

**DIPLOMA IN ELECTRICAL ENGINEERING  
(DELVI)/ADVANCED LEVEL CERTIFICATE  
COURSE IN ELECTRICAL ENGINEERING  
(ACELVI)**

00572

**Term-End Examination**

**December, 2017**

**BIEE-032 : PRINCIPLES OF COMPUTER  
ARCHITECTURE**

*Time : 2 hours*

*Maximum Marks : 70*

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**Note :** *Question no. 1 is compulsory. Attempt any four questions from questions no. 2 to 8.*

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1. Choose the correct option.

$7 \times 2 = 14$

(a) Which of the following is **not** a type of computer hard-drive ?

- (i) IDE
- (ii) FDD
- (iii) SCSI
- (iv) EIDE

- (b) Which component is **not** tested by the POST routine ?
- (i) RAM
  - (ii) CPU
  - (iii) Motherboard
  - (iv) Power supply
- (c) PROM stands for
- (i) Primary Read-Only Memory
  - (ii) Programmable Read-Only Memory
  - (iii) Perfect Read-Only Memory
  - (iv) Primitive Read-Only Memory
- (d) The output quality of a printer is measured by
- (i) Dots per cm
  - (ii) Dots per inch
  - (iii) Dots printed per unit time
  - (iv) All of the above
- (e) SCSI is
- (i) Small Computer Simple Interface
  - (ii) System Computer Select Interface
  - (iii) Small Computer System Interface
  - (iv) Small Computer System Interconnect

(f) LCD monitors often have a smaller \_\_\_\_\_ than CRT monitors.

- (i) refresh rate
- (ii) viewing angle
- (iii) colour depth
- (iv) price

(g) In computers, subtraction is generally carried out by

- (i) 9's complement
- (ii) 10's complement
- (iii) 1's complement
- (iv) 2's complement

2. (a) Explain the working principle of a Dot-Matrix printer. 7

(b) What is meant by MODEM ? Differentiate between external and internal Modems. 7

3. Draw a block diagram showing the internal hardware of a LCD monitor. Explain the function of each component. 14

4. (a) Describe the various steps for preventive manitenance of peripherals of a PC. 7

(b) Explain how data is stored and retrieved in the computer's hard disk. 7

5. What is meant by a SMPS ? Draw the block diagram and describe the working of an SMPS. Also explain various characteristics of power supply. 14
6. (a) Explain the following characteristics of a CRT monitor : 7
- (i) Dot pitch
  - (ii) Resolution
  - (iii) Video bandwidth
  - (iv) Horizontal scanning frequency
- (b) What is Cache Memory ? Compare Internal and External caches. 7
7. (a) What is Centronics ? Explain with the help of an interface diagram. 7
- (b) What is RS-232 ? Draw RS-232 pinout specifications. 7
8. Write short notes on any **two** of the following : 2×7=14
- (a) Logical Memory Organization
  - (b) Chipset Architecture
  - (c) Power Supply Problems