

MAHA PDF OF ELETRONICS

DSE- E19 : 8051 Microcontroller Interfacing and Applications

Unit 1 Interrupt programming in 8051

- 1) In 8051 microcontroller _____ interrupt are set asides for timers.
- A) 4
 - B) 3
 - C) **2**
 - D) 5
- 2) In 8051 microcontroller _____ interrupt are set asides for external hardware interrupt.
- A) 4
 - B) **2**
 - C) 1
 - D) 5
- 3) In 8051 microcontroller _____ interrupt set asides for serial communication.
- A) 4
 - B) 3
 - C) **1**
 - D) 5
- 4) The program which is associated with the interrupt is called_____.
- A) subroutine
 - B) **interrupt service routine**
 - C) Call
 - D) none of these
- 5) _____ instruction is used by microcontroller for return to the place where it is interrupted.

A) RET

B) **RETI**

C) CALL

D) none of these

6) The 8051 microcontroller has total _____ interrupts.

A) 4

B) 3

C) **5**

D) 2

7) In 8051 microcontroller upon reset all interrupts are _____.

A) **disabled**

B) enabled

C) no effect

D) none of these

8) _____ register is responsible for enabling and disabling interrupts.

A) TCON

B) SBUF

C) **IE**

D) IP

9) In 8051 microcontroller _____ interrupt has highest priority.

A) TF1

B) **INT 0**

C) INT 1

D) TF0

10) In 8051 microcontroller _____ interrupt has lowest priority.

A) TF1

B) INT 0

C) **serial communication**

D) TF0

11) In 8051 microcontroller to disable all interrupts _____ of IE register is used.

A) ET 1

B) **EA**

C) ES

D) EX 0

12) In 8051 microcontroller _____ flag set by hardware when timer/counter 0 overflows.

A) **TF0**

B) TF1

C) TR0

D) TR1

13) In 8051 microcontroller _____ flag set by hardware when timer/counter 1 overflows.

A) TF0

B) **TF1**

C) TR0

D) TR1

14) In 8051 microcontroller if a particular bit of IP register will set to 1, its priority becomes _____.

A) low

B) **high**

C) low or high

D) none of these

15) In 8051 microcontroller if a particular bit of IP register will st to 0, its priority Becomes _____.

A) **low**

B) high

C) low or high

D) none of these

16) In 8051 microcontroller the vector location of serial communication interrupt is _____ H.

A) 0000

B) **0023**

C) 001B

D) 0003

!7) In 8051 microcontroller the vector location of external interrupt INT 0 is _____ H.

A) **0003**

B) 0023

C) 001B

D) 0013

18) In 8051 microcontroller the vector location of External interrupt INT 1 is _____ H.

A) 0003

B) **0013**

C) 001B

D) 0023

19) In 8051 microcontroller the vector location of Timer interrupt TF0 is _____ H.

A) 0003

B) **000B**

C) 001B

D) 0013

20) In 8051 microcontroller the vector location of Timer interrupt TF1 is _____ H.

A) 0003

B) 000B

C) **001B**

D) 0013

21) SBUF is _____ bit register used in 8051 serial communication.

A) **8**

B) 16

C) 32

D) 64

22) -----flag indicates all data is transmitted through TxD line of 8051

A) TF

B) RI

C) **TI**

D) TR

23) -----flag indicates all data is received through RxD line of 8051

A) TF

B) **RI**

C) TI

D) TR

Unit-2 Real Word interfacing of 8051

1) The zero crossing detector circuit is used to generate _____ when AC sine wave crosses zero reference voltage.

A) sine wave

B) **square pulse**

C) triangular wave

D) none of these

2) The circuit component of zero crossing detector are _____.

A) stepdown transformer

B) rectifier

C) Schmitt trigger

D) **All of these**

3) The TRIAC is a high speed solid state device that we can be used to control _____ power

A) DC

B) **AC**

C) DC or AC

D) none of these

4) The solenoid valve operates due to _____ effect.

A) electric

B) **electromagnetic**

C) photo

D) none of these

5) To isolate microcontroller circuit from back emf -----device is used.

A) Transistor

B) LED

C) **Optocoupler**

D) IC 8255

6) ADC 0800 is used _____ bit digital to analog converter.

A) 4

B) **8**

C) 16

D) 32

7) If $V_{ref}/2$ pin of ADC 0808 is open it converts _____ analog voltage range into digital.

