N 1040

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2004.

Sixth Semester

Electronics and Communication Engineering

EC 035 — COMPUTER HARDWARE AND INTERFACING

ne : Three hours Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

What is meant by Bios shadowing?

What are enablers in the context of PC cards? What are their different types?

What are chipsets? Why they are important?

What is the significance of ACPI? How it is implemented in a PC?

What is the significance of Enhanced Parallel port?

Distinguish between ATA and ATAPI.

How will you determine the memory speed during trouble shooting?

Explain the purpose of master burst and slave burst signals in the EISA bus.

What might be the problem associated with the monitor if the following symptom is noticed : "A horizontal line appears in the middle of the display".

0. Compare the categories of backups. List their unique advantages and disadvantages.

PART B — (5 × 16 = 80 marks)

1. (i) Explain universal trouble shooting process.

(ii) Enumerate the basic CMOS optimization tactics.

(iii) Discuss briefly the advanced configuring of the chipset setup.

(iv) Explain the PC card architecture, applications and installation.

12. (a) (i) Describe the layout of a typical desktop PC and a modern motherboard components.

(ii) List out the features of Windows NT OS. Describe the step–by–step boot process of a typical PC.

Or

(b) (i) List and explain the features of a typical PC BIOS.

(ii) Describe the concepts of switching power supply an explain the connection schemes for AT and ATX power supplies.

13. (a) (i) Explain the various specifications and standards of DVD. Also explain the most common DVD trouble shooting issues.

(ii) Describe the block diagram of a bi–directional parallel port. Also explain the parallel port signals in a typical PC.

Or

(b) (i) Explain the basic concepts involved in Hard disk drives and show a layout for a typical hard drive sector. Also briefly discuss the concepts of drive formatting.

(ii) Discuss the CD–ROM Mechanics and Electronics. Also explain the operations and features of CD–ROM device drivers and MSCDEX.

14. (a) (i) What are conventional, extended and expanded memory. Show the conventional and upper memory map in a typical PC and explain.

(ii) What are memory managers and explain their services to a modern PC?

Or

(b) (i) What are the limitations of 8 bit ISA bus? How they are overcome in 16 bit ISA bus? Explain the potential problems arising in mixing 8 bit and 16 bit ISA boards?

(ii) Discuss the features of EISA bus.

(a) (i) What is CPU over clocking? Explain any five general symptoms of CPU failure and suggest tactics to resolve them.

(ii) Discuss briefly trouble shooting the serial port.

Or

(b) (i) Write a brief summary of PC preventive maintenance.

(ii) Explain the basic principles and operations of a computer monitor and trouble shooting procedures for the following :

(1) The display appears wavy.

(2) The image appears to shake or oscillate in size.

(3) The image appears to flip or scroll horizontally.