Course Title: **Computer Programming2**
Date: **12.06.2016 (Final Exam)**

Course Code: **CCE1204** - 1st year ElectStudents
Allowed time: **3** hours No.of pages 2

Answer all the following questions:

Question 1: (10 marks)

Implement a Class Point that has the following characteristics:

Constructors including a default constructor that sets the Point to the origin ,

Modifier **methods** to modify the coordinate of the point (**SetX( ), SetY( ))** ,

Access **methods** to know the point coordinates **(GetX( ), GetY( ))** ,

A method **Move** that shifts the coordinates of the point ,

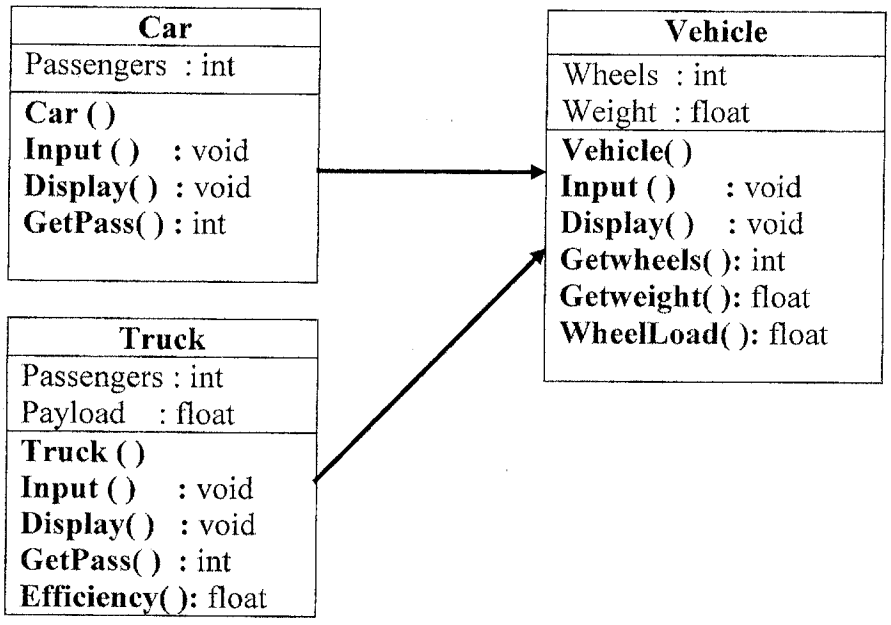
A method to **display** the coordinates of the Point .

write a C++ program to test your class? And draw the class diagram.

Question 2: (20 marks)

a. **What** is the difference between the Structure, the Union and the Enumerator declarations? **Show** the memory size for each. **Explain your answer with example?**

b. **Write a complete C++ program to implement and fully declare the classes represented by the following UML:**



Question 3: (20 marks)

It is required to design and implement an array class, called **MyArray**. The class should provide the following features:

1. ***A constructor that creates a dynamic store for the elements in an array. The default constructor should store up to 100 items of integers.***
2. ***A destructor.***
3. ***A method, Find(), that can check if a given item is in the array or not.***
4. ***A method, Insert(), that can insert a given item into the array.***
5. ***A method, Delete(), that can delete a given element from the array.***
6. ***A method, Display(), that can display the contents of the array.***

An object of **MyArray** contains an array of integers with the following values **(77, 99, 44, 55, 22, 88, 11, 00, 66, 33)** by the **Insert** Function. The program would also ask its user to enter an item from the keyboard that to be deleted from the array. The object should response to the user by display the current elements in the array. **Finally, write a complete C++ program that can accomplish all of the above tasks, don't forget to draw the appropriate UML diagram.**

Question 4: (10 marks)

Write the output of the following programs.

```
#include <iostream>
#include <string>
using namespace std;
struct Name{
string Firstname, Lastname;
};
struct Student{
int year;
Name N;
};
void main(){
Student S1;
S1.year=6;
S1.Name.Firstname="Mostafa";
S1.Name.Lastname="Ahmed";
cout<<"S1"<<S1.Name<<endl;
}
```

```
#include <iostream>
using namespace std;
void main()
{
    int number[]={1,3,5,7,9};
    int *ptr=number;
    cout<<number[0]<<"  "<<(*(ptr+1)
    +  (*(ptr+2));
}
```

