

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 ()

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

★ ★ ★