
1	What is job satisfaction? Briefly outline the factors affecting it.	2
2	What is the concept of perception? How is it formed?	2
3	What is attitude? Explain its components..	2
4	What are values? Differentiate between personal and organisational values.	2
5	What is personality? Describe factors affecting it.	2
6	Discuss the different types of motivation.	2
SECTION -B		6*3=18 marks
	Long answer type question (approx. 500 -800 words)	Marks
7	Discuss the Principles of scientific management and Contingency theory of management. Do you think the knowledge of OB is required by a manager? Justify with examples..	6
8	How has globalization affected organisations and what is the impact on behavior of employees?.	6
9	What is organisational behaviour? Explain its concept. "Organisational behaviour is interdisciplinary in nature ". Explain	6

Session: 2023-24	Max. Marks: 30
Program Name: Master of Computer Application (MCA)	
Course Code: MCA- 107(N)	Course Name: Data Structures

SECTION -A		2*6=12 marks
Q. No.	Short answer type question (approx. 200 -300 words)	Marks
1	Distinguish between primitive and non-primitive data structures.	2
2	What is an algorithm? Discuss the different steps in the development of an algorithm?	2
3	Explain circular queue? Write an algorithm to insert and delete an element from a circular queue.	2
4	What is data structure? Explain various types of data structure.	2
5	Explain recursion. Write a recursive algorithm to calculate factorial of a number.	2
6	What is minimum spanning tree. Write algorithm to find the minimum spanning tree.	2
SECTION -B		6*3=18 marks
	Long answer type question (approx. 500 -800 words)	Marks
7	What is tree traversal. Explain the in-order, preorder and post-order traversal.	6
8	What is stack? Why it is known as LIFO? Write algorithm of PUSH and POP operation on stack.	6
9	What is queue? Why it is known as FIFO? Write an algorithm to insert and delete an element from a simple queue	6

Session: 2023-24	Max. Marks: 30
Program Name: Master of Computer Application (MCA)	
Course Code: MCA- 108(N)	Course Name: Operating System

SECTION -A		2*6=12 marks
Q. No.	Short answer type question (approx. 200 -300 words)	Marks
1	What are threads?	2
2	What do you mean by a address binding? Explain with the necessary steps, the binding Of instructions and data to memory addresses.	2
3	Explain the resource allocation graph.	2
4	Explain the methods for deadlock prevention	2
5	What is demand paging? Explain	2
6	What are protection goals and principles	2
SECTION -B		6*3=18 marks
	Long answer type question (approx. 500 -800 words)	Marks
7	What is paging and swapping? Explain the paging hardware?	6
8	What is a process? Draw and explain process state diagram.	6
9	Define Operating Systems and discuss its role from different perspectives. List out different services of Operating Systems and explain each service	6



Session: 2023-24	Max. Marks: 30
Program Name: Master of Computer Application (MCA)	
Course Code: MCA- 109(N)	Course Name: Software Engineering

SECTION -A		2*6=12 marks
Q. No.	Short answer type question (approx. 200 -300 words)	Marks
1	List the characteristics of software contrasting it with characteristics of hardware.	2
2	How do we create a process that can manage unpredictability?	2
3	Identify the human factors considered for an agile software development	2
4	Is it possible to realize Win-Win spiral model for software. ?	2
5	Summarize the pros and cons of iterative software development model.	2
6	Define agile process .Give any two agile principles.	2
SECTION -B		6*3=18 marks
	Long answer type question (approx. 500 -800 words)	Marks
7	What do mean by software Testing? Differentiate verification and validation. Give an example.	6
8	Write the IEEE definition of software engineering. Demonstrate your understanding of umbrella activities of a Software process. If you have to develop a word processing software product, what process model will you choose? Justify your answer and examine.	6
9	What are SDLC in water fall model? .List two deficiencies in waterfall model. Which process model do you suggest to overcome each deficiency?	6

Session: 2023-24	Max. Marks: 30
Program Name: Master of Computer Application (MCA)	
Course Code: MCA- 110(N)	Course Name: C++ and Object Oriented Programming

SECTION -A		2*6=12 marks
Q. No.	Short answer type question (approx. 200 -300 words)	Marks
1	What is Friend function in C++ ?	2
2	Differentiate between method overloading and method overriding with an example	2
3	What do mean by abstract class and container class?	2
4	What is Polymorphism ?	2
5	Write a C++ program to find the length of a given string.	2
6	What do you mean by dynamic binding? How it is useful in OOP?	2
SECTION -B		6*3=18 marks
	Long answer type question (approx. 500 -800 words)	Marks
7	What is Inheritance? Explain its advantages. Also explain with example how a subclass is derived from a super class in C++	6
8	What is constructor? Explain constructor overloading in C++ with an example.	6
9	Explain, with suitable examples, the advantage of object oriented language over structured programming language.	6

