

Course No: EQUP 3324  
Course Title: Microcontroller.  
Date: 15 / 03 / 2017  
No. of Questions:4  
Time: 60 min.  
Using Calculator (Yes)

University of Palestine



1<sup>st</sup> Midterm Exam  
2<sup>nd</sup> Term 2016/2017  
Total Grade: 15

Instructor Name: Eng. M. Timraz  
Student No.: \_\_\_\_\_  
Student Name: \_\_\_\_\_  
College Name: Engineering  
Dep. / Specialist: Biomedical Eng.  
Using Dictionary (No)

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**Q1: Design with drawing a bus system to transfer data form 8 registers which has 4 bits for each, using multiplexers? (03/15)**

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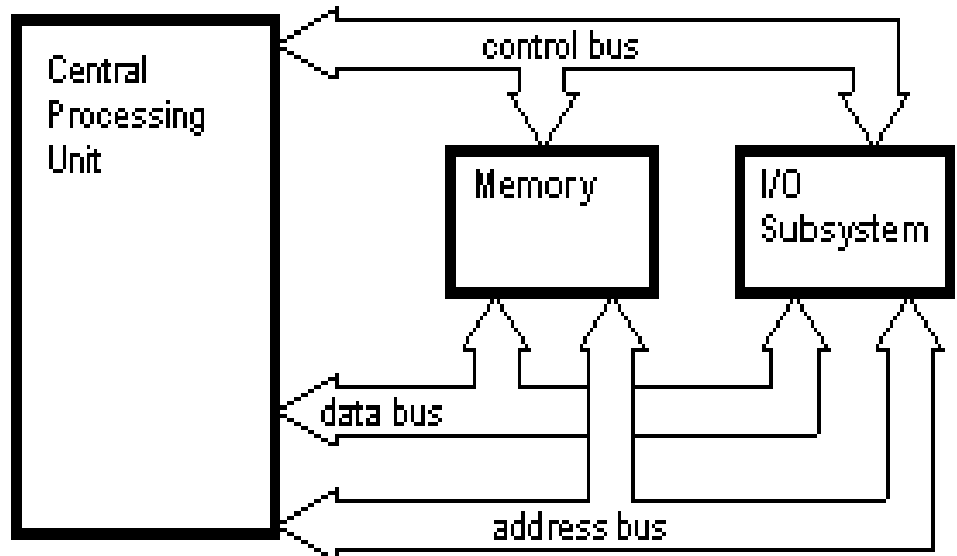
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**Q2: For the following Fig. if the instruction set was 24 bit for accessing a memory contains 1024 registers, How many lines for *data* and *address* bus lines? (03/15)**



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**Q3: Correct the wrong line for the following code program as shown in the table below?**  
 (04/15)

No.	Invalid code program	Correction code program
a.	Void main ()	
	{	
	TRISA=0,	
	PORTA=0,	
	Delay_mm(1000),	
	PORTA=0B00000000,	
b.	}	
	Void main	
	(	
	TRISB=0B00000000	
	PORTB=0,	
	Delay_mm(1000),	
	TRISB=0B00000011,	
	Delay_mm(2000),	
PORTB=0;		
c.	PORTB=0B00011111,	
	)	
	Void main ()	
	{	
	TRISA=1,	
	TRISB=0,	
	PORTA=0B0000,	
	PORTB=0B00000000;	
	Delay_us(2000),	
	PORTA=0B00011111;	
	Delay_ms(2000);	
PORTA=0B00010101;		
Delay_ms(2000);		
PORTA=0B00000000;		
}		

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**Q4: Write a Micro C program to control "10 LEDs" were connected with a Pic 16F877A, and then draw the external block diagram for the Pic and the connected LEDs with pins and pin's number? (5/15)**

Good Luck.