

B.TECH. CSE SEMESTER – II

2020

WORKSHEET-I

1. Draw the block diagram of a digital computer system and explain each functional unit in brief.
2. Write the basic operations performed by a computer system.
3. Explain the classification of computers.
4. Discuss the evolution of computers through various generations with a focus on hardware, software and memory technology.
5. What is memory hierarchy? Differentiate between Primary and Secondary storage. List out the key properties used to characterize and evaluate storage units of the computer system.
6. Differentiate between static RAM and dynamic RAM.
7. Define software. Discuss different classes of software with representative example of each class.
8. What is an Operating System?
9. Write the basic functions of an Operating system.
10. What is the basic difference between Loader and Linker?
11. What are the limitations of Low Level Language?
12. Write the features and limitations of following operating systems-
 - DOS
 - LINUX
 - WINDOS
 - ANDROID
13. Explain in brief about-
 - Compiler
 - Interpreter
 - Assembler
 - Loader
 - Linker
14. Differentiate between compiler and interpreter.
15. Write short note on following-
 - Machine Language
 - Assembly Language
 - High Level Language

16. Differentiate between Machine language and Assembly Language.

17. Write short note on following-

- Monolithic Programming
- Procedural Programming
- Structured Programming
- Object Oriented Programming

18. Define Algorithm. What are the basic characteristics of an algorithm? Write an algorithm to calculate the area of triangle. Given its length and width.

19. Write an algorithm that swaps values of two variables using a third variable.

20. Draw the symbols with their meaning that we use in flowchart. Draw a flowchart to find the factorial of given positive integer N.

21. Three integer numbers are input through the keyboard. Write an algorithm and flowchart to find the out the largest number.

22. Find the value of radix (r) in the equation given below:

- $(211)_r = (152)_8$
- $(144)_8 = (121)_r$
- $(2010)_3 = (57)_r$
- $(33)_r = (11110)_2$

23. Convert the following-

- $(2017)_{10} = (\dots)_2$
- $(365)_8 = (\dots)_{16}$
- $(1947)_{10} = (\dots)_{16}$
- $(B9C)_{16} = (\dots)_8$
- $(110101110)_2 = (\dots)_{10}$
- $(2015.16)_8 = (\dots)_{10}$
- $(BACE.2019)_{16} = (\dots)_8$
- $(110101.01)_2 = (\dots)_{10}$
- $(1950.47)_{10} = (\dots)_{16}$
- $(DEAD.FEE)_{16} = (\dots)_2$
- $(365.24)_8 = (\dots)_{10}$
- $(ABCD.61)_{16} = (\dots)_2$
- $(3A.2C)_{16} = (\dots)_8$
- $(2018)_{10} = (\dots)_2$
- $(265)_8 = (\dots)_{16}$