

Roll No.

Total Pages : 3

311101

January 2023
BCA 1st SEMESTER
Computer and Programming Fundamentals
(BCA-17-101)

Time : 3 Hours]

[Max. Marks : 75

Instructions :

1. *It is compulsory to answer all the questions (1.5 marks each) of Part-A in short.*
2. *Answer any four questions from Part-B in detail.*
3. *Different sub-parts of a question are to be attempted adjacent to each other.*

PART-A

1. (a) Give the full form of the following :
EEPROM, SMPS, ASCII. (1.5)
- (b) A sine wave completes one cycle in 100 micro seconds.
What is its frequency? (1.5)
- (c) What is a Protocol? Name any *four* protocols. (1.5)
- (d) Define the following : Amplitude, Time Period and
Frequency. (1.5)
- (e) What are the characteristics of a computer system?
(1.5)

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- (f) What is Cache memory? (1.5)
- (g) What is the difference between Algorithm and Flow chart? (1.5)
- (h) Differentiate between Primary memory and secondary memory. (1.5)
- (i) What is the difference between internal and external documentation? (1.5)
- (j) Differentiate between guided and unguided transmission media. (1.5)

PART-B

- 2. (a) Discuss in detail the various functional components of a computer system with the help of the block diagram. (9)
- (b) Give the classification of computers. (6)

- 3. (a) What are the various attributes of a good program. (6)
- (b) Differentiate between the following :
 - (i) Application Software and System Software.
 - (ii) Problem Oriented and Procedure Oriented Programming Languages.
 - (iii) Assembler, Compiler, Interpreter. (9)

- 4. (a) Draw a flow chart to print N terms of a Fibonacci series. (6)

- (b) Explain how an operating system acts as a resource manager and resource allocator. What are the various tasks performed by an Operating System? (9)

- 5. (a) Define Computer Virus. What are different types of Computer viruses? What are characteristics of computer viruses? How will you protect your computer system from viruses? (9)
- (b) What is network topology? Discuss various network topologies with their advantages and disadvantages. (6)

- 6. (a) Discuss OSI model in detail. (9)
- (b) What is a programming language? Discuss in detail the various categories of computer languages. (6)

- 7. Write note on the following :
 - (i) Modes of data transmission.
 - (ii) Types of errors occur during programming.
 - (iii) LAN, MAN and WAN.
 - (iv) Applications of Internet and Intranet.
 - (v) Modular approach of programming. (15)