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[NPTEL \(https://swayam.gov.in/explorer?ncCode=NPTEL\)](https://swayam.gov.in/explorer?ncCode=NPTEL) » Microprocessors And Microcontrollers (course)


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Course
outline

About
NPTEL ()

How does an
NPTEL
online
course
work? ()

Week 0 : ()

Week 1 ()

Week 2 ()

Week 3 ()

Week 4 ()

Week 5 ()

Week 7 : Assignment 7

The due date for submitting this assignment has passed.

Due on 2025-03-12, 23:59 IST.

Assignment submitted on 2025-03-08, 13:26 IST

1)

1 point

Find the value of TMOD for the the following constraints:

program timer 1 in mode 1, use 8051 XTAL for the clock source, and The timer should start or stop using internal instructions

a) TMOD = 02h

b) TMOD = 20h

c) TMOD = 10h

d) TMOD = 01h

a.

b.

c.

d.

No, the answer is incorrect.

Score: 0

Accepted Answers:

c.

Week 6 ()**Week 7 ()**

Lecture 32 :
8051
Microcontroller
(Contd.) (unit?
unit=73&lesso
n=74)

Lecture 33 :
8051
Microcontroller
(Contd.) (unit?
unit=73&lesso
n=75)

Lecture 34 :
8051
Microcontroller
(Contd.) (unit?
unit=73&lesso
n=76)

Lecture 35 :
8051
Microcontroller
(Contd.) (unit?
unit=73&lesso
n=77)

Lecture 36 :
8051
Programming
Examples
(unit?
unit=73&lesso
n=78)

Lecture
Material (unit?
unit=73&lesso
n=79)

**Quiz: Week 7
: Assignment
7
(assessment?
name=213)**

Feedback
Form (unit?
unit=73&lesso
n=159)

Week 07:
Assignment
Solution (unit?)

2)

In 8051, timer 1 run can be controlled by

- a) TR1
- b) TF1
- c) IE1
- d) IT1

- a.
- b.
- c.
- d.

Yes, the answer is correct.
Score: 1

Accepted Answers:

a.

3)

Which register in an 8051 microcontroller contains the SMOD bit?

- a) SBUF
- b) TMOD
- c) PCON
- d) TCON

- a.
- b.
- c.
- d.

Yes, the answer is correct.
Score: 1

Accepted Answers:

c.

4)

The delay produced by 8051 Mode 1 timer with TH=20 and TL=0F, crystal frequency 11.0592MHz is

- a) 5.183 milliseconds
- b) 62.201 milliseconds
- c) 60.201 milliseconds
- d) 52.38 milliseconds

- a.
- b.

1 point**1 point****1 point**

unit=73&less
n=196)

Week 8 ()

Week 9 ()

Week 10 ()

Week 11 ()

Week 12 ()

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- c.
 d.

Yes, the answer is correct.

Score: 1

Accepted Answers:

b.

5)

In Timer Control Register of 8051, Mode 0 use

- a) 13 bit timer
b) 16 bit timer
c) 8 bit timer
d) 12 bit timer

- a.
 b.
 c.
 d.

No, the answer is incorrect.

Score: 0

Accepted Answers:

a.

6)

Which pins of an 8051 microcontroller function as the RxD and TxD pins during a serial communication operation?

- a) TxD – P3.1, RxD – P3.0
b) TxD – P3.0, RxD – P3.1
c) TxD – P3.0, RxD – P3.0
d) TxD – P3.1, RxD – P3.1

- a.
 b.
 c.
 d.

No, the answer is incorrect.

Score: 0

Accepted Answers:

a.

1 point

1 point

- 7) **1 point**
- Default interrupt priority order in 8051 microcontroller?
- a) $INT0 > TF0 > INT1 > TF1 > RI + TI$
 - b) $INT0 < TF0 < INT1 < TF1 < RI + TI$
 - c) $INT1 > TF1 > INT0 > TF0 > RI + TI$
 - d) $INT1 < TF1 < INT0 < TF0 < RI + TI$

- a.
- b.
- c.
- d.

Yes, the answer is correct.

Score: 1

Accepted Answers:

a.

- 8) **1 point**
- which of the following instruction, program the IP register to assign the highest priority to TF0(Timer Interrupt 0)

- a) `MOV IP,#00000100B`
- b) `MOV IP,#00000010B`
- c) `MOV IP,#08h`
- d) `MOV IP,#01h`

- a.
- b.
- c.
- d.

No, the answer is incorrect.

Score: 0

Accepted Answers:

b.

- 9) **1 point**
- Suppose contents of IP register is 07h, what happens if INT0, INT1, and TF0 are activated at the same time. Assume the interrupts are edge-triggered.
- a) INT0 interrupt serviced first
 - b) INT1 interrupt serviced first
 - c) TF0 interrupt serviced first
 - d) All interrupts serviced at same time

- a.

- b.
- c.
- d.

Yes, the answer is correct.

Score: 1

Accepted Answers:

a.

10)

1 point

Assume that after reset, the interrupt priority (IP) is updated with instruction `MOV IP,#00001100B`. What is the correct order of priority.

- a) $INT0 > TF0 > INT1 > TF1 > RI + TI$
- b) $INT0 < TF0 < INT1 < TF1 < RI + TI$
- c) $INT1 > TF1 > INT0 > TF0 > RI + TI$
- d) $TF1 > INT1 > INT0 > TF0 > ri + TI$

- a.
- b.
- c.
- d.

No, the answer is incorrect.

Score: 0

Accepted Answers:

c.

11)

1 point

In idle mode of power control register, which of the following is not true?

- a) All of registers, ports and internal RAM maintain their data
- b) The ALE and PSEN output are held low
- c) The internal CPU clock is gated off
- d) Interrupt, Timer and Serial port functions act normally

- a.
- b.
- c.
- d.

No, the answer is incorrect.

Score: 0

Accepted Answers:

b.

12)

1 point

In idle mode of power control register, which of the following is not true?

- a) All of registers , ports and internal RAM maintain their data
- b) The ALE and PSEN output are held low
- c) The internal CPU clock is gated off
- d) Interrupt, Timer, and Serial Port functions act normally

- a.
- b.
- c.
- d.

No, the answer is incorrect.
Score: 0

Accepted Answers:

b.

13)

1 point

In serial communication which of the following mode of operation receives or transmits 10 bits?

- a) Mode 0
- b) Mode 1
- c) Mode 2
- d) Mode 3

- a.
- b.
- c.
- d.

Yes, the answer is correct.
Score: 1

Accepted Answers:

b.

14)

1 point

The following program generates a square wave on pin P1.5 Using timer1, Find the frequency. Consider XTAL = 11.0592 MHz.

```
MOV TMOD, #10H
AGAIN: MOV TL1, #34H
MOV TH1, #12H
SETB TR1
BACK: JNB TF1, BACK
CLR TR1
CPL P1.5
CLR TF1
SJMP AGAIN
```

- a) 3.25 Hz
- b) 15.14 Hz
- c) 7.57 Hz
- d) 6.57 Hz

- a.
- b.
- c.
- d.

Yes, the answer is correct.

Score: 1

Accepted Answers:

c.