

**Nalanda Open University**  
**Assignment Questions (Session-2017-19)**  
**(Year of Issue -2017 for Examination 2018)**  
**Master of Computer Application (M.C.A.) Part-I**

**Method of Submission of Assignment**

Each student shall be required to submit two assignments of 20 marks in each theory paper of all programmes where no practical/project work is prescribed. For this purpose, the University administration will set out and provide to each student three different topics in each theory paper; out of which he/she will be required to write out and submit assignment work only on two topics of his/her choice in the answer book provided to him/her for this purpose by the University. Both the assignments, each carrying equal marks, shall be evaluated for the purpose of examination. It is again emphasized that writing of two assignments in each theory paper, where no practical / project work is prescribed, is compulsory and unless it is done and assignment copy submitted to the University on the date of the examination of the theory portion of the concerned paper, the study requirement of the student will not be taken to have been completed and he/she will be declared to have failed. Besides, it has, now, been decided by the University to club the marks obtained by a student in his/her assignment work /project work with the marks obtained by him/her in the written examination of that paper to determine his/her pass percentage in the concerned paper. Hence, it is in student's interest that he/she submits the assignment work in time. Students are also advised to prepare their assignments very carefully and meticulously. They must write assignment in their own handwriting. Assignment answers should not be copied from the learning material supplied by the University or from any other source. Assignments must be submitted in the answer books provided to the students by the University for this purpose. In no case, assignment written in private copy will be accepted by the University. In case of loss of assignment copy, fresh assignment copy may be procured from the University on payment of Rs.100.00 by bank draft. Similarly, Project-Work, wherever prescribed, must also be submitted by the fixed date, failing which the student will be deemed to have failed in the concerned subject.

**ASSIGNMENT QUESTIONS**

**Master of Computer Application (M.C.A.) Part-I (Old Book)**

**Paper-I**

**(Answer Any Two Questions.)**

1. Describe different types of operators in C with examples.
2. What are the functions in C? Give examples to explain the recursive function.
3. Differentiate between arrays and pointers? Give examples to explain the difference.

**Paper-II**

**(Answer Any Two Questions.)**

1. Discuss all the fundamental gates with diagram and their truth tables. What are universal gates?
2. Describe encoders and decoders. How are they different from S-R flip-flop? Explain.
3. Write an assembly language program to add two numbers and display their results.

**Paper-III**

**(Answer Any Two Questions.)**

1. Define a basic OR gate. Compare it with the AND gate.
2. What does the inclusion-exclusion principle state?
3. Explain Binomial and Poisson distribution.

**Paper-IV**

**(Answer Any Two Questions.)**

1. Draw a Data Flow Diagram (DFD) and develop SRS for Railway Reservation System.
2. Define a system? Explain the Components and characteristics of a system.
3. What is MIS, DSS, TPS and OAS? Explain with examples.

**Paper-V**  
**(Answer Any Two Questions.)**

1. Prepare a conversation between two persons about distance education through an open University.
2. It is a recession time and your company, suggesting ways of economizing on the use of paper, electricity etc.
3. Write an essay on different types of editing

**Paper-VI**  
**(Practical Work)**

**Paper-VII**  
**(Answer Any Two Questions)**

1. Write a recursive function to multiply two natural numbers.
2. Compare and contrast between Heap sort and Merge sort. Give examples for each type.
3. Describe different types of minimum spanning trees with examples.

**Paper-VIII**  
**(Answer Any Two Questions)**

1. Construct a graph with chromatic number 5.
2. Show that  $C_6$  is bipartite and  $K_3$  is not bipartite.
3. Show that  $K_5$  is not planar.

**Paper-IX**  
**Answer Any Two Questions)**

1. Discuss all the layers of OSI model and their respective functionalities.
2. How data link layer different from transport. Discuss some protocols of transport layer.
3. What is routing? Describe all the routing algorithms and their advantages.

**Paper- X**  
**(Answer Any Two Questions)**

1. Explain in detail TPS, MIS, DSS and EIS in an organization with an example.
2. How OLAP is different from Data Mining? Can we use OLAP as a tool for strategic management? Comment.
3. Discuss the term "Knowledge Management". What is the importance of knowledge management in an organization?

**ASSIGNMENT QUESTIONS**

**Master of Computer Application (M.C.A.) Part-I) (New Book)**

**Paper-I**  
**(Practical Work)**

**Paper-II**  
**(Answer Any Two Questions.)**

1. Discuss all the fundamental gates with diagram and their truth tables. What are universal gates?.
2. Describe encoders and decoders. How are they different from S-R flip-flop? Explain.
3. What are interrupts? Discuss various types of interrupts. How interrupts are handled? Explain.

**Paper-III**  
**(Answer Any Two Questions.)**

1. Define a basic OR gate. Compare it with the AND gate.
2. What does the inclusion-exclusion principle state ?
3. Explain Binomial and Poisson distribution.

**Paper-IV**

**(Answer Any Two Questions.)**

1. Elaborate the various steps involved in the process of communication.
2. What is group discussion? Explain its characteristics.
3. What is editing? Discuss the different types of editing.

**Paper-V**

**(Answer Any Two Questions.)**

1. Explain how both waterfall model and prototyping model can be accommodated in the spiral model.
2. Prepare an outline of SRS for a "Library Information System". Make suitable assumptions wherever necessary.
3. Explain any two ways of Requirements Gatherings. What are their shortcomings? Use examples to explain.

**Paper-VI**

**(Practical Work)**

**Paper-VII (Answer Any Two Questions)**

1. Discuss the Object Oriented System Development Life in detail.
2. What is Package diagram? Discuss the utility of Package diagram with an example.
3. Discuss Use case diagram and sequence diagram with an example of each.

**Paper-VIII**

**(Practical Work)**