With my **Best wishes** *Dr. Eng. Elsayed Sallam*

Tanta University

Department: Engineering Physics and Mathematics
Total Marks: 85 Marks

Faculty of Engineering

Course Title: Engineering Mathematics(2B) | Course Code: PME1206 | Year: 1st Electrical Eng.
Date: JUNE. 5th 2016 (2nd term) | Allowed time: 3 Hrs | No. of Pages: (2)

Remarks: Answer All of The Following Questions

PART I (45 MARKS)

Question Number 1 (45 Marks)

i) Plot the following function, then find its Fourier cosine series. [15 Marks]

$$f(x) = \begin{cases} cosx & 0 \le x < \frac{\pi}{2}, \\ 0 & \frac{\pi}{2} \le x < \pi. \end{cases} \quad , \; H.P. = \pi.$$

ii) Find Laplace transform of the following functions: [10 Marks]

a) $f(t) = t\,u(t-3),$ *b)* $f(t) = 3\,e^{-4t}(cos\,4t - t\,sin\,4t).$

iii) Find Inverse Laplace transform for: [10 Marks]

a) $\frac{(2S-1)}{(S^3-S)}$, *b)* $\frac{S-9}{(S-9)^2+13}$.

iv) Solve the following O.D.E. using Laplace Transform: [10 Marks]

$$y''' + 2y'' - y' - 2y = 0, \quad y(0) = 1, \quad y'(0) = y''(0) = 2.$$

PART II (40 MARKS)

Question Number (2) (every item has 8 marks)

i) Find the integral surface $u = u(x,y)$ *for* $(yu_x)^2 + (xu_y)^2 = (xyu)^2,\ u(x,0) = e^{x^2}.$

ii) For the following linear PDE

$$2u_{xx} - 3u_{xy} + u_{yy} - y = 0.$$

a) Determine the nature of the equation,
b) Reduce the equation to canonical form,
c) Find the general solution if it is possible.

P.T.O.

iii) Find the general solution of the system

$$\frac{dX}{dt} = \begin{bmatrix} -0.5 & 1 \\ -1 & -0.5 \end{bmatrix} X.$$

iv) Use the technique of separation of variables to solve the following initial-boundary value problem (the wave equation)

$$u_{tt} - 4u_{xx} = 0, \quad 0 < x < 1, \quad t > 0,$$

subjected to the following initial-boundary conditions

$$u(0,t) = 0, \quad u(1,t) = 0,$$

$$u(x,0) = 1, \quad u_t(x,0) = 1.$$

v) In an electric transmission line, the voltage (v) and the current (i) satisfy the following first order PDEs

$$C\,v_t + i_x = -Gv, \qquad v_x + Li_t = -R\,i\ .$$

where C is the Capacitance, L is the Inductance, R is the Resistance and G is the Leakage Conductance. All of them are per unit length.

a) Describe the propagation of the current through the transmission line if $G = R = 0$.

b) What is the distribution of the voltage in x- t space if $G = R = 0$ *and* $0 < x < 1,\ t > 0$, *for the homogeneous boundary conditions and Non-homogenous initial conditions.*

With Best Wishes

Course Examination Committee and Course Coordinators

Dr. Eng. Mohamed Elborhamy Dr. Eng. Yaser Gamiel

TANTA UNIVERSITY

Electrical Power and Machines Department

Faculty of Engineering

Final EXAM 2015/2016- Second Term

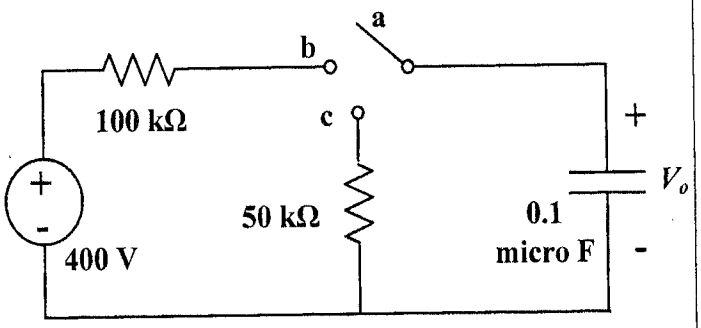
Course	Electrical Circuits (2) (EPM1203)	Time Allowed	3 hours
Students	1st Year (Electrical)	Total Marks	85
Date	June 9th , 2016	Number of pages	4

