Computer Organization BCA 202-QB

Unit 1

1. What is Boolean Algebra?
2. State the Boolean equation of logic gates.
3. What are logic gates? Explain by giving suitable examples.
4. Derive truth tables for AND, OR, NOT, NOR, XOR, NAND.
5. What do you mean by universal gates? Derive the logic gates using NOR.
6. Derive De- Morgan's Law.
7. What are the basic Boolean Laws?
8. What do you mean by duality theorem?

Unit 2

1. Explain K-Map. Explain SOP and POS methods.
2. What do you mean by seven segment decoder?
3. What do you mean by Minimization Technique?
4. Explain Pairs, Quads, and Octets.
5. What do you understand by "Don't Care Conditions"?
6. Explain Multiplexers. Draw diagrams of each.
7. What do you mean by Encoder & Decoder?
8. Explain BCD to Decimal Decoder.

Unit 3

1. Explain Half Adder & Full Adder with the help of suitable diagram.
2. What are Subtractor Circuits?
3. Explain binary addition using suitable examples.
4. How can you perform binary addition? Explain giving suitable examples.
5. Compare underflow with overflow.
6. How can you add and subtract using 2's complements?

Unit 4

1. What do you mean by Flip Flops?

2. Draw suitable diagrams for RS Flip Flop.
3. Draw suitable diagrams for JK Flip Flop.
4. Explain Racing Condition.
5. Explain the types of counters giving examples of each.
6. What do you mean Registers & Shift Registers? Explain its types.

Unit 5

1. What are semi conductor memories?
2. Differentiate between SRAM & DRAM.
3. Explain A to D converter using its block diagram.
4. Explain D to A converter using its block diagram.
5. Write short notes on: ROM, PROMS, EPROMS, RAM.

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