

Professional Course Examination, January 2021

(1st Semester)

BACHELOR OF COMPUTER APPLICATIONS

(Introduction to Information Technology)

(Revised)

Full Marks : 75

Time : 3 hours

(PART : A- OBJECTIVE)

The figures in the margin indicate full marks for the questions

SECTION-A

(Marks : 15)

1. Tick (✓) the correct answer in the brackets provided :

(1x10=10)

(a) Every piece of data in a computer is stored as:

- (i) Number
- (ii) Character
- (iii) Program
- (iv) Instruction

(b) In a computer, the execution of instruction takes place in:

- (i) CPU
- (ii) ALU
- (iii) CU
- (iv) Memory

(c) The processor employed in a mobile phone for data processing is

- (i) Microprocessor
- (ii) Microcontroller
- (iii) Digital Signal Processor
- (iv) Mobile processor

- (d) A laser printer is an example of a/an
- (i) character printer
 - (ii) line printer
 - (iii) impact printer
 - (iv) page printer
- (e) Which one is not a scripting language?
- (i) Visual Basic
 - (ii) Java
 - (iii) Python
 - (iv) Perl
- (f) The procedure used to organize a set of relations in a database is called.
- (i) DBMS
 - (ii) RDBMS
 - (iii) Normalization
 - (iv) SQL
- (g) The communication channel used by the unguided media is
- (i) Air
 - (ii) Twisted pair cable
 - (iii) Coaxial cable
 - (iv) Optical fiber
- (h) Hardware device that allows a computer to be connected to a network, both functionally and physically is called
- (i) Port
 - (ii) Switch
 - (iii) NIC
 - (iv) Modem
- (i) It is operates at network layer of the OSI model.
- (i) Bridges
 - (ii) Routers
 - (iii) Gateways
 - (iv) Hub

- (j) An ISP which offer internet access via other ISP service is
- (i) Access provider
 - (ii) Hosting ISP
 - (iii) Virtual ISP
 - (iv) Mailbox provider

2. State whether the following statement are *True (T)* or *False (F)* by putting a Tick (✓) mark in the brackets provided: **(1x5=5)**

- (a) The basic unit to represent text, pictures, etc of the monitor screen is called pixel. (T/F)
- (b) An Assembly language is machine dependent language. (T/F)
- (c) A collection of related data that is used in an application is called a record. (T/F)
- (d) IPv4 provides 128 bits for addresses. (T/F)
- (e) Individual networks connected to the internet need not be identical. (T/F)

SECTION-B

(Marks : 10)

Answer the following questions : **(2x5=10)**

1. (a) What is the difference between data and information?
Or
(b) What is cache memory?
2. (a) What do you meant by aspect ratio? How do you measure the size of monitor screen?
Or
(b) What is an Operating system? Give two examples of system software.
3. (a) What is computer hardware and software?
Or
(b) What is a tuple? Is it the same as a field?
4. (a) What is a network topology? Mention four topologies.
(b) What is the difference between analog signal and digital signal?
5. (a) What is an internet? Name some of the Internet Service Provider.
Or

(b) What is data security?

(Part : B-DESCRIPTIVE)

(Marks : 50)

The figures in the margin indicate full marks for the questions

1. (a) Explain three physical devices used as memory cells in details. (10)

Or

(b) Explain the CPU execution cycle of an instruction giving a suitable diagram. (10)

2. (a) What is an output device? Explain the main principle of operation of LCD. (5)

(b) What is line printer? Explain the function of Laser printer. (5)

Or

(c) What is programming language? Distinguish between multiprogramming, multitasking, multiprocessing, multithreading and time sharing operating system. (2+8=10)

3. (a) What is Database Management System(DBMS)? What is RDBMS? Discuss in brief the structure of database with a suitable example (10)

Or

(b) Explain the major functions of an Operating System. (5)

(c) Explain in brief the archiving database. (5)

4. (a) Explain the different three transmission mode of data communication. (5)

(b) Explain three types of Networks? (5)

Or

(c) What is TCP/IP? Explain the different layers of an TCP/IP model. (2+8=10)

5. (a) Explain any five internet services. (10)

Or

(b) What do you mean by an Intellectual Property Rights? What are the three types of intellectual property? (6)

(c) Write short note on careers in Information Technology. (4)

*****BCA/1/CC/03*****