

**2014**

**( 1st Semester )**

**BACHELOR OF COMPUTER APPLICATION**

**Paper No. : BCA-103**

**( Computer Fundamentals and PC Software )**

*Full Marks : 75*

*Time : 3 hours*

**( PART : B—DESCRIPTIVE )**

**( Marks : 50 )**

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

1. (a) What do you mean by digital computer?  
Explain the characteristic feature of  
second-generation computer. 5
- (b) Explain the basic structure of computer  
organization with a neat diagram. 5

Or

(c) What is compiler? Explain how it differs from interpreter. 4

(d) What are secondary storage devices? How does direct access differ from sequential access in memory read/write operation? 6

2. (a) Convert the following :  $1 \times 5 = 5$

(i)  $(6758)_8 = ?$

(ii)  $(101101101)_2 = ?_{16}$

(iii)  $(4706)_8 = ?_{10}$

(iv)  $(545)_6 = ?_4$

(v)  $(127.54)_8 = ?_{10}$

(b) Explain how microprocessor determines the performance of a computer. Briefly describe the different types of processor. 5

Or

(c) Explain the memory organization operates in a computer with necessary diagram. 6

(d) What do you mean by application software? Explain the difference between word processor and spreadsheet.  $1+3=4$

3. (a) Explain the working operation of optical disk with neat diagram. 5

(b) Explain the difference between mainframe computer and super-computer. 5

Or

(c) What do you mean by operating system? Explain the different functions of operating system. 6

(d) Write notes on the following : 2+2=4

(i) Laser printer

(ii) Digitizer

4. (a) What is magnetic disk? Explain how data are stored and organized in magnetic disk. 2+4=6

(b) Explain how control unit and arithmetic logic unit coordinate the working operation of a computer. 4

Or

(c) What is high-level programming language? Explain the working operation of C programming language with example. 2+4=6

( Turn Over )

(d) Write notes on the following :  $2+2=4$

(i) PROM

(ii) Cache memory

5. (a) What is register? Explain the different types of register in computer architecture.

$2+4=6$

(b) What is input device? Explain how keyboard helps in giving inputs to a computer.

$1+3=4$

Or

(c) Explain the steps involving in converting one number system (other than base 10) to another number system (other than base 10) with solved example.

5

(d) What is print preview facility? Explain the difference between cut-and-paste and copy-and-paste facilities of word processing package.

$2+3=5$

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**2014**

**( 1st Semester )**

**BACHELOR OF COMPUTER APPLICATION**

**Paper No. : BCA-103**

**( Computer Fundamentals and PC Software )**

**( PART : A—OBJECTIVE )**

**( Marks : 25 )**

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

**SECTION—I**

**( Marks : 15 )**

**I. Put a Tick (✓) mark against the correct answer from the following in the brackets provided :**

**1×10=10**

**1. The number of character transmitted per second from the tape to primary storage is called**

**(a) data transfer rate ( )**

**(b) jitter ( )**

**(c) offline storage ( )**

**(d) None of the above ( )**

2. Software which is an integrated set of programs that controls the resources memory of a computer system and provides user interface is called
- (a) operating system ( )
  - (b) multiprogramming ( )
  - (c) threat ( )
  - (d) deadlock ( )
3. The first electronic computer which was developed in 1943-1946 is called
- (a) the mark-I ( )
  - (b) EDVAC ( )
  - (c) EDSAC ( )
  - (d) UNIVAC I ( )
4. If the storage unit can retain its data even when a power is turn off, this unit is called
- (a) volatile ( )
  - (b) non-volatile ( )
  - (c) EPROM ( )
  - (d) renewable unit ( )

5. The device that accepts data from a computer and translates them into a form suitable for use by outside world is called
- (a) input device ( )
  - (b) output device ( )
  - (c) translator ( )
  - (d) integrator ( )
6. A design which composed of patterns of line, points, circles, arcs and other geometric shapes that can be represented by geometric axis of X and Y is called
- (a) raster graph ( )
  - (b) vector graph ( )
  - (c) line graph ( )
  - (d) pie graph ( )
7. The data which is currently being executed by the CPU is called
- (a) time-sharing ( )
  - (b) process ( )
  - (c) file ( )
  - (d) None of the above ( )

8. The printer that produces very high quality output character by using very tiny ink particles is called
- (a) drum printer ( )
  - (b) laser printer ( )
  - (c) dot-matrix printer ( )
  - (d) ink-jet printer ( )
9. The most popular sequential access which uses plastic ribbon of  $\frac{1}{2}$  inch or  $\frac{1}{4}$  inch with recording material coated on them is called
- (a) magnetic disk ( )
  - (b) magnetic tape ( )
  - (c) optical disk ( )
  - (d) flash memory ( )
10. The software tool that takes multiple object program file and fits them together in executable form is called
- (a) compiler ( )
  - (b) linker ( )
  - (c) interpreter ( )
  - (d) None of the above ( )



( 5 )

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

1. RPG programming is mainly used in application development.

( T / F )

2. Point and draw device is input device used to point and select graphic icon display on the screen.

( T / F )

3. Fractional number is formed in the same way as in decimal number system.

( T / F )

4. Storage unit of a computer system holds data and instruction to be processed.

( T / F )

5. A microprocessor does not contain all the circuits needed for arithmetic logic and control function.

( T / F )

SECTION—II

( Marks : 10 )

III. Answer the following questions : 2×5=10

1. How does an IC help in reducing the size of a computer?

2. Explain any two types of optical disk.

3. What is an input device? Name some commonly used input devices.

( 8 )

4. What is an assembler?

( 9 )

5. Explain the difference between landscape and portrait mode of printing.

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I/BCA/103