قبل أن تبدأ إجابتك الرجاء قراءة التعليمات العامة الآتية والالتزام بها بكل دقة:	
١. اكتب رقم السؤال بوضوح.	٢. استخدم الرسومات التوضيحية ذات البيانات الواضحة والكاملة كلما أمكن.
٣. أجب بوضوح سواء باللغة الإنجليزية أو العربية.	٤. لا يشترط الإجابة بترتيب الأسئلة في ورقة الامتحان.
٥. افترض قيمًا معقولة لأية بيانات ناقصة.	٦. فيما عدا الرسومات لا تستخدم القلم الرصاص إلا في أضيق الحدود
٧. ابدأ إجابة كل السؤال في بداية صفحة جديدة (إلا إذا تعذر ذلك)	٨. تجنب تمامًا في إجاباتك استخدام: • اللونين الأحمر والأخضر • سائل التصحيح corrector

Answer ALL the following SIX questions and problems:

The first question (9 marks)

The capacitor in the circuit shown in Figure is initially uncharged. At time t=0 the three-position switch is moved from position "a" to position "b", where it remained for 15 ms. Then after the 15 ms delay, the switch is moved to position c, where it remains indefinitely.

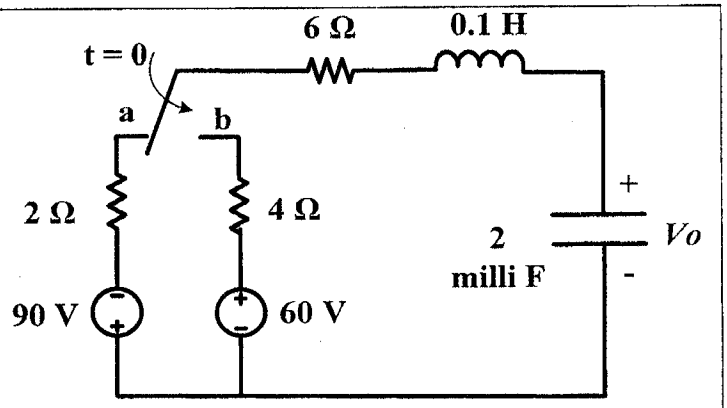


1) Derive an expression for the voltage across the capacitor from t=0 to infinity.
2) Plot the capacitor voltage versus time for a suitable range.
3) When will the capacitor voltage equal each of the following values:
   a) 150 V b) 310 V c) 350 V

The second question (13 marks)

1. A series RL circuit is supplied from an ac sinusoidal voltage source of rms value of V_s, angular frequency of ω and phase shift of θ with respect to the time reference. If the circuit has zero initial stored energy, **show with brief explanation** the general form of the transient current when supply is switched on at time=0. **(4 marks)**

PLEASE TURN OVER

2.	The switch in shown figure has been moved from position "a" to position "b" at time t=0. **Find** a time expression for *the voltage across capacitor* for $t \geq 0$ **(9 marks)**	

The third question (20 marks)

A balanced three-phase, **acb-phase sequence**, Y-connected generator has an impedance of **0.2 + *j*0.3** Ω/phase. The generator feeds two balanced three-phase loads connected in parallel;

Load 1 is **Y**-connected with an impedance of **4 + *j*5** Ω/phase

Load 2 is Δ-connected with an impedance of **6 – *j*9** Ω/phase

The loads are fed from a distribution line with an impedance of **0.6 + *j*0.4** Ω/phase.

If the magnitude of the line voltage, $\mathbf{V_{CB}}$ (at the terminals of the loads) equals **200∠0** V, **answer the following:**

(i) **Construct** a single-phase equivalent circuit.

(ii) **Specify** the **three-phase values** (magnitude and phase angle) of the following:

1. The phase voltage at the terminals of each load
2. The phase current of each load
3. The current in the line feeding the loads
4. The line voltage at the generator terminals
5. The generator internal phase-voltage

(iii) **Calculate** the total **average, reactive** and **apparent** power delivered to each load.

(iv) **Calculate** the total **instantaneous** and **apparent** power delivered by the generator.

