

B.E. (Information Technology) Third Semester (C.B.S.)
Programming Logic & Design Using C

P. Pages : 2

Time : Three Hours



NJR/KS/18/4393

Max. Marks : 80

- Notes :
1. All questions carry marks as indicated.
 2. Solve Question 1 OR Questions No. 2.
 3. Solve Question 3 OR Questions No. 4.
 4. Solve Question 5 OR Questions No. 6.
 5. Solve Question 7 OR Questions No. 8.
 6. Solve Question 9 OR Questions No. 10.
 7. Solve Question 11 OR Questions No. 12.
 8. Due credit will be given to neatness and adequate dimensions.
 9. Assume suitable data whenever necessary.
 10. Illustrate your answers whenever necessary with the help of neat sketches.
 11. Use of non programmable calculator is permitted.

1. a) Define Algorithm. Give various characteristics that an algorithm must satisfy. 4
- b) Explain with example different operators used in C-language. 5
- c) Write a C program to generate a Fibonacci series for first 100 numbers. 4

OR

2. a) Explain the following with example. 8
 - i) For loop
 - ii) While loop
 - iii) Else-If
 - iv) Switch case
- b) Write a C-program to reverse any number entered by user. 5
3. a) How recursive function is different from a normal function? Illustrate with program. 5
- b) Explain the storage classes of C. 4
- c) What are various parameter passing techniques? Explain with example. 4

OR

4. a) Explain the preprocessor directive of C in brief. 5
- b) What do you mean by searching? Find the position of element 77 using Binary search in array A given below. 8
A = {5, 14, 23, 32, 41, 50, 69, 77}.
5. a) Explain the different string handling functions with suitable example. 8
- b) Write a program which accepts a string from user and count the number of words, vowels, constants, and other characters. 6

OR

6. a) A bank stores the information of their customers as follows. 6
 Name, Address, Age, Gender, AccountID, AccountType and Balance
 Write a C program using structure for accepting records of 100 customers and print the records of customer where AccountType is saving, Age>40 and Balance < 10000.
 b) Differentiate between structure and union. 4
 c) Write a program which shows the use of pointer operator. 4

7. a) What are various file opening modes? 4
 b) Explain file I/O and console I/O functions. 4
 c) Write a program to copy the contents of one file to another file using command line arguments. 6

OR

8. a) Write a program to store the students record in the file and read the student record from the file. The students record should contain following information. Name, Roll-No, Semester, Branch, College & Result. 5
 b) Discuss following in detail **any three**. 6
 i) Enumerated data types ii) Bitwise operator
 iii) Bit field operator iv) Volatile Qualifier
 c) What is differentiate between text file and binary file? 3
9. a) What is difference between static and dynamic memory allocation? 3
 b) Explain the various dynamic memory management functions. 6
 c) Write a program to generate lines of different colors and styles. 4

OR

10. a) Write a menu driven program using graphics having following options to draw. Square, Circle, Ellipse, Polygon. 6
 b) Explain the following graphics functions. 7
 i) Getimage () ii) Imagesize ()
 iii) Putpixel () iv) Move to ()
 v) Floodfill () vi) Arc ()
 vii) Outtextxy ()
11. a) Explain various steps involved in invoking ROM-BIOS functions. 6
 b) Explain in detail Elementary TSR'S. 7

OR

12. Write a short note on:
 i) Pointer variable. 3
 ii) NULL pointers. 3
 iii) Dangling Pointers 3
 iv) Advantage of using Pointers. 4
