

- Q.26 What do you mean by memory management?  
 Q.27 How to transfer C or ASM code in microcontroller.  
 Q.28 Write the selection criteria of microcontroller.  
 Q.29 Discuss the steps involved in interfacing of 7 segment display.  
 Q.30 List any 5 characteristics of embedded system.  
 Q.31 What are the different types of processors used in embedded system?  
 Q.32 Write a short note on compiler.  
 Q.33 Discuss the steps involved in interfacing of LED.  
 Q.34 What is simulator and emulator?  
 Q.35 List any 5 applications of PIC?

### **Section-D**

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

- Q.36 Differentiate between 8051, PIC and AVR.  
 Q.37 Draw the block diagram of AVR and explain function of each block.  
 Q.38 Draw architecture of embedded system and explain its working in detail.

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181062C/171062C

**6th Sem / Eltx.**  
**Subject : Embedded Systems**

**Time : 3 Hrs.**

**M.M. : 100**

### **SECTION-A**

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

- Q.1 How an embedded system communicate with the outside world?  
 a) Memory                      b) Output  
 c) Peripherals                d) Input
- Q.2 Which of the following is an 8-bit RISC Harvard architecture?  
 a) AVR                        b) Zilog80  
 c) 8051                        d) Motorola 6800
- Q.3 RTOS stands for \_\_\_\_\_.  
 a) Real time output system.  
 b) Real time operating system  
 c) Rare time operating system  
 d) None
- Q.4 Which of the following enables the user to utilize the system efficiently?  
 a) Kernel                        b) Operating system  
 c) Software                      d) Hardware

- Q.5 The 8051 microcontroller is an \_\_\_\_\_ bit microcontroller.

a) 4                          b) 8  
c) 12                        d) 16

Q.6 The time taken to respond to an interrupt is known as

a) Interrupt delay      b) Interrupt time  
c) Interrupt latency    d) Interrupt function

Q.7 AVR is a family of \_\_\_\_\_ which was developed by Atmel company.

a) Microprocessors      b) Microcontrollers  
c) Bit processors        d) amplifiers

Q.8 Identify the standard software components that can be reused in an embedded system design?

a) Memory  
b) application software  
c) application manager  
d) Operating system

Q.9 Which of the following are hardware components of an embedded system?

a) Computer processor b) Device peripherals  
c) Computer memory d) all the above

Q.10 AVR stands for \_\_\_\_\_?

a) Alf and Vegard's RISC processor.  
b) Atmel Virtual processor  
c) Access Virtual Reader  
d) None of these

## Section B

**Note:** Objective types Questions. All Questions are compulsory. (10x1=10)

- Q.11 Expand PIC.,
  - Q.12 Give one application of embedded system.
  - Q.13 AVR is a \_\_\_\_\_ bit RISC' single chip microcontroller?
  - Q.14 8051 is a \_\_\_\_\_ bit microcontroller.
  - Q.15 Expand LED.
  - Q.16 What is embedded system?
  - Q.17 Name one software used in microcontroller.
  - Q.18 What is compiler?
  - Q.19 What is relay?
  - Q.20 PIC is based on \_\_\_\_\_ architecture. (Von Neumann/Harvard)

## **Section-C**

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

- Q.21 Write any 5 applications of embedded system.
  - Q.22 What do you mean by Real time operating system?
  - Q.23 Name the various factors affecting embedded system.
  - Q.24 Discuss different softwares used in microcontroller.
  - Q.25 Differentiate between embedded system and general purpose system.