The fourth question (18 marks)

1.	When one coil of a two magnetically-coupled pair has a **current** of **5 A**, the resulting fluxes Φ_{11} and Φ_{21} are **0.1 mWb** and **0.4 mWb** respectively. If the number of turns N_1 =**500** and N_2=**1500**, **find** the self-inductances of the coils, the mutual inductance, the coefficient of coupling and the permeances P_1 and P_{21}. **(6 Marks)**

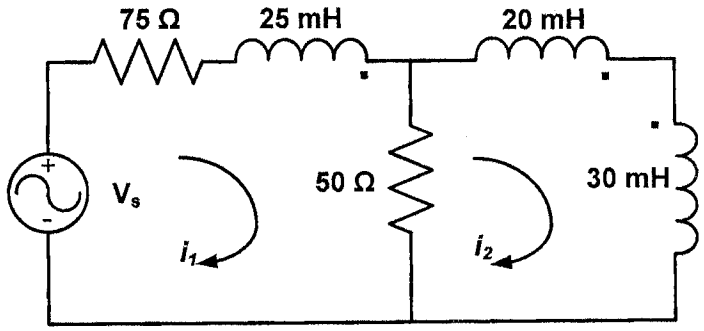
PLEASE TURN OVER

2. **The circuit shown has three perfect magnetically-coupled coils.** **(8 Marks)**

(i) **Determine** the mutual inductance between any of the two magnetically-coupled coils

(ii) **Write** a set of mesh-current equations that describe the circuit in terms of i_1 ***and*** i_2 (in both **time** and **frequency** domain).

(iii) **Simplify** the series branch, containing **20 mH** and **30 mH** coils, to a single equivalent coil.



3. **Derive** a general expression of the total **energy stored** in two magnetically-coupled coils. **Show** how the **polarity-marked (dotted) terminals** affect the final value of the **stored energy**. **(4 Marks)**

The fifth question (15 marks)

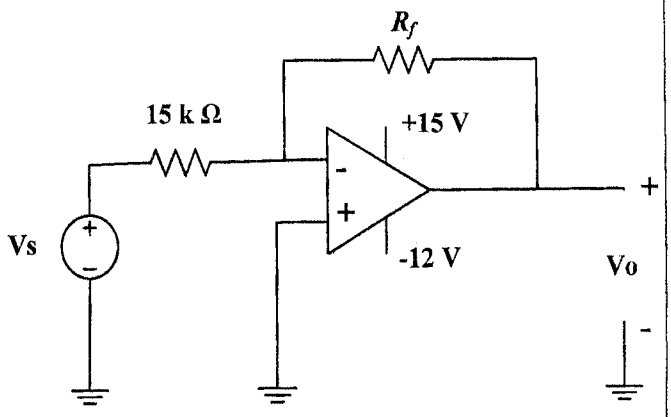
1. **Sketch** a top view of a 741 operational amplifier package with a description for each of its terminals. **(3 marks)**

2. With the aid of **a circuit diagram** and **suitable relations**, **explain** how an operational amplifier can be used to get difference between two signals. Clarify how to achieve *unity scaling factors*. **(5 marks)**

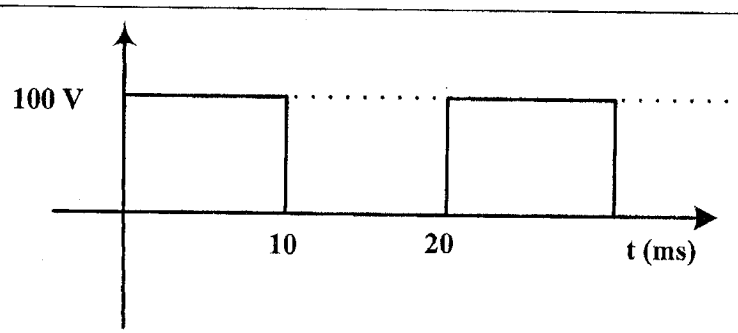
3. The operational amplifier shown in the figure is ideal.

a) For R_f=75 kΩ, **specify** the range of V_s required to avoid amplifier saturation. (3 marks)

b) For V_s=2 V, what is the permissible range of R_f to avoid saturation? (3 marks)



PLEASE TURN OVER

4.	The given figure shows output voltage time variation of a DC chopper. Plot the Fourier series spectrum up to the fifth harmonic. **(5marks)**	

The Sixth Question (10 points)

Write down in your answer sheet the statement number ONLY followed by either ✓ mark for correct statements or X mark for incorrect ones. ***Explanation is NOT needed!***

