

**Professional Course Examination (Odd), 2023**

( 1st Semester )

**BACHELOR OF COMPUTER APPLICATIONS**

Course No. : BCA/1/CC/03

**( Introduction to Information Technology )**

Full Marks : 75

Time : 3 hours

*The figures in the margin indicate full marks for the questions***( PART : A—OBJECTIVE )**

( Marks : 25 )

**SECTION—I**

( Marks : 15 )

**A.** Tick (✓) the correct answer in the brackets provided : 1×10=10

1. In computer terminology, information means
  - (a) alphanumeric data ( )
  - (b) program ( )
  - (c) data in more useful or intelligible form ( )
  - (d) raw data ( )
2. Which of the following memories uses flip-flop component?
  - (a) DRAM ( )
  - (b) SRAM ( )
  - (c) ROM ( )
  - (d) SDRAM ( )
3. If the processed data output is recorded on a removable storage such as pen-drive or CDROM, it is called
  - (a) a hard copy ( )
  - (b) a soft copy ( )
  - (c) a file ( )
  - (d) a document ( )

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4. A standard to communicate between a computer and a synthesizer is called
- (a) MIDI ( ) (b) DIMI ( )  
(c) IDMI ( ) (d) MIID ( )
5. The precise notation used to express an algorithm is called
- (a) a flowchart ( )  
(b) a computer program ( )  
(c) a software ( )  
(d) a programming language ( )
6. Which of the following is not a non-text database?
- (a) Picture database ( )  
(b) Music database ( )  
(c) Video database ( )  
(d) Book database ( )
7. A communication channel that is used to send the data by pulses of light, is
- (a) air ( ) (b) twisted pair cable ( )  
(c) coaxial cable ( ) (d) optical fiber ( )
8. The total number of connecting lines required for  $n$ -nodes of completely connected network topology is
- (a)  $(n-1)/2$  ( ) (b)  $(n(n-1))/2$  ( )  
(c)  $n/2$  ( ) (d)  $(n-1)$  ( )
9. Set of rules for computers to retrieve textual data from remote servers is called
- (a) WWW ( ) (b) E-mail ( )  
(c) HTTP ( ) (d) URL ( )
10. The copyright provides which of the following rights to the author?
- (a) To prepare a derivative work based on the original work ( )  
(b) To give a performance based on the work if it is a drama ( )  
(c) To exhibit the work if it is a work of art ( )  
(d) All of the above ( )

**B.** State whether the following statements are *True (T)* or *False (F)* by putting a Tick (✓) mark : 1×5=5

1. The computer main memory is an external memory.

( T / F )

2. System software that converts source code to object code is called language processor.

( T / F )

3. IPv6 provides 256 bits for addresses.

( T / F )

4. A collection of related data having a similar purpose is called a database.

( T / F )

5. MS-Office is a public domain software.

( T / F )

#### SECTION—II

( Marks : 10 )

**C.** Answer the following questions : 2×5=10

1. (a) What is data storage?

**OR**

(b) What is the difference between data and information?

2. (a) What do you mean by aspect ratio?

**OR**

(b) What is system software? Give example.

3. (a) What are hardcopy and softcopy?

**OR**

(b) What is boot strap?

4. (a) What is computer network topology?

**OR**

(b) What are modulation and demodulation?

5. (a) What do you mean by WWW?

**OR**

- (b) What is Intellectual Property Right?

**( PART : B—DESCRIPTIVE )**

( Marks : 50 )

1. (a) What is data processing? Explain the various steps in data processing with a suitable diagram. 2+8=10

**OR**

- (b) Explain the basic functional component of computer system with a suitable diagram. 10

2. (a) Explain the main working principle of Liquid Crystal Display (LCD). 5  
(b) What is output device? Explain the main classification of printers. 5

**OR**

- (c) Distinguish among multiprogramming, multitasking, multiprocessing, multithreading and time-sharing systems. 5

- (d) Define the following : 5  
(i) Algorithm  
(ii) Flowchart  
(iii) Machine language  
(iv) High-level language  
(v) Compiler

3. (a) What is Relational Database Management System (RDBMS)? Discuss in brief the structure of database with a suitable example. 2+8=10

**OR**

- (b) What are the major functions of an operating system? 5

- (c) Define the following : 5  
(i) Archiving database  
(ii) Database tuple  
(iii) Database field  
(iv) Data dictionary  
(v) Data normalization

4. (a) What is communication channel? Explain the data transmission modes of data communication with a suitable diagram. 2+8=10

**OR**

- (b) What is baud rate? What are the various transmission media or channels? 2+8=10

5. (a) Explain any three Internet services. 3

- (b) Explain the different layers of an OSI model. 7

**OR**

- (c) What are the three types of intellectual property? 5

- (d) What are the privacy, security and integrity of information? 5

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