



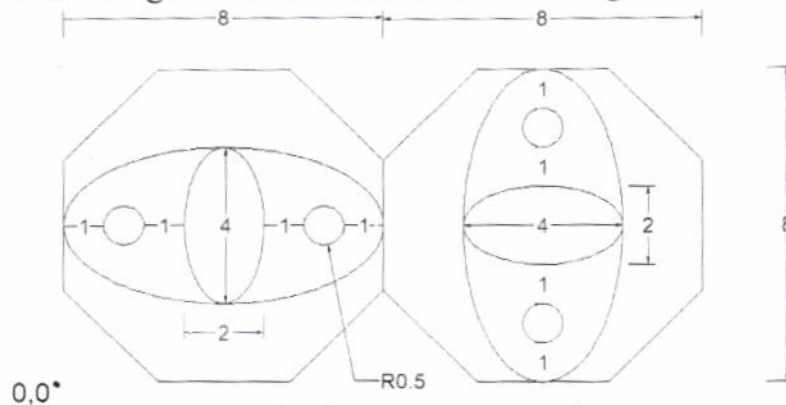
Subject :Computers Principles  
Branch :All Engineering Branches  
Examiner :Computers Committee

Class: First Year  
Time :3Hours  
Date : 10 /6 /2014

**NOTE: Answer (4) Questions Only / Each Question Has (25) Degree**

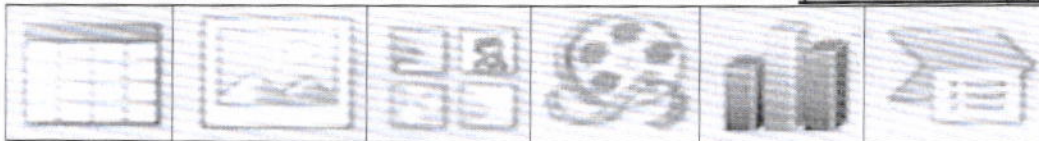
**Q1.a.** List the two basic components of **CPU**, explain the functions of each of them briefly.(10%)

**b.** Draw the figure below using **AutoCAD** commands.The figure start from the point **(0,0)**.(15%)



**Q2.a.** Explain the name and function of icons in PowerPoint slides.(choose 5 only).

(10%)



**b.** Fill the cells **D1** to **E5** using **Excel** functions.

(15%)

	A	B	C	D	E
1	2	1	3	=AVERAGE(C1:C3)	= INT(C2/2)
2	-1	-2	-3	= MIN(A1:C3)	= ABS(A2-B2)
3	4	5	6	= COUNT(B1:C2)	= SIGN(B3)
4	5	4	6	= SUM(A1:C2)	= SQRT(A4+B4)*2
5	10	5	12	= MAX(A3:B5)	= A5-A5/B5-B5

**Q3.a.** Choose the appropriate words from following list to fill the blanks.

(10%)

(Bridge, WAN, Router, LAN, OS, Firewall, HTTP, Internet Protocols, HTML, FTP).

- 1.----- is a device that forwards data from one network to another.
- 2.----- is software or hardware that checks information coming from the Internet.
- 3.----- are set of rules determines how computers communicate with each other.
- 4.----- connects a group of users in the different countries.
5. ----- is short for Hyper Text Transfer Protocol.

**b.** Answer the following questions in Microsoft Word application.

(15%)

1. What is the advantage of use **Borders** command?
2. In what menu the **Font** command is found?
3. How is using the **Merge Cells** command different from **Split Cells** command?
4. Explain the purpose of **Sort** command.
5. What is the command used for add **Special Characters** to the document?

Q4. a. Convert the following equation to appropriate formula in MS- Excel application. (10%)

$$Z = e^x \cdot \sqrt[3]{\frac{2X^2}{\sqrt{e^{2X}}}} + \sin(X)^2 \cdot \log(X + Y) - \ln|(X \cdot Y)^3|$$

b. What is the shape result from execute following commands in AutoCAD application. Put all the necessary coordinates on the resulting shape. (15%)

Command : Circle  
Specify center point for circle:0,0  
Specify radius of circle:6

Command: Line  
Specify first point :5,-8  
Specify next point :12,-8  
Specify next point :12,8  
Specify next point :5,8  
Esc

Command: Line  
Specify first point :-5,-8  
Specify next point :-12,-8  
Specify next point :-12,8  
Specify next point :-5,8  
Esc

