

Chapter 1

Introduction to Computer Architecture

Lesson 7

Assignments

Objective —

- **To refresh our knowledge**

Outline

- Solved Problems and Objective Type Questions
- 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 Turing 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

The McGraw-Hill Companies

SCHAUM'S
ouTlines

COMPUTER ARCHITECTURE

Nicholas Carter

- ▲ Overview of hardware and software design elements in computer systems
- ▲ Enhanced coverage of topics like instruction sets, processor design, and memory systems.
- ▲ Concise explanations of hardware and software interfaces.
- ▲ Over 600 solved problems and objective questions.



For sale in
India, Pakistan,
Nepal, Bangladesh,
Sri Lanka and
Bhutan Only

Adapted by: RAJ KAMAL

THANK YOU