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Roll No. ....

ID—4036

**B.C.A. EXAMINATION, 2022**

(First Semester)

**COMPUTER AND PROGRAMMING  
FUNDAMENTALS**

Code : BCA-101

Time : 3 Hours

Maximum Marks : 80

Before answering the question-paper candidates should ensure that they have been supplied to correct and complete question-paper. No complaint, in this regard, will be entertained after the examination.

**Note :** Q. No. 1 is compulsory. Attempt any *one* question from each Unit. All questions carry equal marks.

**Unit I**

- 1/ (a) What do you understand by data communication ?

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- (b) What is real time operating system ?  
(c) What is different types of error in programming ?  
(d) Differentiate between primary memory and secondary memory  
(e) What do you ENIAC, EDSAC, EDVAC and UNIVAC stand for ?  
(f) What are pseudo codes ?  
(g) Differentiate between RAM and ROM  
(h) Differentiate between LAN ,WAN and MAN.

**Unit II**

2. (a) Discuss the importance feature of various generation of computer. Also give some examples of computer belonging to each generation  
(b) Explain various components of Digital computer system with a Block diagram.

3/ Explain the following :

- (i) Virtual memory

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- (ii) Cache memory
- (iii) Optical Disk
- (iv) Magnetic disk.

### Unit III

4. (a) What is Operating system ? Explain the various function of operating system.
- (b) Differentiate between single user and multiuser operating system and Multiprogramming and multiprocessing operating system.
5. (a) What do you mean by software ? Explain different types of software
- (b) Explain the following :
  - (i) Multitasking
  - (ii) Time sharing

### Unit IV

6. (a) Describe, what is meant by 4GL and its important ? How is it different from 3GL ?

- (b) Explain the following :
  - (i) Debugging
  - (ii) Documentation

7. Explain the following :

- (a) What do you mean by computer language ? Classify different type of computer language.
- (b) What is structure programming ? Explain the advantage and disadvantage of it.

### Unit V

8. (a) What is Network Topology ? What are the various types of network topology ? Discuss benefit and limitation of these topologies over one another.
- (b) Describe different mode of data
9. (a) List and describe the various types of Modem
- (b) What is Internet ? What are the hardware and software requirements of internet ?