

- Q.28 Define the general block diagram of 8051.  
 Q.29 Explain memory organization of 8051.  
 Q.30 Explain the program counter and data pointer,  
 Q.31 Compare the role of assembler and compiler.  
 Q.32 Write a short note on jump instruction.  
 Q.33 Explain the types of RTOS.  
 Q.34 Give the brief idea about AVR.  
 Q.35 Write a short note on program counter and stack pointer.

#### SECTION-D

- Note:** Long answer type questions. Attempt any two questions out of three questions. (2x10=20)  
 Q.36 Write the difference between micro-processor and micro controller  
 Q.37 Explain pin diagram of 8051 micro-controllers in detail.  
 Q.38 Explain the 8051 oscillator and clock and what is the relation between clock and crystal frequency.

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**4th Sem / IC**

**Subject:- Microcontroller and Embedded System**

Time : 3Hrs.

M.M. : 100

#### SECTION-A

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

- Q.1 8051 how many 16 bit register.  
 a) 1 b) 2  
 c) 3 d) 4  
 Q.2 How many bit in 1 nibble?  
 a) 3 b) 4  
 c) 1 d) 2  
 Q.3 How many pin in 8051 micro controllers?  
 a) 20 b) 30  
 c) 40 d) 10  
 Q.4 8051 uses which RAM location for register R0-R7  
 a) 00-2FH b) 00-07  
 c) 00-7F d) 00-0F  
 Q.5 What is the order decided by the processor to execute the instruction?  
 a) Decode, fetch, execute  
 b) Execute, fetch, decode  
 c) Fetch, execute, decode  
 d) Fetch, decode, execute

- Q6 ALU has bit
- a) 8                                      b) 16
- c) 32                                      d) 4
- Q.7 MOV instruction is type of
- a) Data transfer                      b) logical
- c) Jump                                      d) None of these
- Q8 Register that is used to holds the memory address of the next instruction to be executed is
- a) Program memory      b) Program Counter
- c) Control Unit                      d) Instruction decoder
- Q.9 Why microcontroller is not called general purpose register
- a) Because they have built RAM and ROM
- b) Because they to design perform dedicated task
- c) Because they are cheap
- d) Because they consume low power
- Q.10 Which of the following Instruction affect the Flag of the status Register?
- a) AND                                      b) INC
- c) OR                                      d) All of the mentioned

## SECTION-B

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

- Q.11 What is logical instruction?
- Q.12 What is DPTR.
- Q.13 What is stack memory.
- Q.14 What is parity flag
- Q.15 What is AVR?
- Q.16 Write two hardware interrupt name?
- Q.17 What is timer
- Q.18 Define Embedded system?
- Q.19 Program counter has 16 bit (Yes/No)
- Q.20 Write one application of 8051?

## SECTION-C

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

- Q.21 What is embedded system.
- Q.22 Write 4 application of embedded system.
- Q.23 Write a short notes PIC and ARM microcontroller.
- Q.24 Explain push and pop instruction by a one example.
- Q.25 What is microcontroller and write their applications?
- Q.26 Explain the different types of flag register.
- Q.27 Define A & B CPU register.