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PGDCA

Paper : 1.1

( **Fundamentals of Computers** )

*Full Marks : 100*

*Time : 3 hours*

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

1. Choose the correct option among the following : 1×10=10
- (a) A computer converts data into
- (i) information
  - (ii) software
  - (iii) output
  - (iv) graphs
- (b) The first prototype computer was invented by
- (i) Blaise Pascal
  - (ii) Herman Hollerith
  - (iii) Baron Gottfried Wilhelm von Leibniz
  - (iv) Charles Babbage

- (c) What is the full form of ENIAC?
- (i) Electronic Numerical Integrator And Computer
  - (ii) Electronic Number Integration Analog Computer
  - (iii) Electronic Numerical Integrator And Calculator
  - (iv) Early Number Integration and Calculator
- (d) A motherboard is the main
- (i) printed circuit board.
  - (ii) personal circuit board
  - (iii) power circuit board
  - (iv) power computer board
- (e) Primary storage memory of the computer communicates directly with the
- (i) register
  - (ii) processor
  - (iii) system
  - (iv) compiler
- (f) A genuine and up-to-date operating system and regularly update security patches must be used to protect the system from
- (i) viruses
  - (ii) data loss
  - (iii) memory loss
  - (iv) All of the above

- (g) Devices such as printers and scanners are installed on the computer using
- (i) system drivers
  - (ii) software drivers
  - (iii) device drivers
  - (iv) All of the above
- (h) Assembly language is translated into machine language by
- (i) assembler
  - (ii) compiler
  - (iii) linker
  - (iv) interpreter
- (i) Input devices are used to transfer information into which unit of a computer?
- (i) ALU
  - (ii) Control unit
  - (iii) Memory unit
  - (iv) CPU
- (j) The I/O devices that provide a means of communication between the computer and outside world are known as
- (i) input devices
  - (ii) output devices
  - (iii) peripheral devices
  - (iv) system devices

2. Fill up the blanks : 1×10=10

- (a) Workstations are high end —.
- (b) Data lines and the number of bits in a — are similar.
- (c) Data bus is used for the — of data.
- (d) — helps in proper functioning of computer hardware.
- (e) The term — was first used in print by John W. Tukey in 1958.
- (f) — acts as an interface between the user and the internet.
- (g) — unit performs the basic arithmetic functions.
- (h) Another name for a laptop is —.
- (i) — is the primary control program for managing all other programs in a computer.
- (j) A — virus is written in a macro language.

3. State true or false : 1×10=10

- (a) Compilers, interpreters, linkers and debuggers are programming software.

- (b) The three main components of operating system are control programs, system service programs and utility programs.
- (c) Storing is the process of recording data and information so that it can be retrieved for use whenever required.
- (d) The secondary memory of the computer system does not store all the instructions and data permanently.
- (e) Secondary storage is the storage within the primary storage.
- (f) Computers cannot process millions of instructions every second.
- (g) An analog computer does not operate on binary digits to compute.
- (h) A hybrid computer only uses the best features of analog computers.
- (i) A special purpose computer is a digital or an analog computer specifically designed to perform desired specific task.
- (j) In the analog computers, an analog signal is produced which is composed of DC and AC magnitudes, frequencies and phases.

4. Match the following :

1×10=10

Column—A

Column—B

- |                       |   |
|-----------------------|---|
| (a) Transistor        | (i) auxiliary memory  |
| (b) Operating system  | (ii) input device   |
| (c) Loader            | (iii) converts a high-level language program into machine codes |
| (d) C                 | (iv) assembly language  |
| (e) Interpreter       | (v) second generation computers                                 |
| (f) McAfee Scan       | (vi) fourth generation computers                                |
| (g) Personal computer | (vii) links small programs                                      |
| (h) Plotter           | (viii) high level language                                      |
| (i) Secondary memory  | (ix) loads the program into the memory                          |
| (j) Scanner           | (x) application software  |
|                       | (xi) output device  |
|                       | (xii) system software   |
|                       | (xiii) antivirus  |

5. Answer the following questions (any four) :

5×4=20

- (a) List two benefits and two demerits of CD-ROM.

- (b) Describe the life cycle of computer virus.
- (c) Mention two characteristics each of RAM and ROM.
- (d) List two capabilities and two limitations of a computer.
- (e) What is a bus? What are different types of bus?

6. Write short notes on (any four) :  $5 \times 4 = 20$

- (a) Cache Memory
- (b) Magnetic Disk
- (c) Instruction Execution
- (d) Computer Software
- (e) Virtual Memory
- (f) Computer Maintenance

7. Explain the characteristics of different programming languages. 10

Or

What is an operating system? Describe the functions performed by the operating system.

( 8 )

8. What are different functional units of a computer? Explain the functions performed by each unit.

10

*Or*

Explain the salient features of different generation of computers.

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