

- OTE: 1. Figure should be Neat and labeled.
2. All Questions are compulsory.
3. Right side indicates marks.

1 Answer any 4 from following. 91

(20)

1. What are the components of computer?
2. Write a short note on structure & buses
3. Explain the functions of computer.
4. What is Bus Interconnection?
5. Explain the types of RAM
6. Explain the types of ROM.
7. What are the characteristics of Memory System.
8. Explain ARM architecture

2 Answer any 4 from following. 92

(20)

1. Write a short note on BCD
2. Explain the history & evolution of 32-bit microcontroller.
3. Explain the concept of scheduling.
4. Explain the working of RTOS.
5. Convert the given Hexadecimal numbers into equivalent Decimal numbers:
 1. $(A58B)_{16}$
 2. $(89FF)_{16}$

6. Solve:

1. $(1010)_2 + (1001)_2$
2. $(11000)_2 + (10101)_2$

7. Solve:

1. $(100011)_2 * (1101)_2$
2. $(010010)_2 * (1100)_2$

8. Write a short note on RISC.

3 Answer any 4 from following. 93

(20)

1. Explain WIFI
2. Write a short note on EDA tools.
3. Draw the block diagram of 8051.
4. Explain Timers & Counters.
5. Explain Interrupt Management.
6. Write a short note on PCB layout.
7. Explain Wire Fire.
8. Explain external peripheral devices.

4 Answer any 3 from following. 94

(15)

1. Explain the SRAM & DRAM
2. Write a short note on Gray Code.
3. Explain Serial data I/O interconnection.
4. Explain cache memory & its principles.
5. Explain development system for microcontroller.
6. Explain the Digital components.