

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) 22₁₀ (b) 16₁₀ (c) 10₁₀ (d) 20₁₀****(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.wbsctonline.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 _____.

$$1 \times 10 = 10$$

3. Answer the following questions (Any Ten):

- 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

5. Answer the questions (Any One):

$$6 \times 1 = 6$$

- (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):

$6 \times 1 = 6$

- (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):

$6 \times 1 = 6$

- (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? $2 + 2 + 2 = 6$