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Reg. No. : | | | | | | | | | | | | |

Question Paper Code : 95296

5 Year M.Sc. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2015.

Second Semester

Software Engineering

ESE 023 – PROGRAMMING IN C

(Common to 5 Year M.Sc. Software Systems)

(Regulations 2010)

Time : Three hours Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. List the advantages of using flow chart.

2. Define high level and low level language for computers.

3. What does the following fragment of code print?

```
main()
{
int c=1;
c=c+2 * c++;
printf("\n%d",c);
}
```

4. What is the order of precedence and associativity of arithmetic operators?

5. Write the characteristics of array in C.

6. What is the difference between scanf() with %s and gets()?

7. List the advantages of using functions.

8. How is a structure different from an array?

9. Explain the arguments of malloc( ) function.

10. What is the output of the following code fragment/

```
#define MOON 1
#define SUN 0
main( )
{
#ifdef moon
printf ("This is a MOON\n");
#endif
#ifdef sun
printf("this is a SUN\n");
#endif
}
```

PART B — (5 × 16 = 80 marks)

11. (a) (i) Explain the basic structure of a program in C. (8)

(ii) Draw the flow chart to find the sum of the digits of the given number. (8)

Or

(b) (i) Describe the symbols used for flow chart in detail with an example. (8)

(ii) Write a C Program to find the area of the rectangle. (8)

12. (a) (i) What is the order of precedence and associativity of arithmetic operators? (8)

(ii) Compute the largest of three numbers using conditional operator. (8)

Or

(b) (i) Discuss unary, binary and ternary arithmetic operators with an example. (8)

(ii) Distinguish between the following : (8)

(1) do-while and while loop

(2) break and continue

13. (a) (i) Write a C program to convert a decimal number in to binary. (8)

(ii) Describe the single dimension and multidimensional arrays with an example. (8)

Or

(b) (i) Write a C program to print the following series : 0 1 1 2 3 5 8 13 ... The number of terms should be given by the user. (8)

(ii) Write a C program to store a list of integer numbers in an array and perform the operations to find the maximum, minimum and average value. (8)

14. (a) (i) Write a C program to read a text and print the count of occurrences of letters. (8)

(ii) Explain the storage classes in C with an example. (8)

Or

(b) (i) Explain the difference between 'call by reference' and 'call by value'. (8)

(ii) Describe how to create a simple database program in C language to store a person's details such as name, age, date of birth and address. (8)

15. (a) (i) Explain the functions used for to perform random access to files. (8)

(ii) Differentiate static and dynamic memory allocation? Discuss the built-in functions used for dynamic memory allocation. (8)

Or

(b) (i) Describe the conditional preprocessor directives with an example. (8)

(ii) Write a program to compare two files specified by the user, displaying a message indicating the files are identical or different. (8)