No. of Printed Pages : 4 181055/171055/125952
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5th sem Branch : Eltx, Power Eltx
Subject:- Microcontrollers /
Microcontrollers & Applications

Time : 3Hrs. M.M. : 100

SECTION-A

Note: Multiple choice questions. All questions are compulsory (10x1=10)

Q.1 How many types of architectures are available, for designing a device that is able to work on its own ? (CO2)

a) 3 b) 2
c) 1 d) 4

Q.2 To identify that which key is being pressed, we need to : (CO3)

a) Ground all the pins of the port at a time
b) Ground pins of the port one at a time
c) Connect all the pins of the port to the main supply at a time
d) None of the mentioned

Q.3 Which pin of the external hardware is said to exhibit into interrupt INTO (CO1)

a) Pin no 9 b) Pin no 10
c) Pin no 11 d) Pin no 12

Q.4 Jz, JNZ, instructions checked content of _____ register. (CO3)

a) DPTR b) SP

c) PSW d) A

Q.5 What is a null modem connection ? (CO2)

a) No data transmission
b) No MAX232
c) The RxD of one is the TxD for the other
d) No serial communication

Q.6 Are PUSH and POP instructions are a type of CALL instructions (CO3)

a) Yes
b) No
c) None of the mentioned
d) Cant be determined

Q.7 When the microcontroller executes some arithmetic operations, then the flag bits of which register are affected ? (CO2)

a) PSW b) SP
c) DPTR d) PC

Q.8 What is the function of the SCON register ? (CO2)

a) To control SBUF and SMOD registers
b) To program the start bit, stop bit, and data bits of framing
c) To control SMOD registers
d) None of the mentioned

Q.9 What is the advantage of registers of indirect addressing mode ? (CO2)

a) It makes use of registers R0 and R1
b) It uses of data dynamically
c) It makes use of operator @
d) It is easy

Q.10 What is the only register without internal on-chip RAM address in MCS (CO2)

a) Stack Pointer b) Program Counter
c) Data Pointer d) Timer Register

SECTION-B

Note: Objective type questions. All questions are compulsory. (10x1=10)

Q.11 What is the full form of RTC ? (CO1)
Q.12 Define watchdog timer. (CO2)
Q.13 Define stack pointer. (CO1)
Q.14 What do you understand by term peripheral ? (CO4)
Q.15 Which bit of the flag register is set when output overflows to the sign bit ? (CO2)
Q.16 What is the width of the data bus in 8051 ? (CO1)
Q.17 Assembly language is referred to as a low level language. (True/ False) (CO1)
Q.18 Expand ADC. (CO3)
Q.19 8051 Microcontroller has _____ (4K/64K) bytes of Ram. (CO1)
Q.20 Define Opcode. (CO2)

SECTION-C

Note: Short answer type questions. Attempt any twelve questions out of fifteen questions. (12x5=60)

Q.21 Write a short note on "Assembler operations" (CO2)
Q.22 Explain Bus organization in 8051 (CO1)
Q.23 What do you understand from Assembly Language? Give examples. (CO1)
Q.24 What is debugger ? Explain its function. (CO3)
Q.25 Explain RISC. (CO2)

Q.26 What are the basic features of PIC Microcontroller ? (CO3)
Q.27 What is addressing mode ? Explain addressing modes used in 8051 ? (CO1)
Q.28 Explain the interrupts in 8051 microcontrollers. (CO2)
Q.29 Explain the interfacing of the Keypad with mocrocontroller. (CO3)
Q.30 Write a short note on " Digital to Analog (DAC) interface (CO3)
Q.31 What are the general-purpose registers used in 8051 microcontrollers (CO3)
Q.32 What is the Harvard Architecture ? (CO1)
Q.33 Explain Stack operation (CO2)
Q.34 Write a short note on " Timer operation". (CO3)
Q.35 Write a short note on " Interrupt Priority in 8051 Microcontroller". (CO2)

SECTION-D

Note: Long answer type questions. Attempt any two questions out of three questions. (2x10=20)

Q.36 Write the steps to execute an Assembly Language Program. (CO2)
Q.37 Draw and explain the block diagram of 8051 (CO1)
Q.38 Write and explain any five instructions belonging to data transfer instruction of 8051 (CO2)