Kafrelsheikh University
Faculty of Engineering
Preparatory Year
Final Exam, 2018-2019
Date: 15 / 1 / 2019

Computer Technology
Time: 180 minutes
Mark: 60
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[ILOS: a1,a2, b2, b3, b4]
Do NOT use a scientific calculator!
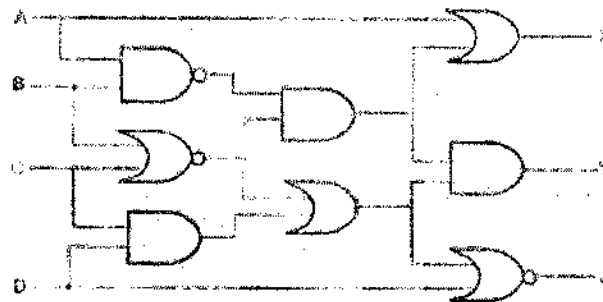
Problem 1: (10 Marks)
Calculate the following:

a) Explain how to convert the following **binary** numbers to the **decimal** numbers

    a) **11010.11**   b) **0.11001**   c) **1000001**   **(6 Marks)**

b) Explain how to convert the following **decimal** numbers to the **binary** numbers

    a) **0.25**   b) **84**   c) **47.40625**   **(6 Marks)**

Problem 2: (20 Marks)

(a) Obtain W from the truth table in the Sum Of Products (SOP) form. Draw the logical circuit to implement it. Then, Simplify the logical expression W and Draw the logical circuit to implement it after simplification. **(8 Marks)**

A	B	C	W
0	0	0	0
0	0	1	1
0	1	0	1
0	1	1	1
1	0	0	0
1	0	1	1
1	1	0	1
1	1	1	0

(b) What is the output of the following circuit for the binary inputs? **(6 Marks)**

Explain how to choose the correct answer foe the following quistions:

(c) The Boolean function $Y = AB + CD$ is to be realized using only 2 input NAND gates. The minimum number of gates required is: **(3 Marks)**

    (a) 2   (b) 3   (c) 4   (d) 5

(d) Minimum number of 2 input NAND gates required to implement the function, $F = (\bar{X} + \bar{Y})(Z + W)$ is : **(3 Marks)**

    (a) 3   (b) 4   (c) 5   (d) 6

<< Software Part >>

Answer ALL the following questions:

Question 3 *(10 Marks)*

(a) There are two main types of memories for storing data in computer. Mention with examples.

(b) Mention different types of software. Give an example of each.

(c) What are the levels of programming languages?

(d) Mention different types of viruses that affect the PC. How can they affect the computer?

(e) What HTML stands for? Mention the main elements of HTML page

(f) Write the main format of the **<div>** tag statement.

(g) Write the basic code of the anchor tag **<a>** to pointer to Google webpage.

(h) In webpage design, we study two different types of URLs. Mention them with examples.

Question 4 *(10 Marks)*

A. Confirm if the following sentences are Right ☑ or Wrong ☒ : *(10 of 20 Marks)*

1- *Any* Game software is an application program.

2- The **<div>** tags are used to design the Webpage Layout.

3- Cache memory is one of the primary storage memory.

4- The **CSS** page used to create the Website.

5- Touch-Pad is one of the famous memory devices.

6- CD-ROM device can hold more data than DVD device.

7- To pointer to any another html page, we must use "Add Hyperlink" option.

8- ALU is the part of the computer performs the arithmetic calculations.

9- The steps to "attach a CSS page" to a certain HTML page is "create new site".

10- One of the steps of adding an image to a website is "attach hyperlink".

11- Smart Cards is one of the secondary memory device.

12- A URL is an address that specifies a protocol, web server, and file path

13- Android software is one of the system software.

14- One of the steps of adding video to a website is attach dynamic page

15- To add hyperlinks to the website, we need to write **<div> tag**.

16- One of the pages supported by Web Expression 4 is XML.

17- Antivirus software can be infected (يصاب بـ) by a virus.

18- Webpage " *.dwt* " stands for a Dynamic web Template

19- If a computer is described to have 512 Mbytes of memory, it refers to ROM memory.

20- Internet is a good media for preventing viruses.

21- We must use "Add Hyperlink" option to pointer to any another html page.

22- In Software Copyright Issue, the Shareware software means trial period software.

B. Choose the suitable answer: *(10 of 20 Marks)*

[1] GH-yahoo , is the basic code of .... Hyperlink.

    A) Google   B) Yahoo   C) YouTube   D) Facebook

[2] Removing Unused Programs refers to -------------

    A) Defragment   B) Uninstall a program   C) Recovery   D) Back up

[3] Anti-virus is -------- program.

    A) virus   B) application   C) hardware   D) operating systems

[4] Computer architecture depends on ------

    A) hardware   B) software   C) user   D) All the previous

[5] Which storage device cannot be erased?

    A) CD-ROM   B) Floppy disk   C) Magnetic tape   D) Hard Disk

[6] What unit is used to measure the speed of a CPU?

    A) MHZ   B) MB   C) KB   D) Bit

[7] One of the steps of adding an video to a website is ………

    A) insert->Media   B) insert->picture   C) attach dynamic page   D) Attach Style Sheet

[8] …… *page* is a page type of MS expression web.

    A) CSS   B) HTML   C) PHP   D) All the previous

[9] The contents of these chips are lost when the computer is switched off.

    A) DRAM chips   B) ROM chips   C) RAM chips   D) Cash Memory

[10] -------- means *frees up space* on your hard disk drive.

    A) Back up   B) Recovery   C) Disk Cleanup   D) Format

[11] To write the main title of your special webpage, you use the tag ……..

    A) ..   B) <a>..   C) <title>..</title>   D) <div>..</div>

[12] -------------- some common operating systems.

    A) Windows   B) Dos   C) UNIX   D) All the previous

[13]   In Software Copyright & Law, the Freeware software means downloaded --------

A) fully free   B) free trial period   C) not free   D) Not of the previous

[14]   One of the two types of URLs used is ......

A) Absolute   B) picture   C) dynamic page   D) Not of the previous

[15]   Information security covers protection *against* ---------- to protect computer from failure.

A) viruses & hackers   B) passwords   C)Laws   D) Not of the previous

[16]   ---------- must be considered to achieve (بحقق) Information security of computer.

A) Secure password   B) Using UPS   C) Shutdown   D) All the previous

[17]   Restore an image for my operating system with all its contents refers to ---------

A) Backup   B) Recovery   C) Clean Up   D) Format

[18]   One of the steps of adding an image to a website is ....

A) insert->hyperlink   B) insert->picture   C) attach dynamic page   D) Attach Style Sheet

[19]   Touch Screen (in ATM machine) is an --------- device.

A) Memory   B) Input/ Output   C) Input   D) Not of the previous

[20]   One of the famous *supercomputer* operating systems is ---------------

A) Windows   B) Dos   C) Android   D) Linux

[21]   To create a Google Search box in our web page, we must first create ....

A) Video   B) Hyperlink   C) Style Sheet page   D) dynamic page

[22]   The <div> tags are written only inside ..... part of the HTML page.

A) title   B) head   C) footer   D) body