Sacs. 3214   **Computer Programming and Data Structures (1+2)**   **Marks: 50**
Time: 2 hours

I   **Answer the following**   (10x1=10)
1. What is the size of *double* data type in C?
2. Name two types of *goto* statement.
3. What is the function of compiler?
4. Define debugging.
5. What do you mean by typecasting?
6. Name any ternary operator.
7. Which is the null character for terminating strings?
8. What is the function of *sizeof* operator?
9. Write down syntax for assigning values to variables in C.
10. C is a case-sensitive language. State whether True or False.

II   **Write short notes on ANY FIVE of the following**   (5x2=10)
1. How is a *break* statement different from *continue* statement?
2. What are the different escape sequence characters in C?
3. Name any four header files and any two related functions contained in each file.
4. What are the applications of arrays?
5. What is an expression? How is an expression different from variables?
6. What is the importance of *main()* in C programs?
7. What are unary operators? Name any two unary operators in C.

III   **Answer ANY FIVE of the following**   (5x4=20)
1. Discuss different iteration statements available in C language.
2. An amount of rupees, say P, is deposited in a commercial bank for N years, which pays simple interest at the rate of R% annually. Write a program to print the amount after N years. Input the values of P, N and R from the user.
3. Explain *Call By Value* in functions with example.
4. What are unions? How do they differ from structures?
5. How can you declare and initialize pointer variables?
6. What is dynamic memory allocation?
7. How are elements in a linked list represented?

IV   **Write an essay on ANY ONE of the following**   (1x10=10)
1. Discuss different types of errors in C language with suitable examples. Depict with the help of a flow chart.
2. Explain queues and their working. What are the various operations on queues? Write a program for insertion in a queue.

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