

## Unit 10 - Week 8

## Course outline

How does an NPTEL online course work?

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Week 8

MSP430 Clock System and Reset

Interrupts in MSP430

Interrupts in MSP430-Continued

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## Assignment 8

The due date for submitting this assignment has passed.  
As per our records you have not submitted this assignment.

**Due on 2020-11-11, 23:59 IST.**

1) What will happen when there is a brownout condition? 1 point

- Only POR  
 Only PUC  
 First POR then PUC  
 First PUC then POR

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
First POR then PUC

2) Which of the following clock sources are not present in MSP430G2553? 1 point

- DCO  
 VLO  
 LFXT  
 XT2

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
XT2

3) What is the frequency range of DCO in MSP430G2553? 1 point

- 32K to 16MHz  
 16K to 60MHz  
 60K to 16MHz  
 16K to 25MHz

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
60K to 16MHz

4) After a POR, which of the following does not happen: 1 point

- Status register is cleared  
 PC is loaded with reset vector  
 Watchdog timer becomes active.  
 I/O pins are switched to output.

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
I/O pins are switched to output.

5) How many average number of Instructions per seconds can the MSP430 microcontroller perform if it is operating a program at 8 MHz clock frequency? Assuming each instruction in the program is taking an average 3 clock cycles. 1 point

- 2.66 MIPS  
 4.5 MIPS  
 1 MIPS  
 None of the above

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
2.66 MIPS

6) Which of the following flags when '1' represent generation of non – maskable interrupt? 1 point

- ACCVIFG  
 TAIFG  
 OFIFG  
 WDTIFG

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
ACCVIFG  
OFIFG

7) Global Interrupt Enable bit can disable Non Maskable Interrupt. The statement is 1 point

- True  
 False  
 Depends on whether individual interrupt enable bit is set or not  
 True if the RST/NMI pin is configured in reset mode.

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
False

8) What all contents of the main program should be stored on Stack before servicing an interrupt subroutine? 1 point

- Program Counter only  
 Content of Flag register only  
 Program Counter and Status Register  
 None of the above

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
Program Counter and Status Register

9) Which Interrupt source has the highest priority and lowest priority in MSP430 Microcontroller? 1 point

- RESET ; TIMER  
 PORT1 ; RESET  
 RESET ; PORT1  
 NMI ; PORT1

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
RESET ; PORT1

10) What is the correct sequence for execution of an Interrupt subroutine? 1 point

- PC and SR contents of the main program are stored on Stack.
- SR is cleared.
- Contents of stack are restored into PC and SR
- Interrupt flag is cleared
- Interrupt subroutine code is executed
- Interrupt with highest priority is selected and associated subroutine is selected.

- 1 → 2 → 3 → 4 → 5 → 6  
 1 → 4 → 6 → 5 → 3 → 2  
 1 → 2 → 6 → 5 → 4 → 3  
 2 → 1 → 5 → 4 → 3 → 6

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
1 → 2 → 6 → 5 → 4 → 3