

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination, April/May 2018

Course: Computer Programming Techniques
Program: B.tech Electronics Engineering
Time: 03 hrs.

Semester: VI
Max. Marks: 100

Instructions: Attempt all the questions. Section B and C is having one internal choice.

SECTION A

S. No.		Marks	CO
Q 1	What is the concept of local and global variables? Explain with the help of example.	5	CO1
Q 2	Write an output of the following and explain the concept for the same <pre> struct abc { int a; char b; char c; }; main() { printf("%d", sizeof(struct abc)); } </pre>	5	CO2
Q 3	Write a program to explain the concept of classes and objects.	5	CO5
Q 4	Write the output of the following <pre> main() { int a[2][2] = {1,2,3,4}; printf("(a[0]+0) = %d\n", *(a[0]+0)); printf("(*(a+0)+0) = %d\n", (*(a+0)+0)); printf("**a = %d\n", **a); printf("(*(a+1)+0) = %d\n", (*(a+1)+0)); printf("**a[1] = %d\n", *a[1]); } </pre>	5	CO2

SECTION B

Q 5	Write a note on the following :- 1. Goto statement 2. Continue	10	CO1
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	<p>3. While loop</p> <p>4. Bitwise and logical AND operator</p> <p>5. Three Basic data types</p>		
Q 6	What do you understand by the term Inheritance? Explain the types of inheritance and write a program for each to support your answer.	2+8	CO5
Q 7	Comment on the statement “function can be define with in the definition of any other function”. Write a function to return an array and print the elements of an array in main program.	2+8	CO2
Q 8	Explain the concept of doubly linked list. Write the program to implement doubly linked list with functions for insertion, deletion and traversing.	2+8	CO4, CO1
	OR		
	Explain the concept of circular queue with the help of example. Write a program to implement the circular queue with the functions of insertion, deletion and traversing using arrays.	3+7	
SECTION C			
Q 9	Explain read, write and append mode to open a file and write a program for each mode. Write a program to create a file named “hello.txt” and write a string “ hello dear how are you ?” into the file and then replace the word “dear” with “jini” and display the content on the monitor.	10+10	CO3
Q 10	Explain the concept of Dynamic memory allocation. What is the concept of single linked list and write the program to implement the single linked list with the functions of insertion, deletion and traversing.	5+15	CO4
	OR		
	Write a program to implement stack using singly linked list with the functions of push, pop and traverse. Also implement queue using singly linked list with functions of enqueue, dequeue and traverse.	10+10	

Name:

Enrolment No:



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SECTION A

S. No.		Marks	CO
Q 1	What is the concept of for loop? Write a program to explain the concept and draw flow-chart for the same.	5	CO1
Q 2	Write a program to input a string and print the string character by character.	5	CO2
Q 3	What do you understand by classes and the instances of classes? Explain with the help of example.	5	CO5
Q 4	Write a program to input an array at runtime and print an array using pointer.	5	CO2

SECTION B

Q 5	Write a note on the following :- 1. Do while 2. switch 3. Bitwise and logical OR operator 4. Arrange the following operator [], *, +, &&, = according to the precedence in incrementing order 5. Break statement	10	CO1
Q 6	What do you understand by default constructor and parameterized constructor? Write a program for each to support your answer	5+5	CO5
Q 7	Explain function declaration, call and definition. Write a program having a function that return a pointer.	5+5	CO2
Q 8	Explain the functionality of stack with diagram. Write a program to implement a stack using arrays with functions of insertion, deletion and traversing.	2+8	CO4, CO1
OR			
	Write a program to implement the doubly linked list with the functions of insertion, deletion, and traversing	10	

SECTION C

Q 9	Explain any three mode to open a file and write a program for each mode to support your answer. What is the concept of fseek() function write the syntax for the same and write the program to explain the functionality of fseek() function.	10+10	CO3
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Q 10	Explain the concept of Dynamic memory allocation. What is the concept of single linked list and write the program to implement the single linked list with the functions of insertion, deletion and traversing	5+15	CO4
	OR		
	Explain the concept of circular queue with the help of example. Write a program to implement the circular queue with the functions of insertion, deletion and traversing using arrays.	5+15	