A) 0 to 2

B) **0 to 5**

C) 0 to 8

D) 0 to 10

8) If $V_{ref}/2$ left open i.e. Voltage span is 0-5V then step size is _____ mV.

A) 1.96

B) **19.6**

C) 15.69

D) 11.76

9) To get step size 10.04 mV input voltage range must be _____ V.

A) 0 - 5

B) 0 - 4

C) **0 - 2.56**

D) 0 - 1

10) ADC 0804 is used _____ bit analog to digital converter.

A) 4

B) **8**

C) 16

D) 32

11) If switch position of thumbwheel is 9 then _____ is BCD output.

A) **1001**

B) 1100

C) 0110

D) 0011

Unit -3 Application of 8051

1. ADC 0804 is a ---- bit ADC

a. **8**

b. 10

c. 12

d. 16

2. -----is a 8 bit ADC

a. LM35

b. DAC0808

c. **ADC0804**

d. BC107

3. LCD stands for

A.Liquid crystal Diode

B.Liquid crystal display

C.Luminance crystal diode

D.Lunen crystal display

4. Following is temperature sensor

A. LM35

B. DAC0808

C. ADC0804

D. BC107

5. PIR stands for
- A. Passive interrupt sensor
 - B. Passive infrared sensor**
 - C. Positive infrared sensor
 - D. Pre-active infrared sensor
6. ----- is used for numerical input in form of BCD
- A. LM35
 - B. DAC0808
 - C. ADC0804
 - D. Thumb wheel switch**
7. 8051 has -----interrupt
- 2
 - 3
 - 6**
 - 10
8. 8051 is -----bit microcontroller
- 2
 - 16
 - 8**
 - 10
9. In 8051 for serial communication-----pin is used for serial transmission
- 2**
 - 16
 - 8
 - 11
10. In 8051 for serial communication-----pin is used for serial reception of data.
- 2**
 - 16
 - 10
 - 11

11. in 8051 the interrupts are ----- A.edge triggered B.level triggered C.both a and b D. none
12. 8051 has -----number of timers
2
16
10
11
13. -----is called as electro mechanical switch
Transistor
Relay
LED
SCR
14. -----is called as electronics switch.
Transistor
Relay
LED
TRIAC
15. To compute the RPM of the DC motor following sensor can be used
PIR
Optocoupler
IR
LED
16. To control the speed of the DC motor -----technique is used
Voltage control
Power control
PWM control
Current control
17. To display the numeric number -----is used
Seven segment
LED
Relay
SCR

18. To display the alphanumeric values -----is used
Seven segment
LED
LCD
SCR
19. In LCD RS pin is used to select
Command register
Data register
Both a and b
None
20. In LCD D7 pin is used to show
Command
Data
Busy flag
MSB
21. --- technique is used for connecting the more than one seven segment display.
Time division multiplexing
Space division multiplexing
code division multiplexing
frequency division
multiplexing
22. In ADC0804 the INTR pin is used to
Start of conversion
End of conversion
Interrupt to process
Halt

1)In automatic street light control system using 8051_____ device is used.

- A) LCD
- B) transistor
- C) opto-coupler

D) **LDR**

2) If RS pin of LCD= 0 it will select_____ of LCD module.

A) **Command register**

B) Data register

C) both Command and Data register

D) None of these

3) For LCD to recognized information at the data pins as command its -----

A) **Pin RS=0**

B) Pin RS=1

C)pin E=1

D)pin E=0

4) If RS pin of LCD= 1 it will select_____ of LCD module.

A) Command register

B) **Data register**

C) both Command and Data register

D) None of these

5) Temperature measurement system , using 8051 we need-----.

A) ADC

B) temperature sensor

C) LCD display

D) **All of these**

6) For LCD to recognized information at the data pins as command its _____.

A) **Pin RS=0**

B) Pin RS=1

C) pin E=1

D)pin E=0

7) If $V_{ref}/2$ pin of ADC 0808 is open it converts _____ analog voltage range into digital.

A) 0 to 2

B) **0 to 5**

7

C) 0 to 8 D) 0 to 10

7

8) To avoid back emf generated during motor ON-OFF _____ is connected across the motor.

A) transistor

B) zener diode

C) **freewheeling diode**

D) none of the above

9) In water level control application there are _____ probes are used.

