

2015

(1st Semester)

BACHELOR OF COMPUTER APPLICATION

Paper No. : BCA-103

(New Course)

(Introduction to Information Technology)

Full Marks : 75

Time : 3 hours

(PART : B—DESCRIPTIVE)

(Marks : 50)

*The figures in the margin indicate full marks
for the questions*

1. (a) Define a computer. Write the characteristics of computer. 4
- (b) Describe the classification of computers based on size and type. 6
- Or
- (c) What is secondary storage? How does it differ from a primary storage? 4
- (d) What is magnetic disk? Explain sequential access and random access storage devices. 6

2. (a) What is machine language? Differentiate between compiler and interpreter.
- (b) What is decision table? Explain the various basic flowchart symbols and their functions.

Or

- (c) What is flowchart? Describe the advantages of flowcharting.
- (d) What is pseudocode? Write the limitations of pseudocode.
3. (a) What is time-sharing? List some advantages of time sharing system.
- (b) Describe different types of operating system depending on their capabilities of processing.

Or

- (c) What is multithreading? Differentiate between multitasking and multiprocessing.
- (d) Define a computer virus with examples. Write the characteristics of computer virus.
4. (a) What is communication system? Explain the different modes of data transmission.
- (b) What is transmission media? Explain any two types of wired/guided transmission media.

Or

- (c) Describe the concept of OSI model of network architecture with functions of each layer. 7
- (b) What do you mean by distributed computing system? 3
5. (a) What is IP address? Explain different classes of IP address. 6
- (b) What is Web browser? Differentiate between intranet and extranet. 4
- Or
- (c) What is Internet? Write the impacts of Internet to society. 5
- (d) What is WWW? Write the current strategic uses of the Internet. 5

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BACHELOR OF COMPUTER APPLICATION

Paper No. : BCA-103

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(PART : A—OBJECTIVE)

(Marks : 25)

The figures in the margin indicate full marks for the questions

SECTION—I

(Marks : 15)

I. Tick (✓) the correct answer from the following in the brackets provided : 1×10=10

1. In half-duplex transmission, data can be transmitted only in

- (a) one direction ()
- (b) both directions ()
- (c) both directions simultaneously ()
- (d) All of the above ()

2. A software that searched through a database on Web page for specific information is

(a) Web browser ()

(b) Web server ()

(c) search engine ()

(d) WWW ()

3. Which of the following devices operates at network layer of the OSI model?

(a) Bridges ()

(b) Routers ()

(c) Gateways ()

(d) Hubs ()

4. Which of the following is unguided transmission media?

(a) Microwave ()

(b) Radiowave ()

(c) Infrared ()

(d) All of the above ()

5. The device which converts digital signal into analog signal and reverse is called

- (a) modem ()
- (b) modulation ()
- (c) demodulation ()
- (d) amplifier ()

6. Which of the following years is fourth-generation period?

- (a) 1975-1988 ()
- (b) 1976-1989 ()
- (c) 1975-1989 ()
- (d) 1974-1989 ()

7. The amount of work that a system is able to do per unit time is

- (a) throughput ()
- (b) turnaround time ()
- (c) response time ()
- (d) execution time ()

8. Which of the following is not a main function of modern operating system?

- (a) Command interpreter ()
- (b) Memory management ()
- (c) File management ()
- (d) None of the above ()

9. The time required to position the read/write head over the desire track/cylinder is called

- (a) Latency ()
- (b) Seek time ()
- (c) Access time ()
- (d) Transfer rate ()

10. Satellite communications use

- (a) microwave ()
- (b) optical fibers ()
- (c) infrared ()
- (d) coaxial cable ()

II. State whether the following statements True (T) or False (F) by putting a tick (✓) mark : 1×5=5

1. Synchronous transmission is more efficient than asynchronous transmission.

(T / F)

2. The actual URL is a set of four numbers separated by periods.

(T / F)

3. The OSI model provides a conceptual framework for communication between devices.

(T / F)

4. The function of the DNS protocol is mapping user-friendly names to IP addresses.

(T / F)

5. Attenuation refers to mixed of energy as signal propagates outwards.

(T / F)

SECTION—II

(Marks : 10)

III. Answer the following questions :

2×5=10

1. What is ROM? Write the different types of ROM.

2. Differentiate between input device and output device.

3. What is search engine?

4. What is computer network? Write the different types of computer network.

III. Answer the following questions :

2×5=10

1. What is ROM? Write the different types of ROM.

3. What is search engine?

5. What are the layers in TCP/IP model of network architecture?
