## UNIT 4 FILE HANDLING

1. Why files are needed?
2. What are the different modes of operations performed on a file using fopen() function in C?
3. What are the 3 operations performed on the file?
4. Write a C program to copy the contents from one file to another file
5. What does the following segment of code do
   fp=fopen(“abc.txt”, “w”);
   fprintf(fp, “hello world!”);
6. Write a C program to read and display a text from the file.
7. _____ function set the pointer position anywhere in the data file
8. Write a C program to append data in to a file.
9. Suppose we have these statements in a program
   FILE *fp1, *fp2; char ch;
   fp1 = fopen ("file1", "r"); fp2 = fopen ("file2", "w");
   Assuming that both files opened successfully, supply the missing arguments in the following function calls:
   a) fscanf (___, "%c", &ch); Ans: fp1
   b) fprintf (___, "%c\n", ch); Ans: fp2
   c) fclose (___); /* close the file for writing */ Ans: fp2
10. Based on the statement below:
    fp = fopen ("names.dat", "w");
    a) What is the statement to declare this file pointer?
    b) Write a statement that writes the string "Rock my heart" to the file.
    c) Write a statement that closes the file.
11. What does this program do?

```
int main()
{
FILE *fp;
char str[80];
fp = fopen ("file.txt", "w");
if (fp == NULL)
{
printf("Error opening file.\n");
return 1;
}
do
{
printf ("Enter a string (ENTER to quit): ");
gets (str);
 (str, "\n");
fputs (str,fp);
strcat
} while (*str != '\n');
return 0;
}
```

12. Write a C program to display the contents of the file in reverse order.
13. Write a C program to count no.of characters, spaces, lines, words of a file.

14. Write a C Program to check whether a file can be opened for reading.
15. The following loop appears in fcopy.c program.
    while((ch=getc(source_fp)) !=EOF)
    putc(ch, dest_fp);
    suppose that we neglected to put parentheses around ch=getc(source_fp):
    while(ch=getc(source_fp) !=EOF)
    putc(ch, dest_fp);
    would the program compile without any error? If so, what would the program do when it's run.
16. Find the error in the following function and show how to fix it.
    int count_periods(const char *filename)
    {
    FILE *fp;
    int n=0;
    if((fp = fopen(filename, "r"))!= NULL) {
    while (fgetc(fp) != EOF)
    if (fgetc(fp) == '.')
    n++;
    fclose(fp);
    }
    return(n);
    }
17. Write short notes on fseek(),ftell(),rewind(),fread(),fprintf(),foef() and ferror()
18. The function used for writing a character to a file is _____
19. The mode used for opening an existing file for reading & writing a text stream is ____
20. When a program is terminated; all the files used by it are automatically closed. Why is it necessary to close a file during execution of program? Discuss.
21. Explain perror() and strerror().
22. Distinguish between the following functions.
    a) getc() and getchar().
    b) scanf() and fscanf().
    c) printf() and fprintf().
    d) feof() and ferror().
23. Identify the difference between append and write mode.
24. Write a C program to read name and marks of n number of students from user and store them in a file.
25. Write a C program to write all the members of an array of structures to a file using fwrite(). Read the array from the file and display on the screen.
26. What is searching?
27. Explain the working of binary search algorithm.
28. Write pseudo code to search the array in the reverse order, returning 0 when the element is not found.
29. Write a C program to implement recursive binary search.
30. What is selection sort?
31. Perform Selection sort the following array. Show the array after each swap that takes place. { 30, 60, 20, 50, 40, 10 }.
32. Explain the working of iterative binary search method.
33. What is the difference between Function Pointer and Callback Functions?

34. The given data in matches.csv is sorted as per the year. Write a function to sort the data using city and write it to a new csv file.