

**CERTIFICATE IN INFORMATION
TECHNOLOGY (CIT)**

Term-End Examination

June, 2021

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

Time : 2 hours

Maximum Marks : 50

(Weightage : 75%)

Note : *There are **two** sections in this paper, Section A and Section B. All the questions from Section A are **compulsory**. Attempt any **three** questions from Section B.*

SECTION A

1. (a) Computer word size is a multiple of $10 \times 1 = 10$
- (i) 16 bits
 - (ii) 4 bits
 - (iii) 1024 bits
 - (iv) 10 bits
- (b) In computer terminology, OCR stands for
- (i) Optical Character Reader
 - (ii) Optical Card Reader
 - (iii) Office Cash Receiver
 - (iv) Online Computer Retrieval

- (c) One Kilobyte is _____ bytes.
- (i) 1000
 - (ii) 512
 - (iii) 1020×1020
 - (iv) 1024
- (d) Which of the following is **not** a mode of communication ?
- (i) Simplex mode
 - (ii) Half-duplex mode
 - (iii) Temporary mode
 - (iv) Full-duplex mode
- (e) The process of keeping addresses in memory for future use is called
- (i) Routing
 - (ii) Resolving
 - (iii) Caching
 - (iv) None of the above
- (f) The server on the internet is also known as a
- (i) Hub
 - (ii) Host
 - (iii) Gateway
 - (iv) Repeater
- (g) The first network that planted the seeds of internet was
- (i) ARPANET
 - (ii) NSFNET
 - (iii) VNet
 - (iv) Both (i) and (ii)

- (h) Which of the following protocols is used for WWW ?
- (i) ftp
 - (ii) http
 - (iii) W3
 - (iv) All of the above
- (i) Who is the father of C language ?
- (i) Bjarne Stroustrup
 - (ii) James A Gosling
 - (iii) Dennis Ritchie
 - (iv) Dr. E.F. Codd
- (j) A C variable **cannot** start with
- (i) A number
 - (ii) A special symbol other than underscore
 - (iii) Both of the above
 - (iv) An alphabet

2. (a) Explain how the CPU and Memory work together for data processing. 4
- (b) Differentiate between LAN, MAN and WAN. 6

SECTION B

3. (a) What are the considerations for choosing a Topology ? List advantages and disadvantages of Mesh topology. 5
- (b) Show the processes of encryption and authentication in public key cryptography, with explanation. 5
4. (a) Write a C Program to generate prime numbers between 1 to 50. 5
- (b) Draw a flowchart to convert temperature from Fahrenheit to Celsius. 5
5. (a) Define Communication Network, with a suitable example. 5
- (b) Differentiate between a Bridge and a Router. 5
6. (a) Write down the different types of policies for information security. 5
- (b) How can you prevent your system from virus attacks ? Explain. 5
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