

I B.Tech Supplementary Examinations, Aug/Sep 2008
COMPUTER PROGRAMMING
(Common to Mechanical Engineering, Mechatronics, Production
Engineering and Automobile Engineering)

Time: 3 hours

Max Marks: 80

Answer any FIVE Questions
All Questions carry equal marks

1. (a) What are the delimiters available in 'C'?
- (b) Explain the scope of variable in 'C'. [6+10]
2. Write short notes on selection statement. Write a 'C' program to find Armstrong number using if statement. [16]
3. Write a program to find sum of odd & even series by using function with argument and no return value. [16]
4. Explain an array , array declaration and features of array. [16]
5. Define Structure and write the general format for declaring and accessing structure members with an example. [16]
6. (a) What is the primary advantage of using data file?
- (b) Describe the different ways in which data files can be categorized in 'C'. [8+8]
7. What do you mean by data structure? Explain about Non - Linear data structure? [16]
8. (a) What is a network?
- (b) What is a spanning tree?
- (c) Define minimal spanning tree.
- (d) What are the various traversals in a tree? [4+4+4+4]

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1. (a) What do you mean by enumerated data type explain with example?
(b) Define local and global variable. [10+6]
2. (a) What are the commonly used Input / Output functions used in 'C'. How they are accessed?
(b) What is the standard Input / Output header files in 'C'? How it is used? [10+6]
3. Write a program to find sum of odd & even series by using function with argument and no return value. [16]
4. Explain an array , array declaration and features of array. [16]
5. (a) Write a program to print name, address using structure.
(b) Write a program to print name, marks using structure. [8+8]
6. (a) What are the different accessing modes?
(b) What is the purpose of fopen(), fclose()? [8+8]
7. Write a program to evaluate the following expression $X = A + B * C$ infix to postfix using stack. [16]
8. (a) What is a network?
(b) What is a spanning tree?
(c) Define minimal spanning tree.
(d) What are the various traversals in a tree? [4+4+4+4]

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1. What is the purpose of constant? Write short notes on String and enumeration constant with example. [16]
2. (a) What are the commonly used Input / Output functions used in 'C'. How they are accessed?
(b) What is the standard Input / Output header files in 'C'? How it is used? [10+6]
3. What is the working of following functions :
 - (a) ceil(x)
 - (b) exp(x)
 - (c) cos(x)
 - (d) tolower(x). [16]
4. How to pass arrays as arguments to function? With example. [16]
5. Define Structure and write the general format for declaring and accessing structure members with an example. [16]
6. (a) Write the syntax for opening a file with various modes and closing a file.
(b) Explain about file handling functions. [8+8]
7. What are the advantages of external sorting? Write a program to perform merge sort with following elements [16]
Set A {10, 5,20,25}
Set B {17,19,21,23}
8. (a) What is a network?
(b) What is a spanning tree?
(c) Define minimal spanning tree.
(d) What are the various traversals in a tree? [4+4+4+4]

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1. Explain Integer and Floating point constant with example. [16]
2. (a) Write a 'C' program to find sum of digits of an integer using while loop.
(b) Give the features of for - loop. [10+6]
3. Write program for arranging number in descending order using function without argument and with return value. [16]
4. Explain an array , array declaration and features of array. [16]
5. Define Structure and write the general format for declaring and accessing structure members with an example. [16]
6. Write a program for indexed sequential file for the employee database for the following operation. [16]
 - (a) Add Record
 - (b) Modify Record.
7. What is the advantage of binary search compared to linear search. Write a program to perform binary search? [16]
8. (a) What is a network?
(b) What is a spanning tree?
(c) Define minimal spanning tree.
(d) What are the various traversals in a tree? [4+4+4+4]
