

Vidya Vikas Mandal's
Shree Damodar College of Commerce & Economics, Margao-Goa
FYB.Voc.(ST), Semester-I, Semester End Examination November 2023
Fundamentals of Computers & Programming (STG 101)

Duration: 2 hrs

Max Marks: 60

Instructions:

- 1) Start each question on a fresh page.
- 2) Figures to the right indicate maximum marks.
- 3) All Questions are compulsory, however internal choice is available.

Q.1 Answer ANY 5 of the following:**5X2=10**

- a) Define Information Technology.
- b) What is ASCII?
- c) Give an example of a system software.
- d) Define a Compiler.
- e) What is a pseudocode?
- f) Mention the purpose of the diamond box in a flowchart?
- g) Find the one's complement of 10101010.

Q.2. Answer ANY 5 of the following :**5x2=10**

- a) Convert Binary system number 10101010 into Hexadecimal.
- b) Define Binary Multiplication.
- c) What is Von Neumann Architecture?
- d) Define Cache Memory.
- e) List the purpose of the wait() system call .
- f) Define Disk Scheduling in Storage Management.
- g) What are sectors in a Disk Structure?

Q.3 Answer the following :

A) Design an algorithm for finding the average of three numbers and print the average only if the average is smaller than 15.

OR**(5)**

B) Draw a flowchart to receive the age of a person as input and print if the person is eligible to vote or not. (Eligible Age for voting is 18).

C) Explain five applications of Information Technology.

(5)

Q.4. Answer the following :

A) Illustrate the concept of Binary Number System with two examples of your own.

OR (5)

B) Convert 10101010 and 11001100 in Binary Number System into Octal, Decimal and Hexadecimal number system.

C) Specify two types of errors in programming with an example of each. (5)

Q.5 Answer the following:

A) Elaborate on any five functions of the operating system.

OR (5)

B) Describe the Tree Structured directory with the help of a diagram.

**C) Perform step by step Binary addition on the following numbers : (5)
00111111 and 00111000 and convert the final answer into Decimal number system.**

Q.6 Answer the following:

A) Describe the role of PC(Program Counter), MAR and MBR with the help of an example.

OR (5)

B) Explain one advantage and one disadvantage of any two types of memory.

C) Differentiate between a Kernel and an Operating system.(5 points) (5)
