DipIETE – ET (OLD SCHEME)

Code: DE10   **Subject: COMPUTER ENGINEERING**
Time: 3 Hours   **Max. Marks: 100**

DECEMBER 2010

NOTE: There are 9 Questions in all.
- **Question 1 is compulsory and carries 20 marks. Answer to Q.1 must be written in the space provided for it in the answer book supplied and nowhere else.**
- **The answer sheet for the Q.1 will be collected by the invigilator after half an hour of the commencement of the examination.**
- **Out of the remaining EIGHT Questions answer any FIVE Questions. Each question carries 16 marks.**
- **Any required data not explicitly given, may be suitably assumed and stated.**

Q.1   **Choose the correct or the best alternative in the following:**   **(2×10)**

a.   EPROM can be used for

   (A) Erasing and reconstructing the contents of ROM
   (B) Duplicating the ROM.
   (C) reconstructing the contents of ROM
   (D) Erasing the contents of ROM

b.   Which of the following uses the least power

   (A) TTL
   (B) ECL
   (C) CMOS Chip
   (D) All consume exactly the same power

c.   The technology is used in optical disks?

   (A) Electro Magnetic.   **(B)** Laser.
   (C) Mechanical.   **(D)** Electro Mechanical.

d.   Virtual memory can be implemented with

   (A) Segmentation   **(B)** Paging
   (C) None   **(D)** all of the above

e.   The rate at which scanning is repeated is called the

   (A) Resolution   **(B)** Bandwidth
   (C) Stroke rate   **(D)** Refresh rate

f.   _____ is the time required by a sector to reach below read/ write head.

   (A) Seek Time   **(B)** Latency Time
   (C) Access time   **(D)** None

g. Unix operating system.

(A) is multi user   (B) is multitasking
(C) can run on PCs and larger systems. (D) All of the above

h. Which of the following is required for a plotter to perform specific commands?

(A) Driver   (B) Controller
(C) Software   (D) Firmware

i. CVT can operate with an input voltage range as wide as _ _ _ _ _ _ _ _ or more of the nominal voltage

(A) ± 20%.   (B) ± 40%
(C) ± 50%.   (D) ±80%.

j. AMD stands for …………………….

(A) Advance Mini Devices   (B) Advance Micro Devices
(C) Additional Multiplexing Devices (D) Advance Mono Devices

Answer any FIVE Questions out of EIGHT Questions.
Each question carries 16 marks.

Q.2 a. Briefly differentiate between RISC and CISC processors listing out their relative advantages and disadvantages. **(8)**

b. Give short notes on any **TWO**:-
(i) 8253 Timer.
(ii) EISA.
(iii) Co-processors.   **(4×2 = 8)**

Q.3 a. Write a short note on Keyboard Buffer. **(4)**

b. Differentiate between the cache and associative memory. **(6)**

c. What do you mean by a bus? Define the bus width. **(6)**

Q.4 a. Give pin diagram of 8085 and explain features of each pin. **(8)**

b. What is virtual memory? When is it used? Explain the basic types used for realization of virtual memory. **(8)**

Q.5 a. Name and explain the different types of interrupts in 8085. **(6)**

b. Differentiate between Pentium IV and Pentium PRO. **(4)**

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c. Define any **FOUR** of the following terms in context of disk storage:-

   (i)   Access time
   (ii) Spin-up time
   (iii) Seek time
   (iv) Latency Time
   (v)   Transfer rate **(6)**

Q.6 a. Define Printers. Give description about type of printer based on printing mechanism and their relative advantages and disadvantages. **(8)**

   b. Explain about various addressing modes pertaining to 8085 with suitable example. **(8)**

Q.7 a. Explain about the scope of standard RS-232-C. **(8)**

   b. Describe about the DMA controller-8237 scope of standard RS-232-C. **(8)**

Q.8 a. Explain about the UNIX file system in brief. **(8)**

   b. What do you mean by BIOS? Explain in brief. **(8)**

Q.9 a. Explain construction and working principle of IDE hard disk. **(8)**

   b. Define the following: **(8)**
      (i)   Assembler
      (ii) Compiler
      (iii) Raster
      (iv) Scanning