

BHARATI VIDYAPEETH INSTITUTE OF TECHNOLOGY

QUESTION BANK

Unit Test-II (Shift:-I & II)

Program: - EJ/IS

Semester: - IV

Course:-MAA (22426)

Unit 3 8051 Timers ,interrupts, serial and parallel communication (16 Marks)

2 Marks Questions

1. Compare Interrupt and Polling.(Any two points)
2. Draw the format of SBUF register with its use in microcontroller.
3. Draw the format of PCON register.

4 Marks Questions

- 4) Draw the format of SCON register and describe each bit.
- 5) Describe serial communication modes.(Any two are asked in exam)
- 6) Write a program for serial port of 8051 to transfer letter "A" serially at 4800 baud rate continuously.
- 7) Write a program to send message "WELCOME" serially at 9600 baud rate continuously.
- 8) Write an assembly language program for 8051 to receive 10 bytes of data serially and save them in accumulator. Assume baud rate is 4800, 8 bit data, 1 stop bit.
- 9) Describe all I/O port structure of 8051 with neat diagram.(Any two are asked)
- 10) List interrupts of 8051 microcontroller with their vector addresses and priorities.

Unit 4 8051 Memory and I/O device Interfacing (12 Marks)

2 Marks Questions

- 11) Draw interfacing of LED with 8051 microcontroller.
- 12) Draw flow chart for interfacing 4 X 4 Matrix keyboard.
- 13) Draw interfacing of 2 X 16 LCD with 8051 microcontroller.
- 14) List any four LCD initialization commands with its function.

4 Marks Questions

- 15) Compare absolute and linear decoding(any four points)
- 16) Interface 8K X 8 Program ROM with 8051. Also draw its address mapping.
- 17) Interface seven segment display to 8051 microcontroller and write assembly language program to display 0 to 9 on display.
- 18) Draw interfacing diagram of relay with 8051 and write ALP to turn ON and OFF relay.
- 19) Draw interfacing diagram of stepper motor with 8051 and write ALP to rotate it in clockwise direction using full stepping.
- 20) Draw interfacing diagram of ADC with 8051 microcontroller.
- 21) Draw interfacing diagram of DAC with 8051 microcontroller.

Unit 5 Applications of 8051 Microcontroller (12 Marks)

2 Marks Questions

- 22) Calculate value to be loaded in TL and TH of 8051 microcontroller timer to generate a square wave of 2KHz.
- 23) Write ALP to generate Triangular wave from DAC 0808.

4 Marks Questions.

- 24) Draw Temperature controller using ADC 0808/09 and LM35 sensor.
- 25) Write ALP to control traffic light.