1.	The inductor current is proportional to its voltage time rate.
2.	The capacitor voltage is completely defined at time=0 (the beginning of transient period)
3.	The inductance does not allow instantaneous voltage variation.
4.	For RL circuits, the time response is faster for higher values of the resistance R
5.	For series RLC circuits, the response tends to be oscillatory with increasing value of R.
6.	For parallel RLC circuits, the resistor voltage does not change instantaneously.
7.	For delta-connected three phase systems, the line voltage lags phase voltage
8.	The current in neutral line of *unbalanced* star-connected three-phase systems is zero.
9.	The mutual inductance between two coupled coils does not exceed the product of their self-inductances
10.	The integrating operational amplifier has a capacitor across its output terminals.

Good Luck and best wishes

Prof. Essam Eddin M. Rashad, Dr. Said M. Allam and exam committee

Tanta University

Department: Elec. Power and Machines Engineering
Total Marks: 90 Marks

Faculty of Engineering

Course Title: Electrical Measurements	**Course Code: EPM1202**	**Year: First year**
Date: 2/6/ 2016 (Second term)	**Allowed time: 3 hrs**	**No. of Pages: (2)**

الإمتحان مكون من 3 أسئلة فى صفحتين

Answer the following questions

Problem number (1) (21 Marks)

a) Define the following terms: Gross errors, precision, instrument efficiency, limiting error, accuracy and resolution. **(7 points)**

b) Compare between electrical and mechanical instruments. **(7 points)**

c) Write the equation of dynamic response for analogue instruments, describe and sketch the different response conditions. **(7 points)**

Problem number (2) (21 Marks)

a) Define the components of permanent magnet moving coil shown in Figure 1. **(7 points)**

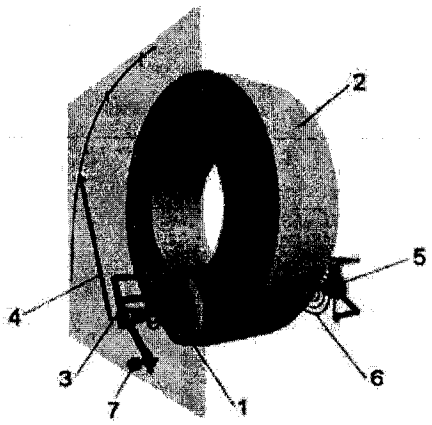


Figure 1

b) Why PMMC instruments are used to measure DC quantities only? How it could be used in measuring AC quantities? **(7 points)**

c) A PMMC instrument with full-scale deflection of 2 mA and a coil resistance of 200 Ω is to be converted into a voltmeter with multi ranges. The required ranges are: 0-20 V, 0-100 V, 0-500 V and 0-1000 V. Design a suitable multiplier resistance for this instrument. **(7 points)**

Problem number (3) (21 Marks)

a) A PMMC meter having an internal resistance of 8 Ω is used as a series ohmmeter with a full-scale deflection of 20 μA and an internal battery voltage of 6 V. The ohmmeter is designed for a half scale deflection of 200 kΩ. Calculate the values of ohmmeter resistances, i.e., R_1 and R_2. **(7 points)**

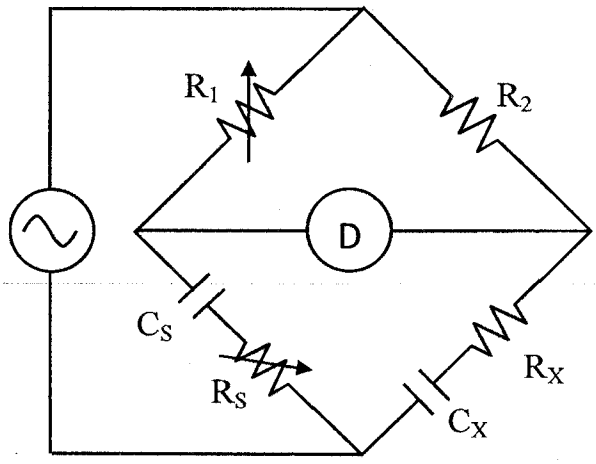
b) Compare between the accuracy of ammeter-voltmeter method, series Ohmmeter, shunt Ohmmeter and DC bridges for measuring electrical resistances. **(7 points)**

c) Mention the main advantages and disadvantages of Electrodynamic instruments. How can they be used to measure high currents? **(7 points)**

Problem number (4) (27 Marks)

a) Supported by net sketches, compare between Attraction and Repulsion types moving iron instruments. **(7 points)**

b) Derive the balance equations of the shown bridge. If R_1 = 100 Ω, R_2 = 33 Ω, and the balance takes place when R_S = 400 Ω and C_S = 1.5 μF, find the unknown capacitance and resistance. If the resistance R_2 is replaced by an impedance comprising a resistance and an inductance ($Z_2 = R_2 + j\omega L_2$), find the value of R_2 and L_2 to achieve the balance once again. Assume that the supply frequency is 50 Hz.



