**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.**

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**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%

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

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**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)**