Session: 2023-24	Max. Marks: 30
Program Name: Master of Computer Application (MCA)	
Course Code: MCA- 111(N)	Course Name: Data Communication & Computer Network

SECTION -A		2*6=12 marks
Q. No.	Short answer type question (approx. 200 -300 words)	Marks
1	What is microwave transmission?	2
2	What is spread spectrum? What are the two types of spread spectrum used in wireless data network? Elaborate.	2
3	Find the net id and host id of the following IP addresses. 114 . 35 . 2 . 7 133 . 57 . 6 . 8	2
4	What is silky windows syndrome?	2
5	Discuss any two benefits of SSL.	2
6	For n devices in a network, what is the number of cable links, number of full duplex channels for a mesh topology?	2
SECTION -B		6*3=18 marks
	Long answer type question (approx. 500 -800 words)	Marks
7	Explain the various types of multiplexing	6
8	How does BGP resolve count to infinity problem?. Explain the operation of hierarchical routing though illustration	6
9	Explain the OSI reference model with neat diagram.	6

Session: 2023-24	Max. Marks: 30
Program Name: Master of Computer Application (MCA)	
Course Code: MCA-E1	Course Name: Web Technology

SECTION -A		2*6=12 marks
Q. No.	Short answer type question (approx. 200 -300 words)	Marks
1	Explain Architecture of WWW in detail.	2
2	Write short note on the “Fundamental ASP Objects”.	2
3	What is JavaScript? How to develop JavaScript? Explain with example	2
4	State the difference between JavaScript and Java.	2
5	What is client side scripting? Explain with suitable example	2
6	Explain AJAX briefly	2
SECTION -B		6*3=18 marks
	Long answer type question (approx. 500 -800 words)	Marks
7	What is IIS? Explain different features of IIS.	6
8	Why HTTP is called state less protocol? Enlist various methods for state management and also give advantages and disadvantages of each method	6
9	What is HTML file and ASP file? List the advantages and limitation of HTML. State the benefits and drawback of ASP.	6

Session: 2023-24	Max. Marks: 30
Program Name: Master of Computer Application (MCA)	
Course Code: MCA-E2	Course Name: Java Programming

SECTION -A		2*6=12 marks
Q. No.	Short answer type question (approx. 200 -300 words)	Marks
1	What is the use of class path ? How it helps in the execution of a java program ?	2
2	What is multithreading ? Explain how does it help Java in its performance ?	2
3	What is File class ? Explain its use with an example program	2
4	Explain advantage of exception	2
5	Explain two uses of "final" keyword with the help of example	2
6	Discuss servlet life cycle.	2
SECTION -B		6*3=18 marks
	Long answer type question (approx. 500 -800 words)	Marks
7	What is Inheritance ? Explain its advantages. Also explain with example how a subclass is derived from a super class in Java.	6
8	What is JDBC ? Explain how JDBC connectivity is established ? Give an example of preparing and executing SQL statements using JDBC.	6
9	What is Java beans ? Explain its features. Also, illustrate the difference between a Java bean and an instance of a normal Java class.	6

Session: 2023-24	Max. Marks: 30
Program Name: Master of Computer Application (MCA)	
Course Code: SBSCS-02N	Course Name: Python Programming

SECTION -A		2*6=12 marks
Q. No.	Short answer type question (approx. 200 -300 words)	Marks
1	Write Python program to calculate the Arc Length of an Angle by assigning values to the radius and angle data attributes of the class Arc Length	2
2	Describe the different access modes of the files with an example	2
3	Write Python Program to simulate a Bank Account with support for deposit Money, withdraw Money and show Balance Operations.	2
4	Discuss inheritance in Python programming language.	2
5	Write a Program to demonstrate the Overriding of the Base Class method in the Derived Class.	2
6	Write a Python program to demonstrate the use of super() function.	2
SECTION -B		6*3=18 marks
	Long answer type question (approx. 500 -800 words)	Marks
7	Write Python program to sort words in a sentence in decreasing order of their length. Display the sorted words along with their length	6
8	Discuss the following methods associated with the file object a) read() b) readline() c) readlines(),	6
9	Explain the different string formats available in Python with examples. Discuss the int(), float(), str(), chr() and complex() type conversion functions with examples.	6