Nalanda Open University
Assignment Session (2016-2019)
(Year of Issue -2018 for Examination 2019)
Master of Computer Application (MCA)-Part-III

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 (OLD SYLLABUS)
Paper-XXI
(MCS-041: OPERATING SYSTEMS)
Answer Any Two Questions. (सभी प्रश्न 10-10 अंकों के हैं)

1. Explain the booting process of windows 2000 operating system.
2. Explain any two security models for computer system.
3. What is a Remote Procedure Call (RPC). How is it implemented? Explain.

Paper-XXII
(MCS-043 : ADVANCED DATABASE MANAGEMENT SYSTEM)
Answer Any Two Questions.(सभी प्रश्न 10-10 अंकों के हैं)

1. Discuss classification as a tool in Data Mining. Describe the ID 3 algorithm for classifying data sets with a suitable example.
2. What is Data Dictionary? What is the significance of creating Data Dictionary in DBMS? Explain the statistics stored in the Data D.
3. What are views? What is the significance of views in DBMS? How are views managed in SQL? Explain with an example.

Paper-XXIII (Practical)
Paper-XXIV
(MCS - 51 : ADVANCED INTERNET TECHNOLOGIES)
Answer Any Two Questions. (सभी प्रश्न 10-10 अंकों के हैं)

1. Explain the underlying software architecture of EJB with the help of a diagram.
2. What is meant by XML parsing? Describe the parsers involved with XML.
3. Explain different phases of life cycle of a servlet with the help of a diagram.

Paper-XXV
(MCS-053 : COMPUTER GRAPHICS AND MULTIMEDIA)
1. Explain different Shading Schemes with their advantages and disadvantages.
2. Discuss different types of projection with diagram.
3. What is authoring tool? Explain different types of authoring tools.

Paper-XXVI (Practical)
Paper-XXVII
(MCSE-003: Artificial Intelligence and Knowledge Management)
Answer Any Two Questions (सभी प्रश्न 10-10 अंकों के हैं)
1. Differentiate between the following :–
   (i)   Forward chaining and Backward chaining
   (ii) Conceptual graph and Conceptual dependency structure
2. Explain A* and AO* algorithms. Give suitable examples.
3. Explain the all the rules of Inference of propositional logic with examples.

Paper-XXVIII
(MCSE-004 : NUMERICAL AND STATISTICAL COMPUTING)
Answer Any Two Questions. (सभी प्रश्न 10-10 अंकों के हैं)
1. Evaluate the Integral $I = \int_0^1 \frac{dx}{1+x}$ using Gauss-Legendre three point formula.
2. Explain Bionomial and Poisson distribution.
3. What is the utility of residual plots ? What is the disadvantage of residual plots ?

Paper-XXIX
(APPLICATION DEVELOPMENT WITH .NET FRAMEWORK)
Answer Any Two Questions (सभी प्रश्न 10-10 अंकों के हैं)
1. Explain the architecture of .NET FRAMEWORK with a diagram.
2. Explain how data access is done using ADO.NET architecture.
3. Describe ASP.NET application life-cycle with a diagram.

ASSIGNMENT (NEW SYLLABUS)
Paper-XVII
(Accountancy and Financial Management)
Practical work

Paper-XVIII
(Advanced Database Management System)
Answer Any Two Questions. (सभी प्रश्न 10-10 अंकों के हैं)
1. What do you mean by Multi-versioning? What are the various schemes available for multi-versioning? Describe any two schemes in detail.
2. Describe the phases of Query processing by using a block diagram. Discuss the process of Query optimization, by using suitable example.
3. What is multivalued dependency? How is 4 NF related to multivalued dependency? Is 4 NF decomposition dependency preserving? Justify your answer.

Paper-XIX
(Compiler Design)
Answer Any Two Questions.(सभी प्रश्न 10-10 अंकों के हैं)
1. What is a regular expression? Explain the rules for writing the regular expression. Write some regular expression.

2. Discuss the design issues in intermediate code generation. Describe the various representations of three-address codes.
3. What are different types of parsing? Explain the difference between top-down parsing and bottom up parsing

Paper-XX
(Design and Analysis of Algorithm)
Answer Any Two Questions. (सभी प्रश्न 10-10 अंकों के हैं)

1. Explain Floyd-Warshall Algorithm with an example.
2. What is Hill Climbing Optimization Algorithm? Explain with an example.
3. What do you mean by complexity of an Algorithm? Explain worst case complexity and average case complexity.

Paper-XXI
(Artificial Intelligence and Knowledge Management)
Answer Any Two Questions. (सभी प्रश्न 10-10 अंकों के हैं)

1. Explain the concept of Game playing. Describe some games of one-player and two-players.
2. Explain different types of agents with diagram. Describe Turing Test.
3. Define the properties of PROLOG. Write the syntax of prolog programming.

Paper-XXII
(Numerical and Statistical Computing)
Answer Any Two Questions. (सभी प्रश्न 10-10 अंकों के हैं)

1. What is the utility of residual plots? What is the disadvantage of residual plots?
2. Explain Bionomial and Poisson distribution.
3. Apply Runge-Kutta fourth order method to find an approximate value of y when x = 0.2 given that y' = x + y with y(0) = 1 and h = 0.2.

Paper-XXIII
(Application Development with .net Framework)
(Practical Work)
Paper-XXIV
(Project)
Viva-Voce