J.S University

Assignment For MCA 2nd Sem.

The Assignment will consist of two parts, A and B. Part A will have 5 short answer questions(40-60 words) of 4 marks each. Part B will have 4 long answer questions of 5 marks each

All questions are compulsory.

These Assignments should be completed and submitted in written form by the student to his/her respective Faculty/ Examiners. Assignment Submission Dates are:

List Of Suggested Questions

The list of suggested questions are for students to practice. Although optional, we recommend that students solve these questions, as they will help them in preparing for exams as well as in clearing the important concepts of the subject.

List of Practical and suggested practical's

The list of practical's should be done by the students in their Lab Sessions. These are the basic practical's, which each student should be able to do himself independently. While the list of suggested practicals are optional, but it is recommended that students should perform those practical so as to have a thorough knowledge of the subject

Education Delivery Schedule (EDS)

As per University Semester scheme, the minimum contact hours of each paper has been Divided into two hours theory and practical class. The faculty will maintain this attendance paper wise for his/her batch.

J.S UNIVERSITY

Cover page of Assignment

ID NUMBER ....

NAME ....

COURSE: MCA

STREAM CS ....

SEM 2nd SEM........................

SUBJECT CODE ....

SUBJECT NAME ....

J.S. University

MCA 2nd Semester

Theory of Automata & Formal Languages

Part-A

Q1-Explain any finite automata with output ?

Q2-Give English description of the language : b(a*b)*a*

Q3-Define a right linear grammar with an example.

Q4-How do we say that the given grammar is ambiguous?

Q5- List out application of pumping lemma.

Part-B

Q1-How do we show the acceptance of CFL?

Q2- Define turning machine. How a TM accepts a language?

Q3-Explain about Counter Machine.

Q4-Explain about Chomsky hierarchy of languages

Q5- Explain about Decision properties of DCFL's.

Object Oriented Programming

Part-A

Q1-Difference between Procedural programming and OOPs?

Q2-Why use OOPs?

Q3-What are the basic concepts of OOPs?

Q4-What is Encapsulation?

Q5-What is Abstraction?

Part-B

Q1-What is method overloading?

Q2-What is method overriding?

Q3-Types of Inheritance in OOPS.

Q4- What are the main features of OOPs?

Q5- What are constructors?

Operating Systems

Part-A

Q1-Why is the operating system important?

Q2-What's the main purpose of an OS? ...

Q3-What are the benefits of a multiprocessor system?

Q4-What is RAID structure in OS? ...

Q5-What is GUI?

Part-B

Q1-What is a Pipe and when it is used?

Q2-What are the different kinds of operations that are possible on semaphore?

Q3- What do you mean by RTOS?

Q4- What is different between main memory and secondary memory.

Q5- What is virtual memory?

Database Management Systems

Part-A

Q1) What is a database?

Q2) What is a checkpoint in DBMS?

Q3) What is a database system?

Q4) What are the advantages of DBMS?

Q5) What is the Relationship?

Part-B

Q1) When does checkpoint occur in DBMS?

Q2) What do you mean by transparent DBMS?

Q3) What are the unary operations in Relational Algebra?

Q4)How many types of database languages are?

Q5)What do you understand by Data Model?

Data Structures & Analysis of Algorithms

Part-A

Q1- Describe the types of Data Structures?

Q2-What is a queue Data Structure?

Q3-List some applications of queue Data Structure.

Q4- What is a Linear Data Structure?

Q5- What is a multidimensional array?

Part-B

Q1- What is a doubly-linked list? Give some examples.

Q2- What is a linked list Data Structure?

Q3-What is an algorithm?

Q4-Where are stacks used?

Q5-What are the operations that can be performed on a stack?

Cyber Security

Part-A

Q1-Define Cyber security.

Q2-What is the difference between IDS and IPS?

Q3-What is a Botnet?

Q4-What is the difference between stored and reflected XSS?

Q5-What are HTTP response codes?

Part-B

Q1-List the common types of cyber security attacks.

Q2-What is a cyber security risk assessment?

Q3-What is the use of Patch Management?

Q4-Which is more secure SSL or HTTPS?

Q5-How to protect data in transit Vs rest?