(8 points)

c) Describe in detail the operation principle of capacitive transducer and explain how it can be used to measure different physical quantities. **(6 points)**

d) Based on your reading, give full details about modern and advanced applications of the cathode ray oscilloscope. **(6 points)**

Good Luck

Course Examination Committee

Prof. Ahmed Refaat

Dr. Doaa Mokhtar

Prof. Essam Eldin Mohamed Rashad

٢١

Tanta University

Department: Electronics & Comm. Engineering
Total Marks: 90 Marks

Faculty of Engineering

Course Title: Electronics (2)	Course Code: EEC1202	Year: First Year
Date: May 2016 (Second term)	Allowed time: 3 hrs	No. of Pages: (2)

Remarks: (answer the following questions… assume any missing data… answers should be supported by sketches…etc)

Question number (1) (18 Marks)

1 (a) Choose the right answer :

1. The current in the MOSFET is controlled by an electric field perpendicular to the surface of the semiconductor. ( ) ***True*** ( ) ***False***
2. The drain current is directly proportional to the width-to-length ratio of the MOSFET . ( ) ***True*** ( ) ***False***
3. The voltage gain of the common source amplifier is directly proportional to the value of transconductance. ( ) ***True*** ( ) ***False***
4. Diac is a three terminal bidirectional diodes. ( ) ***True*** ( ) ***False***
5. UJT is a two terminal device whose trigger voltage is proportional to its applied biasing voltage. ( ) ***True*** ( ) ***False***
6. In a graded index fiber , the total reflected light takes a straight line path . ( ) ***True*** ( ) ***False***
7. In band to band absorption of a semiconductor ,the photon energy must be smaller than the band gap to allow optical absorption. ( ) ***True*** ( ) ***False***
8. Laser diode is a reverse biased *p-n* junction in which photons emitted are confined by an optical cavity. ( ) ***True*** ( ) ***False***
9. The Diac is commonly used to control the SCR triggering. ( ) ***True*** ( ) ***False***
10. The resistance of a photoconductive cell decreases linearly with an increase in incident light. ( ) ***True*** ( ) ***False***

(b) In Fig.1 , (i) calculate the drain current . (ii) What is the change in the current if W/L ratio is changed to 25/1.
Assume: $\lambda = 0$, $\mu_n C_{ox} = 25\ \mu A/V^2$, $V_{TH} = 0.75$ V . Comment on your results.

Question number (2) (18 Marks)

(a) For an NMOS device, if $V_{TH} = 0.8$ V , $\mu_n C_{ox}$ (W/L) $= 0.2$ mA/V^2, $V_{GS} = 2.5$ V. Calculate the drain current and the output resistance when $V_{DS} = 2$V (i) for $\lambda = 0$ and (ii) for $\lambda = 0.02\ V^{-1}$. Discuss your results.

(b) For the circuit shown in Fig,2 , Calculate the gate to source voltage , the drain current and the power dissipated in the transistor .Given $V_{TH} = 0.8$ V , $\mu_n C_{ox}$ (W/L) $= 0.1$ mA/V^2.. Is the circuit can be used as an amplifier? Explain.

Question number (3) (18 Marks)

(a) For the source follower shown in Fig.3 if the drain current =1 mA, and the voltage gain = 0.8. Calculate V_{GS} , W/L , and R_S . Assume $V_{DD} = 1.8$ V, $R_G = 50$ kΩ. Given $V_{TH} = 0.5$ V, $\lambda = 0$, and $\mu_n C_{ox} = 100\ \mu A/V^2$

(b) (i) Describe the basic structure and operation of diacs and triacs.
(ii) Sketch the circuit diagram of a basic SCR over voltage protection and explain its operation and the function of each element.

