Chapter 1

Introduction to Computer Architecture

Lesson 7
Assignments

Objective —

- To refresh our knowledge

Outline

- **<u>Solved Problems and Objective Type Questions</u>**

- Home Assignments

Solved Problems

- Pages 1.16 to 1.30 Computer Architecture by Nicholas carter and Raj Kamal, Schaum Series, 2006 Edition

- First read the solutions and do the same problems again on home assignment copy yourself

Objective Type Questions

- Page 1.30 Computer Architecture by Nicholas Carter and Raj Kamal, Schaum Series, 2006 Edition

Outline

- Solved Problems and Objective Type Questions

- **Home Assignments**

Babbage difference engine

1. Show diagrammatically the solution of getting a list of values for i^4 using Babbage difference engine concept

Turing Machines

2. List the symbols of each of the Turing Machines needed to print a list of values for i^4 using Babbage difference engine concept

Turing Machines

3. Write in the sequence a table with rows showing (i) name of Touring machine, (ii) input data and instruction description for printing list for i^4 for i = 0 to i =4

First Generation

4. A secondary common memory of first generation was of 20K words of 32 bits for the program (set of instructions) and data. How many valves were used for that? (1 K = 1024)

First Generation

5. How many instructions can be in the memory assuming each word uses only one word and has a single Turing machine input data and instruction?

First Generation

6. Draw architecture of IAS computer

Second Generation

7. Draw architecture of IBM 1620

Third   Generation

8. Draw architecture of IBM 360

Fourth Generation

9. Draw a simplistic architecture of IBM PC

Speed up

9. Draw a chart showing speedup of first, second, third and fourth VVLSI generations

Power Dissipation reduction factor

10. Draw a chart showing reduction factor of first, second, third and fourth VVLSI generations

End of Lesson 7 on
Assignments

THANK YOU