# BRAINWARE UNIVERSITY

**Course – BSc(CS)**

**Computer Fundamentals & PCS (BCSC 101)**

(Semester – 1)

**Time allotted: 3 Hours** **Full Marks : 70**

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

## Group –A

(Multiple Choice Type Question) 1 x 10 = 10

1. Choose the correct alternatives for the following:

i) A light sensitive device that converts drawing, printed text or other images into digital form is

a) Keyboard b) Printer

c) Scanner d) None of these

ii) In order to tell Excel that we are entering a formula in cell, we must begin with an operator such as

a) $ b) @

c) = d) #

iii) Fifth generation computers are based on

a) Artificial Intelligence b) VLSI

c) System knowledge d) None of these

iv) Which of the following memory is non-volatile?

a) SRAM b) DRAM

c) ROM d) None of these

v) Microsoft Word is an example of

a) Operating System b) Processing device

c) Application software d) System device

vi) Process Migration can be seen in

a) Multiprocessor OS b) Time sharing OS

c) Multiprogramming OS d) Single-user OS

vii) PCB stands for

a) Process Control Base b) Process Control Block

c) Program Control Block d) Program Control Base

viii) PID states the

a) memory management scheme b) process state

c) turn around time d) response time

ix) DBMS is useful for

a) managing data b) creating tables

b) executing queries d) all of these

x) Hub is used in

a) Star topology b) Mesh topology

c) Ring topology d) Bus topology

## Group – B

(Short Answer Type Question) 3 x 5 = 15

Answer *any three* of the following

2. Find the following: (2 x 2.5)

(a) $(75.2)_8 = ( ? )_{10}$

(b) $(1101)_2 = ( ? )_8$

3. (a) Find the 2's complement of 10111 2.5

(b) $(110010)_2 + (101101)_2 = ( ? )_2$ 2.5

4. Write the difference between RAM and ROM.

5. State ACID properties in transaction.

6. What are the contents of a PCB ? Explain each of them.

7. State the working principle of a CRT monitor.

## Group – C

(Long Answer Type Question) 3 x 15 = 45

Answer *any three* of the following

8. a) What are the important points to be remembered of making a good presentation.

   b) Write the differences between .doc and .docx file format.

   8 + 7

9. a) What is Mail-Merge? State the advantages of using Mail-Merge.

   b) Write the differences between MSWord and WordPad.

   2 + 8 + 5

10. With a suitable diagram, briefly explain the major components and their functions of any conventional computer. 15

11. a) What are the differences of DBMS with conventional file system?

    b) What is the difference between data and information ?

    c) What is super key and primary key?

    8+2+(2.5x2)

12. a) Write about different types of Operating Systems.

    b) What are the states of a process ? Explain with Process State Diagram.

    c) What are the jobs of an OS ?

    8+4+3

13. a) What are the different classes of IPv4 addresses? State the ranges for each class.

    b) What is supernetting ? Create three subnets with 32 IP addresses.

    c) Given one IP address of a classless group of IP as 167.199.170.40/28. Find out the $1^{st}$ address, Last address and total number of addresses in that group.

    3+(2+5)+5