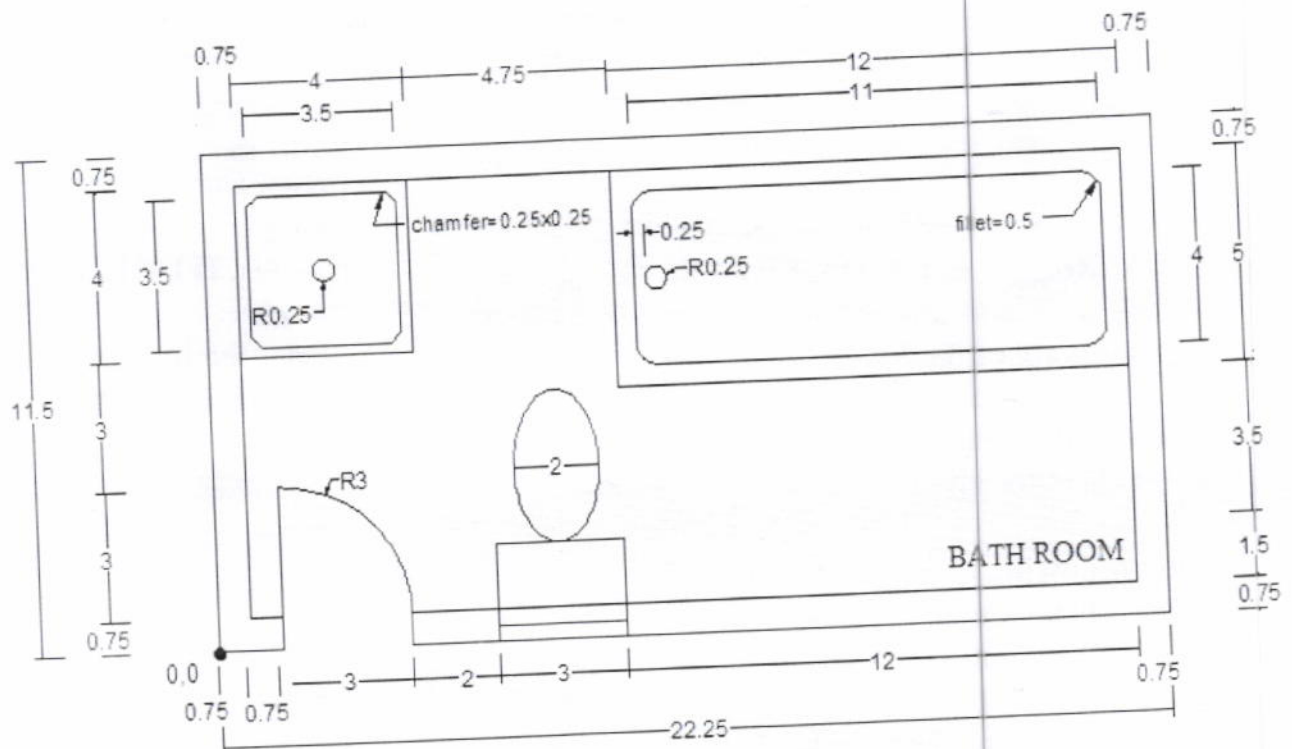
Command: Arc  
Specify 1<sup>st</sup> point :5,8  
Specify 2<sup>nd</sup> point :0,10  
Specify end point: -5,8

Command: Arc  
Specify 1<sup>st</sup> point :-5,-8  
Specify 2<sup>nd</sup> point :0,-10  
Specify end point: 5,-8

Command : Ellipse  
Specify axis end point : 9,6  
Specify other end point: 9,-6  
Specify distance to other axis :1

Command : Ellipse  
Specify axis end point : -9,6  
Specify other end point: -9,-6  
Specify distance to other axis :1

Q5. Draw the Bath floor plan on board its sides are (25, 15 ft), note that the figure Start from Original point (0, 0). Use Relative Polar Coordinate System. (25%)







**Q1.a. (10 mark).**

- CPU contains two units:

1. **Control Unit (CU).**
2. **Arithmetic and Logic Unit (ALU).**

**1. Control Unit (CU).**

This unit control or supervised to all parts of computers such as:

- Control operations for transfers data and instruction from input unit to memory and from memory to output unit.
- Control operations of account executable instructions on ALU.
- Basic work of CU is interpreter the instructions that is mean data oriented to specific location on ALU. for example: if the instruction is (B+C) the B,C values transfers to (Adder) part, if the instruction is (BxC) the B,C values transfers to (Multiplier) part,

**2. Arithmetic and Logic Unit (ALU).**

This unit execute the following operations:

- Mathematical operations such as: add (+), abstract (-), multiplier ( $\times$ ), divide ( $\div$ ).
- Logical operations: this is basic to account comparisons to choose true or false specific case, such as  $>$ ,  $<$ ,  $>=$ ,  $<=$ ,  $<>$ ,  $=$  as a result of these comparisons specific instructions may be executable.
- Merge number of simple comparisons by specific tools such as: AND, OR, NOT.

