Seat No. : _____

AP-106

May-2016

BCA., Sem.-II

CC-108 : Advanced C Programming

Time : 3 Hours] **[Max. Marks : 70**

1. (A) Which are different categories of user defined function ? Explain any two in depth. **(7)**

OR

(1) Explain recursion. **(4)**

(2) Explain terms : (1) Variable visibility (2) Scope (3) Life time **(3)**

(B) Which are different storage classes ? Explain any two in depth. **(7)**

OR

(1) Explain nested function. **(4)**

(2) Explain terms : (1) Function prototype (2) Function calling (3) Function definition. **(3)**

2. (A) Define structure with its syntax. How structure member can be accessed ? Explain operations on structure members. **(7)**

OR

(1) Write an output for the following code : **(4)**

```
1.
void main()
{
int *p;
char *c;
if (sizeof(p) = = sizeof(c))
        printf("Each type of pointer variable takes same size");
else
        printf("Each type of pointer variable takes different size");
}
2.
void main()
{
        int y=5;
        int*p;
        printf("\n Decrement %d \n Increment %d", – –*p, ++*p);
}
```

(2) Differentiate array of structure and array within structure. **(3)**

(B) Define pointer. Write advantages of pointer. Explain arithmetic operations on pointer variable. **(7)**

OR

(1) Differentiate Structure and union. **(4)**

(2) How can you copy and compare structure variable ? **(3)**

3. (A) Explain malloc() and calloc() functions with prototype. **(7)**

OR

(1) Differentiate pass by value and pass by reference. **(4)**

(2) Explain realloc() and free() functions with prototype. **(3)**

(B) Explain different types of link list. **(7)**

OR

(1) Differentiate Array and Link List. **(4)**

(2) Write syntax for structure of a link list node. **(3)**

4. (A) Explain fopen(), fclose() and fprintf() functions with prototype. **(7)**

OR

Explain error handling functions and its importance in File operations. **(7)**

(B) Explain fseek(), ftell() and rewind functions. **(7)**

OR

Explain macro substitution directives with syntax. **(7)**

5. Attempt following questions. **(14)**

(1) Function declaration statements identifies a function with its

(a) Name (b) Arguments

(c) Data type of return value (d) All of these

(2) Which variable retains its value in between function calls ?

(a) Auto (b) Static

(c) Register (d) Extern

(3) The execution of program starts at ___

(a) main() (b) user defined function

(c) anywhere (d) none of the above

(4) Which operator is used to access structure members with use of pointer ?

(a) -> (b) []

(c) Both of the above (d) None of the above

(5) Memory for the structure is allocated at the time of

(a) Structure declaration (b) Structure variable declaration

(c) Function declaration (d) None of the above

(6) _____ permits sharing of memory among different types of data.

(a) Structure (b) Union

(c) Both of the above (d) None of the above

(7) Link list is used to implement data structures such as _____

(a) Stack (b) Queues

(c) Both of the above (d) None of the above

(8) A link list is a _____

(a) Random access structure

(b) Sequential structure

(c) Both of the above

(d) None of the above

(9) Which function gives the current position of the file ?

(a) fseek() (b) ftell()

(c) rewind() (d) None of these

(10) From which standard stream does C program read data ?

(a) Stdin (b) Stdout

(c) Stderr (d) All of the above

(11) Which function is used to read character in file ?

(a) getc() (b) fgetw()

(c) Both of the above (d) None of the above

(12) The pre-processor directives must be preceded by _____ symbol.

(a) * (b) &

(c) # (d) @

(13) Choose the operator which can be used in the conditional expression of #if directive.

(a) defined (b) sizeof

(c) typecast (d) address

(14) A data structure that can store related information of different data types together is

(a) Array (b) Structure

(c) String (d) None of these

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