

**VI/MAT (xii)(a)**

**2015**

**( 6th Semester )**

**MATHEMATICS**

**Paper : MATH-364A**

**( Computer Programming in C )**

*Full Marks : 55*

*Time : 2½ hours*

**( PART : B—DESCRIPTIVE )**

*( Marks : 35 )*

*The figures in the margin indicate full marks  
for the questions*

1. (a) Explain formatted and unformatted input/output function.

(b) Write notes on keyword and header files.

3+4=7

*Or*

Differentiate between operators and operands. Discuss the commonly used operators in C programming.

7

2. Explain if....else and else...if with flowchart or program. 7

Or

Write a program to differentiate break and continue statements. Explain briefly.

3. Explain storage class in C. 7

Or

What is call by reference? Write a program for swapping two numbers using call by reference.

4. How are two-dimensional arrays allocated in the memory? Explain with suitable example. 7

Or

How can pointer be declared and initialized? Explain the relationship between pointers and functions.

5. Explain the different categories of functions with appropriate example. 7

Or

Write a C program giving a file which contains some integers. From this file create another two files one for odd and second for even numbers. Print the result of both files.

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**2 0 1 5**

**( 6th Semester )**

**MATHEMATICS**

**Paper : MATH-364A**

**( Computer Programming in C )**

**( PART : A—OBJECTIVE )**

**( Marks : 20 )**

*The figures in the margin indicate full marks for the questions*

**SECTION—A**

**( Marks : 10 )**

- 1. Put a Tick (✓) mark against the correct answer in the brackets provided :** **1×10=10**

**(a) The declaration 'unsigned u' indicates**

**(i) u is an unsigned character ( )**

**(ii) u is an unsigned integer ( )**

**(iii) u is a character ( )**

**(iv) None of the above ( )**

( 2 )

(b) The value of  $9 + ((8\%2) - 4 * 2) + 1$  is

(i) -1

( )

(ii) -2

( )

(iii) 1

( )

(iv) 2

( )

(c) In case of ordinary integer variable

(i) the leftmost bit is reserved for sign ( )

(ii) the rightmost bit is reserved for sign ( )

(iii) no bit is reserved for sign ( )

(iv) all bits are reserved for sign ( )

(d) What will be the output of the following C code?

```
#include <stdio.h>
int main ()
{
    int x = 011, i;
    for (i = 0; i < %; i+ = 3)
    {
        printf ("start");
        continue;
        printf ( "end");
    }
    return 0;
}
```

- (i) start start ( )
- (ii) start end start ( )
- (iii) start start end ( )
- (iv) start start start ( )

(e) In C, if you pass an array as an argument to a function, what actually gets passed?

- (i) Value of elements in the array ( )
- (ii) First element of the array ( )
- (iii) Base address of the array ( )
- (iv) Address of the last element of the array ( )

(f) When do we mention the prototype of a function?

(i) Defining ( )

(ii) Declaring ( )

(iii) Prototyping ( )

(iv) Calling ( )

(g) The functions fgets ( ) and fputs( )

(i) read and write strings from or to data files ( )

(ii) reads and write strings from or to input output stream ( )

(iii) read and write records from or to data files ( )

(iv) None of the above ( )

- (h) A file must be opened so that
- (i) the program knows how to access the file ( )
  - (ii) the operating system knows what file to access ( )
  - (iii) communicative areas are established for communicating with the file ( )
  - (iv) None of the above ( )
- (i) What do 'C' and 'V' in command line arguments stand for?
- (i) C means argument control and V means argument vector ( )
  - (ii) C means argument count and V means argument vertex ( )
  - (iii) C means argument count and V means argument vector ( )
  - (iv) C means argument configuration and V means argument visibility ( )
- (j) What is (void\*)?
- (i) Representation of null pointer ( )
  - (ii) Representation of void pointer ( )
  - (iii) Error ( )
  - (iv) Representation of simple pointer ( )

**SECTION—B**

( Marks : 10 )

**2. Answer any five from the following questions : 2×5=10**

(a) What are the four basic data types in C?



(b) What is condition operator?

(c) Briefly explain union.

(d) What are the disadvantages of pointers?

( 10 )

- (e) What is the difference between a keyword and identifier?

Q Write a brief note on typedef.

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