

Yashwantrao Chavan College of Science, Karad

Question Bank

Subject Code : **79715** Subject Name : **Electronics Paper XI**

Common subject Code (if any) _-_____

Q.1 Multiple Choice Questions (1Mark Each)

1. To enable interrupts in the 8051_____ register is used. a. IE
b. IP
c. TCON
d. None of these
2. To change the interrupt priority in the 8051_____ register is used. a. IE
b. IP
c. TCON
d. None of these
3. The IE register is _____bit wide.
a. 10
b. 8
c. 16
d. 32
4. The external hardware interrupts of the 8051 are at _____pins. a. Port 0
b. Port 1
c. Port 2
d. Port 3
5. The interrupt vector location for the INT0 is _____.
a. 0000H
b. 0003H
c. 0013H
d. 000BH
6. To enable all interrupts _____ bit of IE must be high.
a. ES
b. EX1
c. EA
d. EX0
7. _____ interrupt has highest priority.
a. INT0
b. INT1

- c. ES
 - d. TF0
8. _____ bit of TCON register is used to set triggering method of INT0.
- a. IE0
 - b. IT0
 - c. TR0
 - d. TF0
9. The interrupt vector location for the INT1 is _____.
- a. 0000H
 - b. 0003H
 - c. 0013H
 - d. 000BH
10. TCON is _____ bit register.
- a. 2
 - b. 16
 - c. 8
 - d. 10
11. ADC0804 is _____ bit converter.
- a. 2
 - b. 16
 - c. 8
 - d. 10
12. The PWM technique in 8051 is used to _____.
- a. to convert analog voltage to digital
 - b. to control speed of the DC motor
 - c. to interface external memory
 - d. to interface relay with microcontroller
13. DAC0808 is _____ bit converter.
- a. 2
 - b. 16
 - c. 8
 - d. 10
14. To interface relay to 8051 _____ must be required.
- a. freewheeling diode
 - b. transistor
 - c. resistor
 - d. all of these
15. The output of the DAC0808 is in _____ form.
- a. Current
 - b. Voltage

- c. Both current and voltage
 - d. None of these
16. _____ pin of the ADC0804 is used to apply the start of the conversion signal. a. RD
- b. WR
 - c. INTR
 - d. D7
17. _____ technique is used to control speed of DC motor.
- a. PWM
 - b. PCM
 - c. PPM
 - d. None of the above
18. The advantage/s of the seven segment connected in the multiplex mode is _____.
- a. Reduces hardware
 - b. Reduces power
 - c. Both a and b
 - d. None of the above
19. _____ is an electronic component that transfers electrical signals between two isolated circuits by using light. a. Relay
- b. Resistor
 - c. Solenoid switch
 - d. Opto-coupler
20. In the temperature measurement system using 8051 we need _____
- a. ADC
 - b. Temperature sensor
 - c. Display
 - d. All of these
21. To study all logic gates _____ is used.
- a. Gate emulator system
 - b. Temperature monitoring system
 - c. Speed measurement system
 - d. Motion detection system
22. The speed of the rotational motion is measured in _____.
- a. Degree Celsius
 - b. RPM
 - c. Volt
 - d. Ampere
23. In the microcontroller based speed measurement system we need _____
- a. 8051

- b. Opto-coupler
 - c. LCD
 - d. All of these
24. The temperature coefficient of the LM35 is_____.
- a. 10mV/°C
 - b. 100mV/°C
 - c. 1mV/°C
 - d. 0.1 mV/°C
25. To study AND gate _____systems is useful.
- a. Motion detection system
 - b. Gate emulator system
 - c. Temperature monitoring system
 - d. Speed measurement system
26. For the motion detection _____ sensor is useful.
- a. Humidity
 - b. LM35
 - c. PIR
 - d. LDR
27. _____applications will be useful for the controlling speed of the DC motor.
- a. Motion detection system
 - b. Gate emulator system
 - c. Temperature monitoring system
 - d. Speed measurement system
28. For the automatic street light system _____ sensor is useful.
- a. Humidity
 - b. LM35
 - c. Pressure
 - d. LDR
29. In the automatic basin system _____ is/ are used .
- a. IR
 - b. Solenoid switch
 - c. Buffer
 - d. All of the above
30. _____ is the hardware tool/s used in the microcontroller.
- a. development boards
 - b. device programmer
 - c. in-circuit debugger
 - d. all of these
31. _____ is the software tool/s used in the microcontroller.

