



COLLEGE OF ENGINEERING, SCIENCE AND TECHNOLOGY
SCHOOL OF ELECTRICAL AND ELECTRONICS ENGINEERING
TRADE DIPLOMA IN ELECTRICAL ENGINEERING
EEE 507 COMPUTER TECHNOLOGY
SUPPLEMENTARY EXAMINATION (YEAR 2016)

DATE/TIME/ROOM – Refer to Timetable

INSTRUCTIONS TO CANDIDATES

1. You are allowed 10 minutes extra reading time during which you are NOT to write.
2. Begin each answer on a fresh new page and use both sides of the sheets.
3. Write your identification number on the top of each attached sheet.
4. The paper contains three sections, Sec A, Sec B & Sec C.
5. For all sheets of paper in which rough work has been done, cross it through and you must attach to your answer script.
6. Write clearly the number(s) of the question(s) attempted on the top of each sheet.
7. Good handwriting and way of representation of answers has weight with respect to marks.
8. Draw diagrams if any with pencil only and label it.
9. Always check your work before you leave the exam room.
- 10. The paper is of 100 marks.**

Section A: Multiple Choice Questions (10x1=20 marks)

1. Which of the following is not a 3rd generation language?
 - a. Java
 - b. Assembly Language
 - c. Fortran
 - d. ADA

2. Which of the following gives a list of memory in increasing order (slow to fast) of speed access?
 - a. RAM, Hard Disk, L1 Cache, L2 Cache
 - b. L1 Cache, RAM, Hard Disk, L2 Cache
 - c. Hard Disk, RAM, L2 Cache, L1 Cache
 - d. L1 Cache, L2 Cache, RAM, Hard Disk

3. Which of the following is **NOT** a function of the Operating System?
 - a. Memory management
 - b. Disk management
 - c. Database management
 - d. Process management

4. Which of the following memories needs refreshing?
 - a. SRAM
 - b. ROM
 - c. DRAM
 - d. All of above

5. A source program is the program written in which level language?
 - a. English
 - b. High level
 - c. Symbolic
 - d. Machine

6. Which of the following machine was not invented by Charles Babbage?
 - a. Tabulating machine
 - b. Difference engine
 - c. Analytical engine
 - d. Both c & d

7. Which technology is used in Compact disks?
 - a. Mechanical
 - b. Electromagnetic
 - c. Electrical
 - d. Laser

8. The data recording format in most of the modern magnetic tape is:
 - a. 7-bit-ASCII
 - b. 8-bit-ASCII
 - c. 7-bit-EBCDIC
 - d. 8-bit-EBCDIC

9. Access time is:
 - a. Seek time + Latency time
 - b. Down time
 - c. Seek time
 - d. Latency time

10. Floating point representation is used to store:

- a. Boolean values
- b. Real numbers
- c. Whole numbers
- d. Integers

Section B: Short Answer Questions (Each question carry 5 marks)

1. Draw a table showing computer generations with its features. [5 marks]
2. Explain five consequences of Moore's law. [5 marks]
3. What are the advantages of assembly language programming? [5 marks]
4. What are the three levels of programming language? [5 marks]
5. Convert below decimal into binary. [5 marks]
 - (a) 10
 - (b) 200
 - (c) 140
 - (d) 56
 - (e) 180
6. Explain five MIPS pipeline stages. [5 marks]
7. Draw the diagram of memory hierarchy. [5 marks]
8. What do you understand by bootstrap program loader? [5 marks]

Section C: Long Answer Questions

1. With respect to instruction set architecture answer the below questions. [10 marks]
 - a) What were the four ways of classifying the ISA.
 - b) In how many classes instructions can be divided?
 - c) What are the pros and cons of Memory-Register type classification?

2. Write an Assembly language programming for 8085 microprocessor: [10 marks]
- a) Addition of two 8 bits numbers
 - b) Addition of two 8 bits numbers stored in memory
3. With respect to RAM answer below: [10 marks]
- a) Key features of Static RAM
 - b) Key features of DRAM
4. Explain the below terms: [10 marks]
- a) Digital Versatile Disk
 - b) Optical Disks
5. With respect to pipelining answer the below questions: [10 marks]
- a) What is pipelining?
 - b) What are the characteristics of pipelining?
 - c) Name three different kinds of pipeline hazards.

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