Total No. of Questions: 09 Total No. Of Pages: 02

University Roll No: .....

Program/ Course: B.Tech. (Sem. 1)

Programming for Problem Solving

Subject Code: ESC-104

Paper ID: 15935

Time: 3 Hrs Max Marks: 60

NOTE:

1. Part-A and Part-B are compulsory.
2. Part-C has two questions Q8 and Q9. Both are compulsory, but with internal choice.
3. Any missing data may be assumed appropriately.

Part - A

[02 marks each]

Q1. Write a short note on:

a) What is a **compiler**?

b) What are **data types**? Name the primary data types.

c) Define **break** statement. Explain its use.

d) Explain the use of **printf** statement.

e) Write the syntax of **for loop**.

f) Define **array** with an example.

Part – B

[04 marks each]

Q2. Define **flow chart**. Make a flow chart for switch case.

Q3. What is the difference between **while loop** and **do-while** loop?

Q4. What are **pointers**? Show the working of a pointer with the help of example program.

Q5. Write a program in C to print the table of 3 using **for loop**.

Q6. Write a program in C to find out the sum of first n natural numbers.

Q7. What are **functions**? Write a program in C to show the working of user defined functions.

P.T.O

Part - C [12 marks each]

Q8. What is operating System? What is the need of operating system? What do you mean by booting? Explain what is meant by loading, saving, compiling & execution of a program?

or

Draw and explain the block diagram of computer system. Also explain in detail the different components of a computer. What are the different applications of computer system?

Q9. Explain **if-else statement** in detail. Write a program in C to find out the greatest integer value out of 3 values entered by the user at runtime using if-else ladder. Also draw the flow chart for it.

or

Define **Structures**. Create a structure named **library** having following components (title, author-name, book-id, book-price). Make at least three entries into it.

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