Question number (4) **(18 Marks)**

(a) (i) Explain the operation of the circuit shown in Fig.4

(ii) Calculate the period and frequency of oscillation ,if the PUT turns on when the voltage at the anode is 0.5V greater than the voltage at the gate .

(b) A semiconductor LED with a band gap of 2.5 eV , what wavelength of light will it emit ? Can you use it to efficiently detect photons of wave length (i) 900 nm (ii) 100 nm? ($h = 4.14 \times 10^{-15}$ eV.s , speed of light = 3×10^{8} m/s) .Comment on your results.

Question number (5) **(18 Marks)**

(a) Consider the operation of a photoconductor under illumination. Prove that the photocurrent gain depends on the ratio of carrier lifetime to the transit time.

(b) (i) Describe the construction and working of solar cells, and explain the following parameters: conversion efficiency, spectrum splitting, and antireflection coating .

(ii) If we use a Si photo-detector to detect a light of wavelength of 650 nm. Calculate the refractive index , thickness, and reflection coefficient of the antireflection coating. Assume the refractive index of Si and air are 3.6 and 1 respectively.

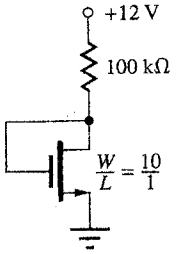


Fig.1

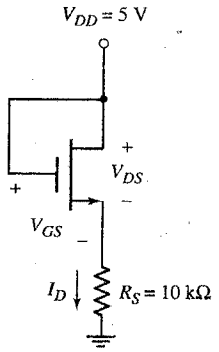


Fig.2

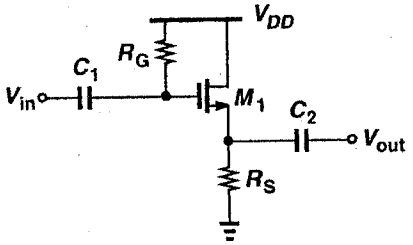


Fig.3

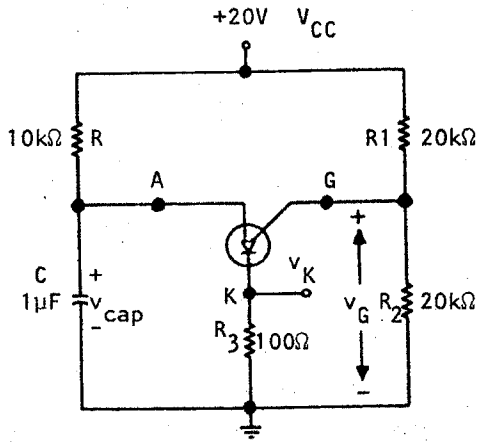


Fig.4

Good Luck..... Prof. Mustafa Mahmoud .

Tanta University

Department: Computers and Automatic Control Eng.
Total Marks: 70 Marks

Faculty of Engineering

Course Title: Computer Hardware	Course Code: CCE1205	Year: 1st
Date: June 16th 2016	Allowed time: 3 hrs	No. of Pages: (4)

Answer the following questions

Question 1(20 pts): Choose the correct answer

1. The main advantages of register addressing mode are
   a. Flexibility and Speed
   b. Speed and number of address bits
   c. Address bits
   d. All of the above

2. Which of the following is highest in memory hierarchy
   a. Cache memory
   b. Secondary memory
   c. Registers
   d. RAM

3. Cache memory acts between
   a. CPU and RAM
   b. RAM and ROM
   c. CPU and main memory
   d. None of these

4. The control operations among the components in a microcomputer takes place via the.....
   a. I/O bus
   b. Data bus
   c. Address bus
   d. Control lines

5. RAM is called DRAM (Dynamic RAM) when
   a. it is always moving around data
   b. it requires periodic refreshing
   c. it can do several things simultaneously
   d. none of the above

6. If multiplexers are used to construct a common bus system for 6 registers of 32 bit each. How many selection inputs of each MUX?
   a. one
   b. two
   c. three
   d. none is correct

7. Which memory unit has lowest access time?
   a. Cache
   b. Registers
   c. Magnetic Disk
   d. Main Memory

8. FIFO replacement algorithm is not used with ..... mapping function.
   a. Direct
   b. Associative
   c. Set-Associative
   d. None of These

9. In which addressing mode the operands are given by their names in the instruction
   a. Absolute
   b. Immediate
   c. Indirect
   d. Direct

