INTRODUCTION TO IT SYSTEMS

Time Allowed: 2.5 Hours

Full Marks: 60

Answer questions from Group-A, B & C as directed.

GROUP-A

1. Choose the correct answer from the given alternatives (Any Ten):   1 X 10 = 10

(i) A web browser is an application that is used to

(a) find and retrieve webpage. (b) send e-Mail (c) prepare a document (d) none of these.

(ii) In any search engine user can

(a) use of two or more keywords   (b) use of +   (c) use of And   (d) All of these.

(iii) A small program that gets loaded in the computer without the user knowledge and replicate itself repeatedly called:

(a) Worms   (b) Virus   (c) Browser   (d) None of these.

(iv) What is the term for unsolicited email?

(a) Spam   (b) Worm   (c) Browser   (d) News Group.

(v) Rules to exchange data between computers are called

(a) Procedure   (b) protocols   (c) hyperlink   (d) program

(vi) CPU scheduling is the basis of

(a) Large memory size system   (b) Multiprogramming system

(c) Multiprocessing system   (d) none of the above.

(vii) Which of the following errors will be handled by the operating system?

(a) Lack of paper in printer   (b) Connection failure in the network

(c) Power failure   (d) All of the mentioned above.

(viii) Decimal equivalent of 16 in hexadecimal

(a) 22_{10} (b) 16_{10} (c) 10_{10} (d) 20_{10}

(ix) The number of bits used to store a BCD digit is

(a) 2   (b) 1   (c) 4   (d) 8

(x) What is the resultant binary equivalent of the decimal problem 49 + 1 =

(a)   00110010   (b) 01010101   (c)   00110001   (d) 00110101

(xi) Flowcharts and Algorithms are used for

    (a) better programming   (b) easy testing and debugging

    (c) efficient coding   (d) all of these.

(xii) Which of the following HTML tag is used for inserting the largest heading in HTML?

    (a) <h1>   (b) <h3>   (c) <h5>   (d) < h6 >

(xiii) In how many way can CSS be written in?

    (a) 1   (b) 2   (c) 3   (d) 4

(xiv) When a user views a page containing a JavaScript program, which machine actually executes the scripts?

    (a) The user machine running a web browser   (b) The web server

    (c) A central machine deep within Netscape office   (d) none of the above

(xv) Which of the following is not a cybercrime?

    (a) Denial of Service   (b) Man in the middle   (c) Malware   (d) AES.

2. Fill in the Blanks (Any Ten):   1 X 10 = 10

i.   _____ is a type of software that is embedded in hardware.

ii.   Universal gates are those gates that can be used for implementing any _____ function without any other types of gates. https://www.wbscteonline.com

iii.   A + 0 = A is an example of _____ Law.

iv.   The Operating System _____ is responsible for interacting with hardware.

v.   In _____ scheduling, each process is given a small amount of time to execute.

vi.   _____ attack is an attempt to make a computer resource unavailable to its intended.

vii.   _____ is a batch file stored in the root directory of the hard-disk.

viii.   A group of four bits is called a _____.

ix.   The advantage of DRAM over SRAM is that it is _____, can hold more data per chip and generate less heat.

x.   _____ software is machine independent.

xi.   _____ is a service that automatically converts domain names into IP addresses.

xii.   Gray code equivalent of 1001 in Binary code is _____.

xiii.   A _____ language is computer language that uses tags to define elements within a document.

xiv.   When designing a flowchart, each step in the process is depicted by a _____ and is associated with a short description.

xv.   Number of types of errors in JavaScript's is _____.

3. Answer the following questions (Any Ten): $1 \times 10 = 10$

i. What is the maximum number of outputs a logic gate can have?

ii. Write De Morgan's first Law.

iii. Identify the device which receives analog data and creates its digital equivalent.

iv. Define Booting.

v. What is the first page of a website called?

vi. Write the full form of HTTP.

vii. Is it possible to run a computer without operating system? Write your opinion.

viii. Write the full form of SSD.

ix. Differentiate between Data and Information.

x. What is BIOS?

xi. Write the utility of Cache Memory.

xii. Define Truth Table.

xiii. Write the utility of Command Line Interpreter.

xiv. Write the full form of URL.

xv. What is Malware?

GROUP-B

4. Answer the questions (Any Six): $2 \times 6 = 12$

i. Write the differences between SRAM and DRAM.

ii. Why should we use more than one search engine simultaneously?

iii. How is 8-4-2-1 code different from 4-2-2-1 code?

iv. "Two's complement is the most popular technique to represent signed number". Justify the statement.

v. Is there any difference between compiler and an interpreter?

vi. With the help of an example, explain the use of flow chart.

vii. Does all HTML tags have an end tag ?

viii. Write the utility of a scripting language.

ix. How does a virus get installed in a computer?

x. Define source code and Executable code.

GROUP-C

$6 \times 1 = 6$

5. Answer the questions (Any One):

(a) (i) How can two numbers be subtracted only through addition ?

(ii) What do you mean by Universal Logic Gates?

Why Universal Logic Gates are called Universal?

(iii) Why SSD is faster than Hard Disk? $2 + (1+2) + 1 = 6$

(b) (i) Write the utility of Excess-3 code .

(ii) Convert the number $(5674)_8$ into the hexadecimal system.

(iii) Write the advantages of multiprocessing operating system. $1 + 3 + 2 = 6$

(c) (i) What are the basic function of an Operating System ?   2 + 2 + 2 = 6

(ii) Write the differences between Primary Memory and Secondary Memory.

(iii) What are the difference between multiprogramming and time sharing System?

6. Answer the questions (Any One):   6 X 1 = 6

(a) (i) Why algorithm is used before any programming ?   2 + 4 = 6

(ii) Draw a flow chart to find out highest number among the three different numbers.

(b) (i) Write the advantages of the flowcharts.

(ii) Describe the use of different symbols used in any flow chart with suitable

example.   1 + 3 + 2 = 6

(iii) How an image can be inserted using suitable tags of HTML in any web page?

(c) (i) What are Style Sheets ?

(ii) Define cascading.

(iii) Write proper syntax to introduce Style Sheet in HTML.

(iv) Why do we use JavaScript?   1 + 1 + 2 + 2 = 6

7. Answer the questions (Any One):   6 X 1 = 6

(a) (i) Write the differences between internet browser and search engine.

(ii) Is worm a computer virus? Write your opinion.

(iii) How does a computer worm work?   2 + 2 + 2 = 6

(b) (i) What do you mean by the term 'Ethical Hacking' ?

(ii) Write the advantages of Ethical Hacking.

(iii) Write a short note on Denial of Service (DoS) attack.   2 + 2 + 2 = 6

(c) (i) Write the differences between Phishing and Spamming.

(ii) Why Firewalls have become so important today?

(iii) How does a virus get installed in a computer?   2 + 2 + 2 = 6