

2009

1. (a) Convert the following hexadecimal numbers to binary equivalent:
 - (i) $(4CE5)_{16}$
 - (ii) $(95AB6)_{16}$

(b) Explain with suitable example the concept of 1's and 2's complement for arithmetic addition.
2. (a) Explain all basic logical gates with truth tables.

(b) What do you understand by combinational logic circuits? Explain with suitable example.
3. (a) Explain with neat diagram the half and full adders circuits.

(b) What do you understand by multiplexer? Draw a logical block diagram of 8 to 2 line multiplexer.
4. Write notes on:
 - (i) De multiplexer
 - (ii) Encoders
5. (a) What do you understand by sequential circuit? Explain JK flip-flop with a neat diagram.

(b) Differentiate between synchronous and asynchronous counters.
6. (a) Draw and explain the block diagram of a master slave flip-flop.

(b) Explain all registers under architecture of 8085.
7. (a) Explain all parts of architecture of a simple computer.

(b) What do you understand by Memory Hierarchy? Explain its parts.

8. (a) Differentiate between virtual and cache memory.

(b) What is the use of flow chart under high level programming language?
Explain with suitable example.

9. What do you understand by memory? Explain all types of RAM used in Modern computer architecture.