

## Assignment For MCA 1<sup>st</sup> 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	1 <sup>st</sup> SEM
SUBJECT CODE	
SUBJECT NAME	



## J.S. University

# MCA 1<sup>st</sup> Semester

## **Fundamental of Computers & Emerging Technologies**

## Part- A

Q1.)- Explain the difference between the terms 'computer' and 'computer system'.

Q2.)- Describe the functions of the two main units found in the central processing unit.

Q3.)- Explain the difference between a mainframe computer and a supercomputer.

Q4.)- Explain the term LAN.

Q5)- Explain the purpose of the following devices in a wireless LAN (WLAN): A. Switch B. Router.

### Part- B

- Q1)- Explain the difference between an algorithm and a pseudo code.
- Q2)- Explain Different Types of Network Topologies
- Q3)- Write about Primary Memory:
- Q4)- Explain Secondary Memory.
- Q5)- Write about DVD and Blue-ray disc.



# Problem Solving using C

## Part- A

Q1- What are the basic data types associated with C?

Q2- What is the process to create increment and decrement statement in C?

Q3- What is the general form of function in C?

Q4- What is the correct code to have the following output in C using nested for loop?



Q5- Explain the use of function toupper() with an example code?

# Part- B

- Q1- What is the process to generate random numbers in C programming language?
- Q2- Describe the newline escape sequence with a sample program?
- Q3- Difference between array and pointer?

Q4- What is pre-processor directives? give three categories of preprocessor directives?

Q5- Write a program to find table of a given number.



# **Principles of Management & Communication**

## Part- A

Q1- What is Job design?

Q2- Is Management - an art or science?

Q3- List the contributions of Fayol towards Management.

Q4- Explain the creative process?

Q5- Write about Creativity and Innovation.

## Part- B

Q1-Define organisational culture.

Q2- Compare groups and individuals.

Q3- Why companies globalise?

Q4- Define groups and state the types of groups. Also outline the functions of informal groups.

Q5- Write functions of Management.



## **Discrete Mathematics**

## Part- A

Q1- If X and y are the two finite sets, such that  $n(X \cup Y) = 36$ , n(X) = 20, n(Y) = 28, then find  $n(X \cap Y)$ .

Q2- Find the missing number in the sequence: 5, 10, 15, \_\_\_\_, 25, 30.

Q3- Determine the missing term in the sequence: 4, 12, \_\_, 108, 324, 972.

Q4- Find out the number of ways that the letters of the word "DETAIL" can be arranged such that the vowels must occupy odd positions.

Q5- Simplify the expression (x + y)(x + z) using the laws of boolean algebra.

### Part- B

Q1- What are the partitions of  $\{0, 1, 2\}$ ?

Q2- What are the partitions of  $\{0, 1, 2, 3\}$ ?

Q3- In a group of 100 students, 72 students can speak English and 43 students can speak Hindi. Based on these data, answer the following questions:

- a. Find the number of students who can speak English only.
- b. Find the number of students who can speak Hindi only.

Q4- In a group of students, there are 6 boys and 4 girls. Out of 10 students, 4 students have to be selected. Find out how many different ways the students can be selected such that at least one boy should be selected?

Q5- Determine in how many ways can three gifts be shared among 4 boys in the following conditions- i) No one gets more than one gift. ii) A boy can get any number of gifts.



# **Computer Organization & Architecture**

Part- A

- Q1- Write about types of buses.
- Q2- Describe Registers.
- Q3- What is An addressing mode?
- Q4- Write about Cache memories.
- Q5- Write about CPU Structure.

### Part- B

- Q1- What is magnetic disk.
- Q2- Write about ROM memories..
- Q3- Describe in detail Virtual memory..
- Q4- Write about Reduced Instruction Set Computer..
- Q5- Write the functions of operating system.