

First & Second Semester

(For the candidates admitted during the academic year 2018-2019 to 2021-2022)

Note:

- i. **Part - A** should be answered in OMR sheet within first 40 minutes and OMR sheet should be handed over to hall invigilator at the end of 40 minutes.
- ii. **Part - B** and **Part - C** should be answered in answer booklet.

Time: 3 Hours

Max. Marks: 100

Part - A (20 × 1 Marks = 20 Marks)

Answer All Questions

Marks BL CO

- ii. Write a program for generating the following pattern: [6 Marks]
- ```

#
```
30. a. Illustrate with suitable scenario to explain various types of function prototypes. 12 1 3  
(OR)  
b. Write a program to compare two strings using functions without using predefined string Library.
31. a. Demonstrate a program to read in an array of names to sort them in alphabetical order using array of pointers. 12 1 4  
(OR)  
b. What are the preprocessor directives in C explain with suitable example?
32. a. Generate C code for the student record using pointer to structures. 12 1 5  
(OR)  
b. What is files? Explain the different modes of file.

\* \* \* \* \*

- |    |                                                                                                                                                                                   |                                                                                             |   |   |   |
|----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|---|---|---|
| 1. | Which of them is not a principle of structured programming?<br>(A) Design the program in top-down manner<br>(C) Code the program so that it runs correctly without testing        | (B) Write each program module as a series of control structures<br>(D) Use good programming | 1 | 1 | 1 |
| 2. | Programming language 'FORTRAN' stands for<br>(A) Formula translator<br>(C) Free translator                                                                                        | (B) Formula translation<br>(D) Free translation                                             | 1 | 1 | 1 |
| 3. | '#' symbol is known to be<br>(A) Linker<br>(C) Assembler                                                                                                                          | (B) Compiler<br>(D) Preprocessor directive                                                  | 1 | 1 | 1 |
| 4. | C variable cannot start with<br>(A) An alphabet<br>(C) A special symbol other than underscore                                                                                     | (B) A number<br>(D) Both (b) and (c)                                                        | 1 | 1 | 1 |
| 5. | What will be the final value of x?<br>int x = 4 * 5 / 2 + 9;<br>(A) 6.75<br>(C) 19                                                                                                | (B) 1.85<br>(D) 3                                                                           | 1 | 1 | 2 |
| 6. | _____ requires a label to identify the place where the branch is to be made.<br>(A) switch<br>(C) continue                                                                        | (B) goto<br>(D) break                                                                       | 1 | 1 | 2 |
| 7. | The array elements always stored in a _____ order<br>(A) Sequential<br>(C) Ascending                                                                                              | (B) Random<br>(D) Descending                                                                | 1 | 1 | 2 |
| 8. | Identify the output of the program<br>#include<stdio.h><br>void main(){<br>int value=0;<br>if(value)<br>printf("HI");<br>printf("HELLO");<br>}<br>(A) HI<br>(C) Compilation Error | (B) HELLO<br>(D) HIHELLO                                                                    | 1 | 2 | 3 |

9. Choose correct statements 1 1 2  
 (A) Constant value does not change. A variable value can change according to needs. (B) A constant can change its values. A variable can have one constant value only.  
 (C) There is no restriction on number of values for constants or variables. (D) Constants and Variables cannot be used in a single main function.
10. Identify the output of the program. 1 2 3  

```
#include <stdio.h>
int main()
{
 int j=0;
 printf("%d %d",j,j++);
 return 0;
}
```

 (A) 0 0 (B) 0 1  
 (C) 1 0 (D) 1 1
11. How many number of time the word Hi will be printed on executing the following program 1 2 3  

```
#include<stdio.h>
int main()
{
 printf("Hi");
 main();
}
```

 (A) 1000 (B) infinite  
 (C) compilation error (D) 100
12. An array is initialized as follows 1 1 3  

```
int x[6]={10,20,30};
printf("%d", x[3]);
```

 What will be output?  
 (A) 30 (B) 20  
 (C) 0 (D) Garbage value
13. A pointer variable stores 1 1 4  
 (A) Address of the variable (B) Value of the variable  
 (C) Garbage value (D) Address of the program
14. Which of the following is the correct syntax to send an array as a parameter to function? 1 1 4  
 (A) func(&array); (B) func(#array);  
 (C) func(\*array); (D) func(array[size]);
15. Identify the macro which will return date in the machine? 1 1 4  
 (A) `__DATE__` (B) `__TIME__`  
 (C) `__FILE__` (D) `__STDC__`

16. Identify the actual parameters of the function add() in the following code 1 1 4  

```
#include <stdio.h>
int add(int x,int y);
int main()
{
 int a=100,b=200;
 int c;
 c=add(a,b);
 printf("%d",c);
 return 0;
}
int add(int x,int y){
 int temp;
 temp=x+y;
 return temp;
}
```

 (A) a b (B) x y  
 (C) 0 0 (D) temp

17. The free() function frees the memory state pointed to by a pointer and returns 1 1 5  
 (A) the same pointer (B) the memory address  
 (C) no value (D) an integer value
18. When fopen() is not able to open a file, it returns 1 1 5  
 (A) EOF (B) NULL  
 (C) 0 (D) -10
19. What is the meant by 'a' in the following operation? fptr = fopen("FirstFile.txt", "a"); 1 1 5  
 (A) Attach (B) Append  
 (C) Apprehend (D) Add
20. Which of the following is true about FILE \*fp 1 1 5  
 (A) FILE is a keyword in C for representing files and fp is a variable of FILE type.  
 (B) FILE is a stream  
 (C) FILE is a buffered stream (D) FILE is a structure and fp is a pointer to the structure of FILE type

### Part - B (5 × 4 Marks = 20 Marks)

Answer any 5 Questions

21. Point out the error in the program and justify 4 2 1  

```
f(int a, int b)
{
 int a;
 a=20;
 return a;
}
```
22. Evaluate the expression 4 2 2  
 Given A=5,B=10,C=29,D=4  
 Expression = (A\*6)+(B/5)+(C-48/D-2)
23. Write a program to concatenate two strings using library functions. 4 2 3
24. Differentiate arrays and structures. 4 2 4
25. Write a C Program to Access Array Elements using Pointer 4 1 5
26. What is function pointer? How to initialize and call function pointer. 4 1 5