

2020

COMPUTER SCIENCE
(Theory)

Full Marks : 70

Pass Marks : 21

Time : Three hours

All the questions are compulsory.

The figures in the right margin indicate full marks for the questions.

Select the correct answers from each of the following (1 to 5) and rewrite it.

1. Which of the following scheduling technique is designed specially for the time sharing 1
 - A. First come first scheduling
 - B. Round robin scheduling
 - C. Shortest job first scheduling
 - D. Priority scheduling

2. In a programming debugging technique, the program is debugged by inserting print statement at important places, then the output becomes too large to be handled. The technique is 1
 - A. Snapshot
 - B. Trace
 - C. Memory dump
 - D. Driver program

P.T.O.

- 3 Which of the following statements are define in the function exit ()? 1
- A. Break, goto, return
 - B. Continue, goto return
 - C. Break, continue, return
 - D. All of the above
- 4 The string function used for combining two strings into a single string is done by – 1
- A. Strcpy ()
 - B. Strcat ()
 - C. Strlen ()
 - D. Strcmp ()
- 5 What type of scanner is going to use for checking answers of multiple choice type questions by using a special type of answer script ? 1
- A. OMR
 - B. OCR
 - C. MICR
 - D. None of the above

Answers Question Nos. (6 to 15) in a word / group of words / in a sentence.

6. Write the MS DOS command to display the content of the file "BIODATA.TXT". 1
7. Why do we are using scroll bar ? 1
8. Draw a decision structure. 1

9. Define self documentation. 1
10. Why do "User's Guide" is used? 1
11. What is the output of the following program segment? 1
- ```
int a = 25;
a++;
cout<<"\na =:"<<a;
```
12. Differentiate between deterministic and non-deterministic loop. 1
13. What is function prototype? 1
14. What are ASCII and ISCII? 1
15. Write two's complement of binary 1011 in 8 bits. 1
- Question Nos. 16 to 25 are short answer type. Answer them in about 40 words.*
16. How many bits are there in a file of movie whose size is 2 GB? 2
17. Differentiate between compiler and interpreter. 2
18. Differentiate between syntax error and logical error. 2
19. Draw a flowchart of swapping of values of two variables. 2
20. What are null statement and compound statement? 2
21. Give the advantage and disadvantage of using conditional operator over if else statement. 2
22. Develop a C++ program to give the following output format : 2
- ```
1
1 2
1 2 3
1 2 3 4
1 2 3 4 5
```
23. Convert $(AB4F)_{16}$ into its equivalent decimal number. 2

24. Differentiate between RAM and ROM in a computer. 2

25. What are the L1 cache and L2 cache ? 2

Give answers of the following questions (26 –30).

26. Write the rules that govern for naming of DOS file. 3

27. Give the differences between a keyword and an identifier. 3

28. What is comment? Explain the methods to mark comment. 3

29. Write a C++ program to find the biggest among three positive numbers. 3

30. Write a C++ program to check whether a given number is odd or even. 3

Give answers of the following questions (31 –34).

31. What are the advantages of algorithm? Develop an algorithm to count positive, negative and zero numbers from a list of numbers. 5

32. Write a C++ program to transpose a given matrix. 5

33. Write a C++ program that generates the factorial of a given positive integer using a function. 5

34. How will you classify printers? Discuss the various types of printers with appropriate examples. 5