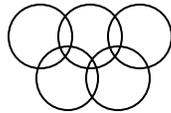


NTK/KW/15/7331

- (b) Write a program to display a smiley face on the screen. 6
- (c) Explain getimage () and putimage () function with example. 4

OR

- 10. (a) Write a program to display following on display screen. 6



- (b) Explain the following with example :
 - (i) textcolor ()
 - (ii) gotoxy ()
 - (iii) outtext ()
 - (iv) outtextxy () 8
- 11. (a) Explain the following standard library in C :
 - (i) <math.h>
 - (ii) <stdio.h>
 - (iii) <conio.h>
 - (iv) <string.h> 8
- (b) Explain various steps involved in invoking ROM-BIOS function. 5

OR

- 12. (a) Define TSR programming. State different types of pointers giving example of each. 8
- (b) Write a short on ROM-BIOS function. 5

Faculty of Engineering & Technology
Third Semester B.E. (Information Technology)
(C.B.S.) Examination

PROGRAMMING LOGIC & DESIGN USING “C”

Time—Three Hours] [Maximum Marks—80

INSTRUCTIONS TO CANDIDATES

- (1) All questions carry marks as indicated.
- (2) Assume suitable data wherever necessary.
- (3) Illustrate your answers wherever necessary with the help of neat sketches.

- 1. (a) What are data types ? Explain different data types in C. 6
- (b) Write a program in C to reverse a given number of 6 digits. 7

OR

- 2. (a) What are the different types of operators in C ? Explain with example. 7
- (b) Write a program to print out all armstrong numbers between 1 and 500. 6
- 3. (a) Explain difference between call by value and call by reference using example. 6
- (b) Write a program to find transpose of a given matrix. 7

OR

4. (a) What is recursion ? How it is different from a normal function ? Give example. 4
- (b) Write a short note on array of pointers. 3
- (c) Write a program to sort an array of 10 numbers using insertion sorting technique. 6
5. (a) Explain the following string functions using example of each :
- (i) Strlen
- (ii) Strcat
- (iii) Strcpy
- (iv) Strcmp. 8
- (b) Create a structure of employee having data : members name, id, dept, post and basic. Write a program to print the details of the employee with his gross salary, net salary and deductions. You can use following formula to calculate the same :
- Gross salary = Basic + DA + HRA + OTHER
- Deduction = IT + PT + PF
- Net salary = Gross salary – Deduction
- DA is 90% of basic, HRA is 20% of basic, IT is 10% of gross salary, PF is 12% of basic, OTHER is 5000 and PT is 500. 6

OR

6. (a) Explain the difference between Structure and Union. 4

- (b) Write short notes on :
- (i) Array of structure
- (ii) Pointer to structure. 4
- (c) Write a program to find out the length of a string without using the standard library function. 6
7. (a) Explain the following file handling functions with example :
- (i) fseek
- (ii) ftell
- (iii) feof. 6
- (b) Write a program to copy contents of one file to another file using command line arguments. 7

OR

8. (a) Explain the following with example :
- (i) Bitwise operators
- (ii) Enumerated data types
- (iii) Type casting. 7
- (b) Write a program to store the student record in the file and read the student record from the file. The student record should contain following information :
- Name, roll-no., semester, branch and result. 6
9. (a) What is the difference between Malloc() and Calloc() ? Explain with example. 4