

I B.Tech - Regular Examinations, June 2009
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) Explain the steps involved in program development life cycle in 'C' language.
(b) What are the advantages and disadvantages of flowchart? [10+6]
2. Write a 'C' program to print a table of the binary, octal and hexadecimal equivalents of the decimal numbers in the range 1 through 256. [16]
3. Define actual parameter and formal parameter. What is meant by global and local variable, explain with example? [6+10]
4. Describe operations on pointers with example. [16]
5. Define Structure and write the general format for declaring and accessing structure members with an example. [16]
6. Write a program using indexed sequential file for employee database. [16]
7. What difference between queue and circular queue? Explain about circular queue operations? [16]
8. Define binary tree. What are the application of binary tree? [16]

I B.Tech - Regular Examinations, June 2009
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. Write short notes on:
 - (a) Increment and Decrement Operators.
 - (b) Conditional Operators. [16]
2. What are the different format specifiers available for Input and Output statements available ? [16]
3. (a) Write a program to explain the concept of the variable will be retained through out the program.
(b) Explain the following library functions [10+6]
 - i. sqrt(x)
 - ii. fmod(x,y)
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 student database. [16]
7. What do you mean by data structure? Explain about Non - Linear data structure? [16]
8. Explain the single source shortest path algorithm. [16]

I B.Tech - Regular Examinations, June 2009
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. What is the purpose of size of and pointer operator in 'C' explain with program? [16]
2. (a) What is the purpose of getchar function? How is it used within a 'C' program.
(b) What is the purpose of putchar function ? How is it used within a 'C' program. [8+8]
3. (a) Write an example to explain about call by value.
(b) Write a factorial program using no return and no argument type. [10+6]
4. Describe operations on pointers with example. [16]
5. How to copy one structure to another structure of a same data type, give 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. Illustrate stacks with Dynamic memory allocation with an example program. [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]

I B.Tech - Regular Examinations, June 2009
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) Define Psuedocode.
(b) Define flowchart.
(c) What are the different stages in the program development? [3+3+10]
2. (a) What is the difference between selection and iteration statement?
(b) Write short notes on if statements. [6+10]
3. (a) Define parameter passing method and how they can be passed.
(b) Explain what are the elements of user defined function. [8+8]
4. (a) Write a program to print the value and address of the elements.
(b) How to use pointers in array? [10+6]
5. How to copy one structure to another structure of a same data type, give 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. Write a program to evaluate the following expression $X = A/B * C + D * E$ to postfix using stack. [16]
8. (a) What is binary tree? What is the representation of binary tree?
(b) What are the common operations done in a binary tree explain any one?[6+10]