10. Which of the following instruction is valid MIPS instruction?
    a. lw $t0, $t1($t3)
    b. lw $t0, $t1(4)
    c. lw $t0, 4($t3)
    d. None of These

11. How many 512x8 RAM chips are needed to provide a memory capacity of 2048 bytes?
    a. 2 chips
    b. 4 chips
    c. 8 chips
    d. None of These

12. Assembly language

a. uses alphabetic codes in place of binary numbers used in machine language
b. is the easiest language to write programs
c. need not be translated into machine language
d. None of These

13. The average time required to reach a storage location in memory and obtain its contents is called the
a. Seek time
b. Turnaround time
c. Access time
d. Transfer time

14. Write Through technique is used in which memory for updating the data
a. Virtual memory
b. Main memory
c. Cache memory
d. A and C

15. The instruction 'add A' is a
a. Machine Instruction
b. High level instruction
c. Assembly instruction
d. Memory instruction

16. A group of bits that tell the computer to perform a specific operation is known as
a. Micro-operation
b. Operation code
c. Machine instruction
d. None of These

17. The circuit used to store one bit of data is known as
a. Encoder
b. Decoder
c. Flip-Flop
d. None of These

18. What characteristic of RAM memory makes it not suitable for permanent storage
a. too slow
b. unreliable
c. it is volatile
d. too bulky

19. Which MIPS-32 addressing mode allows you to specify a constant in the instruction that can be directly used by the CPU without needing any data from the registers or memory?
a. Register-only addressing
b. PC-Relative Addressing
c. Immediate addressing
d. None of These

20. Which MIPS-32 addressing mode allows you to get data from memory location
a. Register-only addressing
b. PC-Relative Addressing
c. Base Addressing
d. None of These

Question 2(10 pts): True or False

1. Operand data can be represented in any order in an instruction.
2. Addressing modes define where operand values are stored.
3. MIPS-32 has 16-bit word size.
4. The replacement algorithms are used with direct mapping function.
5. A "word" is the natural unit of organization of memory. Different computers may have different word lengths (in bits).
6. SRAM needs a refreshment circuit to recharge.
7. In MIPS-32 the instruction length is 26-bit.

8. Address lines indicate which device has permission to use the bus and for what purpose.
9. In MIPS-32, the register-only addressing mode is used for I-type instructions.
10. Virtual memory is used as an extension for cache memory.

Question 3 (20 pts)

1) **(5 pts)** A computer employs RAM chips of 512 x8 and ROM chips of 512x8. The computer system needs 1K bytes of RAM, 1K bytes of ROM. Draw the complete diagram for such system.

2) **(5 pts)** A Direct mapped cache has a capacity of 16-word cache and a block size of 2 words. Consider the following repeating sequence of **lw** addresses (given in hexadecimal):

40 44 48 4C 70 74 78 7C 80 84 88 8C

Determine the effective miss rate if the sequence is input to the following caches, ignoring startup effects.

3) **(5 pts)** Consider a virtual memory system that can address a total of 32 bytes. You have unlimited hard disk space, but are limited to only 8 MB of semiconductor (physical) memory. Assume that virtual and physical pages are each 2 KB in size. What is the total size of the page table in bytes? (Assume that, in addition to the physical page number, each page table entry also contains some status information in the form of a valid bit (V) and a dirty bit (D)).

4) **(5 pts)** A set-associative cache consists of 64 lines, or slots, divided into four-line sets. Main memory contains 4K blocks of 128 words each. Show the format of main memory addresses.

Question 4 (20 pts)

1) **(6 pts)** Write an MIPS-32 program for compute area of a square.

2) **(6 pts)** Convert the following high-level code to MIPS-32 code:

High-Level Code

```
int main() {
   long y;
   int x;
   y=factorial(x);
}
long factorial (int n) {
```

```
    long z;
    z=1;
    int i;
    for(i=1;i<=n;i++)
       z=z*i;
    return(z);
}
```

3) **(4 pts)** What is the difference between DRAM and SRAM in terms of characteristics such as speed, size, and cost?

4) **(4 pts)** Convert the following high-level code to MIPS-32 code:

High-Level Code

```
int array[5];
array[0] = array[0] * 8;
array[2] = array[2] * 8;
```

Good Luck all,

Dr. Nada M. Elshennawy