**b. (15 mark)**

Command: Pol

Enter number of sides:8

Specify center point or [edge]:4,4

Specify radius of circle:4

Command: Pol

Enter number of sides:8

Specify center point or [edge]:12,4

Specify radius of circle:4

Command : ellipse

Specify axis end point of ellipse: 4,2

Specify other end point of axis: 4,6

Specify distance to other axis :1

Command : ellipse

Specify axis end point of ellipse: 0,4

Specify other end point of axis: 8,4

Specify distance to other axis :2

Command : ellipse  
Specify axis end point of ellipse: 10,4  
Specify other end point of axis: 14,4  
Specify distance to other axis :1

Command : ellipse  
Specify axis end point of ellipse: 12,0  
Specify other end point of axis: 12,8  
Specify distance to other axis :2

Command : C  
Specify center point for circle:1.5,4  
Specify radius of circle:0.5

Command : C  
Specify center point for circle:6.5,4  
Specify radius of circle:0.5

Command : C  
Specify center point for circle:12,1.5  
Specify radius of circle:0.5

Command : C  
Specify center point for circle:12,6.5  
Specify radius of circle:0.5

**Q2. a. (10 mark)(choose 5 only).**

**Table:** it is used to insert a table onto an existing slide.

**Picture:** insert a picture from file to slide.

**Clipart:** insert clipart to slide including drawing, movies, sounds or stock photography to illustrate a specific concept.

**Move and Sound:** a great way to add some interest to the Power Pint Presentations is to add sounds and movies to slides.

**Charts :**are used to represent numeric data graphically. Bar, pie ,line ,area and surface are some of the available type.

**Smart art:** insert smart art graphic to visually communicate information. such as diagram and organizations.

**b. (15 mark)**

D	E
2	-2
-3	1
4	1
0	6
10	3

**Q3. a. (10 mark).**

1.Router      2.Firwall      3.Internet Protocol      4.WAN      5. Http

b.(15 mark)

**1.Borders:** A border can be placed around any text, paragraph, table cells and pages .

**2.Home menu**

**3.Merge Cells:** to make many cells one cell where **Split Cells:** To split one cell to two cells or more cells .

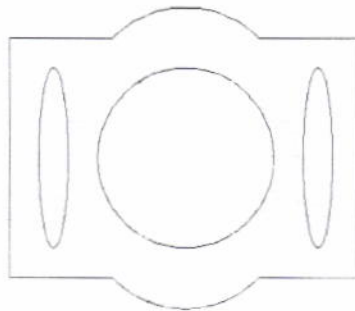
**4.Sort:** to arrange a list of data ascending (0 to 9, A to Z), or descending (Z to A, 9 to 0) orders.

**5.symbol**

**Q4. a.**(10 mark)

$$Z= \exp(X)*((2*X^2)/\sqrt{\exp(2*X))^{(1/3)}+\sin((X*3.14/180)^2)*\log(X+Y)-\ln(\text{abs}(X*Y)^3)$$

b. (15 mark)



**Q5. (25 mark)**

Draw walls

Command: Line (enter)

Specify first point: 0, 0

Specify next point:@1.5<0

Specify next point:@0.75<90

Specify next point:@0.75<180

Specify next point:@10<90

Specify next point:@20.750<0

Specify next point:@10<270

Specify next point:@17<180

Specify next point:@0.750<270

Specify next point:@17.75<0

Specify next point:@11.5<90

Specify next point:@22.25<180

Specify next point:@11.5<0 or c

or

Command: Line (enter)

Specify first point: 0, 0

Specify next point:@11.5<90

Specify next point:@22.25<0

Specify next point:@11.5<270

Specify next point:@17.750<180

Specify next point:@0.750<90

Specify next point:@17<0

Specify next point:@10<90

Specify next point:@20.750<180

Specify next point:@10<270

Specify next point:@0.75<180

Specify next point:@0.75<270

Specify next point:@1.5<180 or c

Draw Washbasin

Command: Rec

Specify first corner point:0.75,6.75

Specify other corner Point:@5.656<45

Command:Rectangle (enter)

Command:Chamfer

Specify first chamfer distance for rectangle :0.25

Specify second chamfer distance for rectangle: 0.25

Specify first corner point: 1,7

Specify other cornerpoint:@4.949<45



Command : C

Specify center point for circle: 2.75,8.75

Specify radius of circle:0.25

#### Draw tub

Command: Rec

Specify first corner point:9.5,5.750

Specify other corner Point:@13<22.619

Command: Rec

Specify first corner point or []:F

Specify fillet radius for rectangles:0.5

Specify first corner point:10,6.25

Specify other corner Point:@11.704<19.983

Command : C

Specify center point for circle: 10.375,8.25

Specify radius of circle:0.25

#### Draw Water closet

Command: Rec

Specify first corner point:6.5,0.750

Specify other corner Point:@3.354<26.565

Command : ellipse

Specify axis end point of ellipse or []: 8,2.25

Specify other end point of axis:@3.5<90

Specify distance to other axis or [Rotation]:1

#### Draw window

Command: Line

Specify first Point :6.5,0

Specify next Point :@0.75<90

Command: Line

Specify first Point :9.5,0

Specify next Point :@0.75<90

Command: Line

Specify first Point :6.5,0.375

Specify next Point :@3<0

#### Draw door

Command: Line

Specify first point :1.5,0.75

Specify next Point :@3<90

Command: arc

Specify 1<sup>st</sup> point:4.5,0.75

Specify center point:1.5,0.75

Specify included angle:90