

Subject Code: R13105/R13

Set No - 1

I B. Tech I Semester Regular/Supple. Examinations Nov./Dec. - 2015

COMPUTER PROGRAMMING

(Common to CE, ME, CSE, PCE, IT, Chem. E, Aero E, AME, Min E, PE, Metal E, Textile Engg.)

Time: 3 hours

Max. Marks: 70

Question Paper Consists of **Part-A** and **Part-B**
Answering the question in **Part-A** is Compulsory,
Three Questions should be answered from **Part-B**

PART-A

1. (a) C is a structured language? Justify the statement.
- (b) Differentiate between while-do and do while.
- (c) What is the importance of #include? explain
- (d) What is pointer? Is *p is similar to &p? explain.
- (e) Discuss about the masks.
- (f) Differentiate between text file and binary file.

[3+4+3+4+4+4]

PART-B

2. (a) Is there any difference between the pre decrement and post decrement operators? Explain.
- (b) Write a program for performing the arithmetic calculation. [8+8]
3. (a) Explain about the switch statement? What is the importance of the break and continue? Give examples.
- (b) Write a program to sum the digits in a given number. [8+8]
4. Explain about different storage classes with examples. [16]
5. (a) How to initialize and access pointer variables? Discuss.
- (b) Write a program to swap two numbers using pass by address. [8+8]
6. (a) How to pass structure variable to functions? Explain with example.
- (b) Write a program to add two complex numbers. [8+8]
7. (a) Explain about the functions for reading and writing data from a file.
- (b) Write a program to print command line arguments on screen. [8+8]

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Question Paper Consists of **Part-A** and **Part-B**
Answering the question in **Part-A** is Compulsory,
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PART-A

1. (a) C is a Middle-Level Language. Justify the statement.
(b) How to access array elements? Explain.
(c) What is the importance of auto and register?
(d) Differentiate between direct and indirect pointers with examples.
(e) Explain about shift keyword.
(f) Discuss about the formatted I/O.

[3+4+4+4+3+4]

PART- B

2. (a) What is flow chart? How it is useful in writing the programs? Explain about different symbols in flow chart?
(b) Draw the flow chart for the Armstrong number and write the program.
[6+10]
3. (a) Explain about different iterative statements with examples.
(b) Write a program to calculate the ncr value.
[8+8]
4. (a) Explain about the static keyword.
(b) Discuss about user defined functions.
(c) Write a recursion program for the towers of hanoi
[4+6+6]
5. (a) How pointers are used to declare single and multi dimension arrays with examples.
(b) Write a program for printing the command line arguments.
[8+8]
6. (a) Is it possible to nest the structures? Explain with example.
(b) Write a program for reversing a linked list.
[8+8]
7. What is file? Explain about different file operations with example.
[16]

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Question Paper Consists of **Part-A** and **Part-B**
Answering the question in **Part-A** is Compulsory,
Three Questions should be answered from **Part-B**

PART-A

1. (a) What is compilation? Is it different from the compiler?
(b) What is the importance of break in switch statement? If break is not given what happens? Explain with example.
(c) What is the importance of #define? explain
(d) What is pointer? Is *p is similar to **p? explain.
(e) Discuss about bit fields.
(f) What are different types of files? Explain.

[3+4+3+4+4+4]

PART- B

2. (a) What is algorithm? What are the criteria's for an algorithm?
(b) Explain about relational operators.
(c) Write an algorithm for sum of digits in a given number.
[5+5+6]
3. (a) Explain about the selection statements with examples.
(b) Write a program for sum of series.
[8+8]
4. (a) What is recursion? How it is different from the normal function.
(b) What are the importance of the extern and register storage classes.
(c) Write a recursion program for the factorial function
[4+6+6]
5. (a) How variables are passed to functions using pointers? Discuss.
(b) Write a program for matrix multiplication.
[8+8]
6. Explain about different bit wise operators with examples.
[16]
7. (a) Explain about the fprintf and fscanf functions with examples.
(b) Write a program to copy one file contents into another file.
[8+8]

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Time: 3 hours

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Question Paper Consists of **Part-A** and **Part-B**
Answering the question in **Part-A** is Compulsory,
Three Questions should be answered from **Part-B**

PART-A

1. (a) What is interpreter? How to compile a C program?
- (b) Discuss about conditional operator.
- (c) What is the importance of #typedef? explain
- (d) Discuss about character pointer.
- (e) Explain the importance of the bit-wise operators.
- (f) Explain about the functions for reading data from a file.

[3+4+3+4+4+4]

PART- B

2. (a) Explain about the program development steps.
- (b) Write an algorithm for generating Fibonacci series. [8+8]
3. (a) How strings are represented using strings? Explain about different string manipulations.
- (b) Write a program to calculate the following series:
 $1 + \frac{1}{2} + \frac{1}{3} + \frac{1}{4} + \frac{1}{5} + \dots$ [8+8]
4. Explain about different parameter passing algorithms with examples. [16]
5. (a) Explain about the functions which are used for allocating memory dynamically.
- (b) Write a program for calculating the sum of values in a given array using pointers. [8+8]
6. (a) What is meant by self-referential structures? Give examples.
- (b) Write a program for creating a linked list. [8+8]
7. (a) Explain about the fopen and fclose functions with examples.
- (b) Write a program to merge two files into single file. [8+8]