A) 2

B) 3

C) **4**

D) 6

10) In traffic control system ULN2003 is used as _____ .

A) amplifier

B) **current buffer**

C) voltage buffer

D) none

11) In three way traffic control system _____ LEDS are to be used.

A) 3

B) 6

C) **9**

D) 12

12) In speed measurement of the motor application using 8051_____ device gives pulses.

- A) LCD
- B) transistor
- C) **opto-coupler**
- D) LDR

13) In gate emulator system _____ are studied.

- A) register
- B) **logic gates**
- C) timer
- D) counter

14) _____is used in temperature measurement system.

- A) IC 7806
- B) IC ULN 2003
- C) **LM35**
- D) LDR

15) PIR stands for _____

- A) **passive infrared sensor**
- B) positive infrared sensor
- C) passive input sensor
- D) positive input sensor

23. In ADC0804 the WR pin is used to

- A) **Start of conversion**
- B)End of conversion
- C .Interrupt to process
- D. Halt

24. To detect the motion following sensor is used

A.PIR

B.Optocoupler

C.IR

D.LED

25. To detect the object following sensor is used

A.PIR

B.Optocoupler

C.IR

D.LED

UNIT 3

1. The combination of LED and photodiode is called as -----

A. PIR

B. Optocoupler

C. IR

D. LED

2. PIR sensor is used to detect –

A. Motion

B. RPM

C. PWM

D. Object

3. The seven segment is used to show -----

A. Numeric values

B. Alphabets

C. Alphanumeric values

D. ASCII

4. The output from the thumbwheel switch is in the form of ----

A. ASCII

B) Binary

C) BCD

D)Hexadecimal

5. The LCD is used to show -----

- A) Numeric values
- B) Alphabets
- C) **Alphanumeric values**
- D) ASCII

6. In ADC 0804 the WR -----pulse is used for stat of conversion

- A) **Low to high**
- B) High to low
- C) Low
- D) High

7. In LCD when RS =1 -----register is selected

- A) Command register
- B) **Data register**
- C) Both a and b
- D) None

8. In LCD when RS =0 -----register is selected

- A) **Command register**
- B) Data register
- C) Both a and b
- D) None

9. To enable the interrupts ----- configuration register is used

- A) **IE**
- B) TMOD
- C) PCON
- D) SCON

10. Timer configuration -----register is used

- A) IE
- B) **TCON**
- C) PCON
- D) SCON

11. IP register is used to
- A. Set the timer
 - B. Set the interrupt
 - C. Set the interrupt priority
 - D. Rest the interrupt priority
12. PWM signal is used to control-----
- A. Relay
 - B. DC motor
 - C. Stepper motor
 - D. Solenoid
13. LM 35 is a ----- A)Temperature sensor B) motion sensor
C)obstacle sensor D) light sensor
14. LM 35 gives the output in the form of -----
- A)Voltage
 - B) Current
 - C) Power
 - D)Binary
15. In IR sensor contains -----
- A) IR transmitter and receiver
 - B) IR transmitter only
 - C) IR receiver only
 - D) PIR
16. In PIR sensor the motion is detected using -----
- A. Thermal radiation from body
 - B. Motion of the body
 - C. Presence of the object
 - D. Presence of the body
17. For automatic street light -----is best suited
- A. PIR
 - B. IR
 - C,LM35

D.Optocoupler

18. In serial communication mode 1 has -----
- A. 1 start ,bit 0 stop bit and 8 bit data
 - B. 1 start ,bit 1 stop bit and 8 bit data
 - C. start ,bit 1 stop bit and 8 bit data**
 - D.start ,bit 1 stop bit and 0 bit data
19. -----is used as an external interrupt INTO
- A. 11
 - B. 12**
 - C. 13
 - D. 14
20. -----is used as an external interrupt INT1
- A. 11
 - B. 12
 - C. 13**
 - D. 14
21. -----is AC switch
- 1.Relay
 - 2.Photodiode
 - 3.TRIAC**
 - 4.Optocoupler
22. In 8051 -----port don't have internal pull-up register
- 1.Port 1
 - 2.Port 0**
 - 3.Port 2
 - 4.Port 3
23. In 8051 the interrupts can be enable and disable using ----register
- 1.IE**
 - 2.TCON
 - 3.PCON
 - 4.SCON

