

**DIPLOMA IN ENTREPRENEURSHIP AND  
SKILL DEVELOPMENT**

**Term-End Examination**

**December, 2010**

**BVEE-005 : COMPUTER HARDWARE AND  
NETWORKING**

00874

*Time : 3 hours*

*Maximum Marks : 100*

*Note : There are two sections in this paper. Section-1 is of 40 marks and is compulsory. Section-2 comprises of 4 questions of 20 marks each. You may attempt any 3 questions from Section 2. There is no negative marking.*

**SECTION - I (40 Marks)**

1. Multiple choice question. Write the correct answer :

- (a) A 32 - bit processor has 2  
(i) 32 Registers  
(ii) 32 I/O Devices  
(iii) 32 MB of RAM  
(iv) A 32 - bit registers
- (b) Which of the following refilling device is 2  
needed for an Inkjet printer ?  
(i) A cartridge  
(ii) A drum  
(iii) A ribbon  
(iv) A toner

- (c) A parity bit is : 2
- (i) used to indicate uppercase letters
  - (ii) used to detect errors
  - (iii) is the first bit in a byte
  - (iv) is the last bit in a byte.
- (d) On - chip cache has : 2
- (i) lower access time than RAM
  - (ii) larger capacity than RAM
  - (iii) its own data bus
  - (iv) become obsolete
- (e) A byte corresponds to : 2
- (i) 4 bits
  - (ii) 8 bits
  - (iii) 16 bits
  - (iv) 32 bits
- (f) Which storage device is not magnetic : 2
- (i) A CD - ROM
  - (ii) A floppy disk
  - (iii) Tape storage
  - (iv) All

- (g) In which topology terminators are used ? 2
- (i) Bus
  - (ii) Star
  - (iii) Tree
  - (iv) Mesh
- (h) Which bus controls the sequencing of read/ write operations ? 2
- (i) Data bus
  - (ii) Address bus
  - (iii) Control bus
  - (iv) None
- (i) What is the central device in star topology ? 2
- (i) STP Server
  - (ii) Hub / Switch
  - (iii) PDC
  - (iv) Router
- (j) Hard copy is : 2
- (i) Writing on a board
  - (ii) Printed output
  - (iii) Storing information on the hard disk
  - (iv) Sending copy to e-mail account

2. List four devices for each of the following and give the area of usage : 5
- (i) Input / Output
  - (ii) Magnetic Storage
3. Which type of device is the mouse ? Differentiate between optical and mechanical mouse. Support your answer with necessary diagrams. 5
4. What is bus ? List the three buses that make up the system bus. 5
5. Explain following memory devices with example : 5
- (i) Register Memory
  - (ii) Secondary Memory

## SECTION - II (60 Marks)

Attempt any three questions :

6. Write notes on the following devices and explain them with necessary diagrams. **20**
- (i) Touch Sensitive Screen
  - (ii) Optical Mark Reader (OMR)
  - (iii) Optical Character Recognition (OCR)
  - (iv) Mass Storage Device
  - (v) Laser printer
7. Explain the following transmission media with their speed, flexibility, cost and suitability. **20**  
Draw diagrams also.
- (i) Twisted pair cable
  - (ii) Co - axial cable
  - (iii) Optical fiber
  - (iv) Microwave
  - (v) Satellite
8. What may be the possible cause of following situations and what kind of trouble - shooting can be done to fix it ? **20**
- (i) System restarting again and again
  - (ii) Disk boot failure
  - (iii) No display in monitor
  - (iv) System is on network with internet facility but internet is not working.
  - (v) Computer system runs slow gradually

9. An electronic goods production company LGR 20 has planned to connect its corporate office (HO) and production unit (PU) with 4 distribution centers (D1, D2, D3, D4) for computerization. HO with 20 nodes. PU with 10 nodes, D1 to D4 with 10 nodes each. The distance between HO to PU is 50 kms, HO to D1 is 100 kms and PU to D1 is 75 kms, HO to D2 is 150 kms and PU to D2 is 200 kms, HO to D3 is 125 kms and PU to D3 is 175 kms, HO to D4 is 300 kms and PU to D4 is 275 kms.
- (i) What topology and communication channel is best suited for distribution centers to connect their nodes and why ?
  - (ii) What will be the best suitable place for server and why ?
  - (iii) What kind of communication channels is suitable for connecting HO and PU with all distribution centers and why ?
  - (iv) Suggest the placement of Switch/ Hub, Repeater, Modem and Router with justification.
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