SDDCA101   COMPUTER FUNDAMENTALS AND PC SOFTWARE

ASSIGNMENT – I   **5 X 3 =15 Marks**

1. Write about evolution and generation of computers.
2. Write about input / output units.
3. Explain in detail about central processing unit with a neat block diagram.
4. Discuss the steps involved in Software development life cycle.
5. Write in detail about storage devices.

ASSIGNMENT – II   **5 X 3 =15 Marks**

6. Explain machine, assembly and high-level languages.
7. Write characteristics of good programming languages.
8. Discuss process management in popular operating systems.
9. Differentiate Communication and Data Transmission. What are different data transmission modes?
10. Write in detail about network topologies and different network types.

SDDCA102-C PROGRAMMING AND DATA STRUCTURES

ASSIGNMENT – I   **5 X 3 =15 Marks**

1. Write a program to check the given number is perfect or not.
2. Write a program to display

3. Write a program to read data of all different data types and check for different possibilities of assignment (Explicit and implicit) conversion. Write short notes on different types of assignments.
4. Write a program to simulate simple calculator – operations like '+','-','*','/', using switch.
5. The function cos(x) is expanded as

$$cos(x) = 1-x^2/2!+x^4/4!-x^6/6!$$

Develop a flow chart to computer the sum of the above series expansion, correct up to 4 decimal places.

ASSIGNMENT – II   **5 X 3 =15 Marks**

6. Write a program to find Mean, Variance and standard deviation of a given set of numbers using arrays.
7. Write a program to compute row sum, column sum and sum of all elements of a matrix using functions.
8. Write an algorithm of heap sort and explain it with an example.
9. Write a program to implement circular queue with an example.
10. Explain about Binary search with an example and write a program using functions.

SDDCA103-INTRODUCTION TO DATABASE MANAGEMENT SYSTEMS

ASSIGNMENT – I   **5 X 3 =15 Marks**

1. Explain the concept of the data independence and the three schema architecture .

2. Discuss Hierarchical and network data model with examples.
3. Explain Codd commandments.
4. Describe the relational data model.
5. Briefly explain Object Oriented databases, Client server databases, Distributed databases and Knowledge databases.

ASSIGNMENT – II   **5 X 3 =15 Marks**

6. Differentiate between sequential file organization and random file organization.
7. What is multi-key organization? Explain with an example.
8. Define Entity, Entity type, Entity set, Relation, Relationship type, and Instance.
9. What are the naming conventions for ER diagram?
10. Draw an ER diagram for a University.

SDDCA104-INTRODUCTION TO COMPUTER ORGANIZATION

ASSIGNMENT – I   **5 X 3 =15 Marks**

1. Convert the following to bases indicated.
   a) 7562 to octal   b) 1938 to hexadecimal   c) 175 to binary
2. Discuss fixed-point representation with example.
3. Construct the karnaugh map for the function
   $$F(x, y, z) = \sum (1, 4, 5, 6, 7).$$
4. Draw the truth table for full-adder & explain the full-adder circuit.
5. Explain about Multiplexers. Draw a neat diagram to show 4-to-1 line multiplexer.

ASSIGNMENT – II   **5 X 3 =15 Marks**

6. Explain about decoder. Draw a 2-to-4 line decoder.
7. Write a note on JK flip–flop. Show the characteristic table and graphic symbol of JK flip-flop.
8. Explain about Shift registers.
9. Explain stored program organization.
10. Explain about main memory. Show the block diagram of typical RAM chip.

NOTE:

1) Last date for submission of assignments for all the courses / papers is- 15-10-2018
2) Non-submission of assignments as per the scheduled date mentioned above attracts a fine of Rs. 200/- upto 31-10-2018 per each assignment of a course / paper and under any circumstances the assignments will not be accepted from 1st November, 2018.
3) Assignments are to be written in the Book-lets provided by CDL and other formats are not accepted.
4) Answer all 10 questions, in a single book only.