DipIETE – ET (OLD SCHEME)

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

JUNE 2011

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 45 Minutes 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.   The stack pointer in the 8085 microprocessor is a

(A) 16 bit register that points to the stack memory.
(B) 16 bit accumulator.
(C) Memory location in the stack.
(D) Flag register used in the stack.

b.   A multiprogramming system is one that can

(A) Compute many programs simultaneously.
(B) Share hardware resources with many programs simultaneously.
(C) Run very fast.
(D) Use many operating systems.

c.   A computer program that converts an entire program into machine language at one time is called a/an

(A) Assembler.   **(B)** Loader.
(C) Compiler.   **(D)** Interpreter.

d.   A stack organized computer has

(A) Three - Address instructions   **(B)** Two - Address instructions.
(C) One - Address instructions.   **(D)** Zero - Address instructions.

e.   The register which keep track of the address of the instruction to be executed next is

(A) Index Register   **(B)** Memory Address Register
(C) Program Counter   **(D)** Instruction Register

f. RISC stands for

   (A) Reduced Instruction Set Computer   **(B)** Rapid Instruction Set Computer
   (C) Reliable Intelligent Super Computer **(D)** Ruby Integrated Silicon Chip

g. Intel 8086 is a

   (A) 8-bit microprocessor.   **(B)** 32-bit microprocessor.
   (C) 16-bit microprocessor.   **(D)** 64-bit microprocessor.

h. MS-DOS is a _____ operating system.

   (A) 8 Bit   **(B)** Single-tasking
   (C) multi-tasking   **(D)** multiuser

i. An instruction in a programming language that is replaced by a sequence of
   instructions prior to assembling or compiling is

   (A) Procedure name.   **(B)** Macro.
   (C) Label.   **(D)** Symbol.

j. 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%

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

Q.2 a. What is AGP? What is it used for?   **(4)**

   b. Explain about the access Mechanism and working principle of an optical
      disk and it's types in brief.   **(6)**

   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.3 a. Describe about the DMA controller -8237 and the steps involved in
      initiating a DMA transaction.   **(8)**

   b. Define BIOS. Explain about the function and essentiality of BIOS in a PC
      in brief.   **(8)**

Q.4 a. Explain about Windows NT Operating System. Also list the main features
      of Windows NT.   **(6)**

b. Define VDU. Explain working principal of CRT Monitor with the help of its diagram. **(10)**

Q.5 a. Explain about the construction and working principle of IDE hard disk drives. **(8)**

b. Explain about the scope of standard RS-232-C. **(8)**

Q.6 a. Write short note on Pixels. Also define the term Resolution. **(6)**

b. Define Programming language and explain about their classification in brief. **(10)**

Q.7 a. Explain about the different generation classification of computers. **(8)**

b. Please provide the pin configuration of Intel 8085. **(8)**

Q.8 a. What is difference between 8086 and 8088 microprocessor? **(8)**

b. Define Addressing mode. Explain various addressing modes used in 8086.
(8)

Q.9 a. Explain about the following in brief:
(i) ISA Bus (ii) EISA Bus **(10)**

b. Please provide a short description about Motorola microprocessors. **(6)**