- a. Simulator
 - b. Compiler
 - c. Assembler
 - d. all of these
32. _____ is the feature of the microcontroller that require refreshed by user program.
- a. Brown-out reset
 - b. Watchdog timer
 - c. SPI bus
 - d. I²C bus
33. _____ is the feature of the reset microcontroller if the supply voltage falls below nominal value.
- a. Brown-out reset
 - b. Watchdog timer
 - c. SPI bus
 - d. I²C bus
34. _____ is the feature of the microcontroller used to receive absolute time and date information continuously.
- a. SPI bus
 - b. I²C bus
 - c. RTC
 - d. LCD drives
35. In _____ type of the architecture places data and code memory on the same bus.
- a. Von Neumann
 - b. Harvard
 - c. RISC
 - d. None of these
36. _____ is the feature of the microcontroller used in the wireless application.
- a. SPI bus
 - b. I²C bus
 - c. RTC
 - d. ZigBee
37. In _____ type of the architecture places data and code memory on separate bus.
- a. Von Neumann
 - b. Harvard
 - c. CISC
 - d. None of these
38. The feature/s of the CISC architecture_____.
- a. Large instruction set
 - b. Data and code on same bus
 - c. Data and code cannot fetch simultaneously

- d. All of these
- 39. The feature/s of the RISC architecture_____.
- a. Small instruction set
- b. Data and code on separate buses
- c. Data and code fetch simultaneously
- d. All of these
- 40. The 8051 is an example of _____architecture.
- a. Von Neumann
- b. Harvard
- c. RISC
- d. None of these

Q.2 Long Answer Questions (8 Marks Each)

1. Explain TCON register of 8051.
2. Explain IE and IP registers of 8051.
3. With proper circuit diagram and proper program explain how DAC0808 interfacing to 8051.
4. Explain how staircase waveform is generating using DAC0808 and 8051.
5. Explain interfacing of seven segment displays in multiplex mode with 8051.
6. With proper circuit diagram and program explain how ADC0804 interface to 8051.
7. Explain DC motor interfacing with 8051 using PWM techniques.
8. With proper circuit diagram and program explain gate emulator system.
9. With proper circuit diagram and program explain traffic control system using 8051.
10. With proper circuit diagram and program explain temperature measurement system using 8051.
11. With proper circuit diagram and proper program explain speed measurement system using 8051.
12. With proper circuit diagram and program explain automatic wash basin system using 8051.
13. Explain any four features of the modern microcontroller.
14. Explain Watch dog timer, brownout reset, I²C bus and SPI bus facility of microcontroller.
15. Explain CISC, RISC, Harvard and von Neumann architecture of modern microcontroller.

Q.3 Short Answer Questions (4 Marks Each)

1. Explain IE0,IT0, IE1 and IT1 bits consist in TCON register of 8051.
2. Write a short note on interrupt sources of 8051.
3. Write a short note on interrupt vector locations.
4. Write a short note on interrupt priority in 8051.
5. Explain TR0,TF0, TR1 and TF1 bits consist in TCON register of 8051.
6. Explain IE register of 8051.
7. Explain IP register of 8051.

8. Write a short note on interfacing of relay to 8051.
9. Explain interfacing of opto-coupler to 8051.
10. Write a short note on interfacing of thumbwheel switch and seven segment display to 8051.
11. Explain TRAIC drive circuit using 8051.
12. Write a short note on interfacing of DAC0808 to 8051.
13. Write a short note on interfacing of ADC0804 to 8051.
14. Write a short note on interfacing of solenoid switch to 8051.
15. Write a short note on PWM technique.
16. Write a short note temperature measurement system using 8051.
17. Write a short note speed measurement system using 8051.
18. Write a short note automatic wash basin system using 8051.
19. Explain in detail motion detection system.
20. Write a short note on street light control system using 8051.
21. Draw a circuit diagram of digital voltmeter system using 8051.
22. Write a short note on water level control system using 8051.
23. Draw a neat circuit diagram of traffic control system using 8051.
24. Compare Harvard and von-Neumann architecture.
25. Compare CISC and RISC architecture.
26. Explain any two Software development tools used in modern microcontroller.
27. Explain any two hardware development tools used in modern microcontroller.
28. Explain Watch dog timer and SPI bus facility of microcontroller.
29. Explain brownout reset and I²C bus facility of microcontroller.
30. Explain uses of development board and programmer.