BICS-028

DIPLOMA – VIEP – COMPUTER SCIENCE AND ENGINEERING (DCSVI)/ADVANCED LEVEL CERTIFICATE COURSE IN COMPUTER SCIENCE AND ENGINEERING (ACCSVI)

Term-End Examination

⬜⬜🮐🮓🮓 **June, 2014**

BICS-028 : PC ASSEMBLY AND MAINTENANCE

Time : 2 hours *Maximum Marks : 70*

Note : Question no. 1 compulsory. Attempt any four from the rest of the questions.

1. Choose the correct answer.

   (a) Interrupts which are initiated by an instruction are 2
      (i) Internal
      (ii) External
      (iii) Hardware
      (iv) Software

   (b) CPU does not perform the operation 2
      (i) data transfer
      (ii) logic operation
      (iii) arithmetic operation
      (iv) All of above

(c) How many address lines are needed to address each memory location in a 2048 × 4 memory chip ? *2*

  (i) 10

  (ii) 11

  (iii) 8

  (iv) 12

(d) A system with five separate devices is to be configured to use RAID and the main requirement is to obtain maximum possible I/O throughput. Which of the following RAID levels will provide the greatest throughput ? *2*

  (i) RAID 0

  (ii) RAID 1

  (iii) RAID 3

  (iv) RAID 5

(e) A hard disk is divided into tracks, which are further divided into *2*

  (i) Clusters

  (ii) Sectors

  (iii) Vectors

  (iv) Heads

(f) IRQ 6 is typically reserved for *2*

  (i) The floppy

  (ii) The keyboard

  (iii) LPT 2

  (iv) The Modem

(g) Which of the following devices sends and receives information from other devices ? *2*

    (i)   Serial Port

    (ii) Parallel Port

    (iii) Video Port

    (iv) Both (i) and (ii)

2. (a) With suitable diagram, state the meaning of extended and expanded memory. *3+2+2*

    (b) List features of PCI Bus. *7*

3. (a) Define the terms Miss rate and Hit rate. *5*

    (b) Calculate hit ratio for a memory which has 1% miss rate when accessed 100 times. *9*

4. (a) What is meant by handshake ? *5*

    (b) Explain DMA and different types of bus arbitration mechanisms. *4+5*

5. (a) Explain Synchronous and Asynchronous data transfer. *7*

    (b) Explain various bus control methods. *7*

6. (a) Explain the term Magneto-Optical. Discuss features of magneto-optical drives in terms of CD-ROM and floppy disk. *3+4*

    (b) Name the different types of ports in a computer. What is the use of USB A connector and USB B connector ? *3+4*

7. (a) What is BIOS ? What are the functions of Power-On-Self-Test program ? *4+4*

   (b) What is the difference between DVD and CD ? *6*

8. Write short notes on any *four* of the following : $3\frac{1}{2} \times 4 = 14$

   (a) Expansion Slot

   (b) Cache Memory

   (c) Hard disk Interface

   (d) Hardware Components of PC

   (e) Static and Dynamic RAM

   (f) Memory Hierarchy