Punjab Technical University
Master of Computer Application Examination

MCA 3ʳᵈ Semester MICRO PROCESSOR AND PERSONAL COMPUTERS 2007

Time: Three hours maximum: 100marks

PART A Answer all questions (8x5=40 marks)

1. (a) Explain the Bus control and address control. Or (b) what are the advantages of 8080 microprocessor with relation to the execute cycles.

2. (a) What are the uses of stack pointer and instruction pointer? Or (b) what is logical address? The data segment base address is FFOOH. The logical offset address is 0321H.Find the physical address of memory.

3. (a) Explain how address decoding is used to interface the MPU and memory subsystem. Or (b) What are the functions of mode registers in the DMA controller chip?

4. (a) Explain the function of the bus subsystem. Or (b) what can be used as a method of handling multiple interrupts in a microcomputer system?

5. (a) Draw the system board block diagram. Explain. Or (b) what are the advantages of Winchester disk over floppy disk?

6. (a) Compare linear and switching power supply. Or (b) explain an interrupt driven system.

7. (a) Describe the floppy disk adapter. Or (b) describe the difference between the floppy disk drive and the hard disk drive.

8. (a) what is meant by handshaking? Explain. Or (b) explain the video display system.

PART B Answer ALL questions (5x12=60 marks)

9. (a) Discuss the I/O subsystem in detail. Or (b) what is debugging? Explain the editor, assembler and linker for creating (or) I/O sub system.

10. (a) what procedures and precautions should be taken to correct MPU faulty problem? Or (b) List the names and describe the functions of general registers.

11. (a). What is meant by system configuration? Give an example. Or (b) what are the various timing signals in an IBM PC system? Explain their uses.

12. (a) Explain the purpose of the following components in a floppy diskette and its jacket. I) Index hole. II) Write protect notch. Or (b) what are the different types of propagating elements in a magnetic bubble memory device?

13. (a) Give a detailed comparative discussion between liquid crystals display with that of LED based system. Or (b) What are the basic working principles of modems and acoustic coupler?