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CIT-001

**CERTIFICATE IN INFORMATION
TECHNOLOGY (CIT)**

Term-End Examination

December, 2023

**CIT-001 : FUNDAMENTALS OF COMPUTER
SYSTEMS**

Time : 2 Hours

Maximum Marks : 50

Weightage : 75%

Note : (i) *Question No. 1 and 2 are compulsory.*

(ii) *Attempt any **three** questions from the rest.*

1. There are ten True/False type questions below
(Write correct answer in your answer sheet) :

10×1=10

- (a) Primary memory is faster than secondary memory.
- (b) Cache memory is made of DRAM.
- (c) PROM allows its entire or selected content to be electrically erased.
- (d) CD-R can be written only once and can be read as many times.

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- (e) In half duplex mode, there must be two communication channels between the sender and the receiver.
 - (f) Hub broadcasts a message to every device on the network.
 - (g) Gateway provides security to the network.
 - (h) We can have only one function in a C program.
 - (i) Header files are used to store program's source code.
 - (j) The for loop and while loop are pre-test loop.
2. (a) Draw a flow chart and then write a program in 'C' language to find the factorial of a number entered by the user. 6
- (b) Compare system software and application softwares. Give examples of each. 4
3. (a) Compare LAN, WAN and MAN. Give characteristics of each, with suitable example. 6
- (b) What is Database ? Explain database development life cycle. 4
4. (a) Briefly discuss the functioning of the following : 6
- (i) Hub
 - (ii) Switch
 - (iii) Router

- (b) Compare Primary and Secondary Memories. Discuss various types of main memories. 4
5. (a) Discuss the working of central processing unit with the help of a diagram. Explain its various components. 6
- (b) Compare Distributed operating system with Conventional operating system. List advantages of Distributed operating systems. 4
6. (a) Explain the process of Encryption and Authentication in public key cryptography. 5
- (b) Describe the functioning of the following operators of C language with suitable example : 5
- (i) &&
 - (ii) ||
||
 - (iii) ~
 - (iv) ++
 - (v) --