D 2692

FIRST SEMESTER M.Sc. DEGREE EXAMINATION, JANUARY 2005

Computer Science

CS 103—COMPUTER ORGANISATION

Time : Three Hours   Maximum : 60 Marks

Answer any **five** *questions from Part A and any* **three** *from Part B.*

Part A

1. Give the logic diagram and truth table of a half-adder.

2. What is a register ? What is meant by parallel loading ?

3. Convert decimal 41.6875 into binary.

4. Explain with suitable example, addition using l's complement representation.

5. Briefly explain the structure of a memory reference instruction.

6. Explain the ISZ instruction.

7. What is a macro ? Give an example.

(5 x **3** = 15 marks)

Part B

8. Briefly explain computer cycles with the help of a flow chart for computer cycle control.

9. Write an assembly language program to multiply two positive numbers. Briefly explain the steps.

10. What is a Stack ? How is it implemented in a random access memory ?

11. Explain Memory-Mapped I/O organisation.

(3 x 15 = 45 marks)