

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

Q1 Answer any 4 from following. 91

(20)

- What are the components of computer?
- Write a short note on structure & buses
- Explain the functions of computer.
- What is Bus Interconnection?
- Explain the types of RAM
- Explain the types of ROM.
- What are the characteristics of Memory System.
- Explain ARM architecture

(20)

Q2 Answer any 4 from following. 92

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

Solve:

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

Solve:

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

Write a short note on RISC.

(20)

Q3 Answer any 4 from following. 93

- Explain WIFI
- Write a short note on EDA tools.
- Draw the block diagram of 8051.
- Explain Timers & Counters.
- Explain Interrupt Management.
- Write a short note on PCB layout.
- Explain Wire Fire.
- Explain external peripheral devices.

Q4 Answer any 3 from following. 94

(15)

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