(4)

7. (a) Explain the purpose of using 'Arrays' in C. What do you understand by two dimensional array. **4**

   (b) Write a C program with comments to find the inverse of a given square matrix. **3½**

Unit - IV

8. (a) What kind of information is represented by a pointer variable? How is a pointer variable declared? What is the purpose of the data type included in pointer declaration? **6**

   (b) Write a short note on union. **1½**

9. (a) What is file? Discuss various modes of opening a data file in C. **3**

   (b) What is structure? How does a structure differ from an array? Describe the syntax for defining structure. How can a structure member is processed. **4½**

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B.Sc. (Part-I) Examination, 2015

(New Syllabus)

COMPUTER SCIENCE

Second Paper

(Programming in C)

Time Allowed : Three Hours]   *[Maximum Marks : 50*

Note: Answer question No. 1, which is compulsory and one question from each of the Unit I to IV i.e. five questions in all.

1. (a) Explain the function scanf ( ) alongwith format conversions with examples.

   $2 \times 10 = 20$

   (b) What are enumeration variables? How they are declared in C?

   (c) Explain various unary operators in C.

   (d) Explain the use of '#define' and '# include' with an example for each.

   (e) Determine the value of each of the following logical expressions if a=5, b=10, c=−6.

(2)

(i) a>b && a < c

(ii) (a > b) :: (b = = c)

(iii) (a==c :: b >a)

(iv) ((b > 15) & & (c < 0 :: a > 0))

(f) Explain the difference between break and continue statement of c language.

(g) What is a structure? Explain with an example

(h) Explain the file handling functions :

(i) fopen

(ii) getc

(i) List different format specifiers used in C language.

Unit - I

2. (a) What do you mean by header files? Discuss the utility of header files in C alongwith few commonly used header files. 3½

(b) Discuss the utility of increament and decrement operators with their pre and post versions with examples. 4

3. (a) Discuss the concept of precedence of Arithmetic operators and also explain the utility of Relational operators in C by giving examples of each. 4½

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(3)

(b) By giving example elaborate the structure of C Program. 3

Unit - II

4. Explain the purpose of switch statement. Summarize the syntactic rule associated with the use of switch statement. Compare the use of switch statement with the use of nested if-else statements. Which is more convenient? Explain the use of break and continue statemet.

5. (a) Discuss various types of loop construct in C with proper syntax and suitable examples. 5

(b) Write a program in C to display the following pattern 2½

```
            *
         *     *
      *     *     *
   *     *     *     *
*     *     *     *     *
```

Unit - III

6. Explain the utilization of 'function' in C. What is the purpose of prototyping a function in program? Differentiate between the two methods of passing values to the function with examples. 7½

S-749 **P.T.O.**