BRAINWARE UNIVERSITY

Course – BSc(HN)

Computer Fundamentals & PCS (BHNC 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)   CPU stands for

   a) Central Processing Unit   b) Control Processing Unit

   c) Common Processing Unit   d) Central Performance Unit

ii)   Which of the following holds the ROM, RAM, CPU?

   a) Hard Disk   b) ALU

   c) Mother Board   d) None of these

iii)   A collection of 8 bit is called

   a) Byte   b) Record

   c) Word   d) Nibble

iv)   How are data organized in a spreadsheet?

   a) Lines and spaces   b) Layers and planes

   c) Height and width   d) Rows and columns

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) 2's complement of 1011101

      (b) Excess-3 BCD of 246

3.   Compute the following: (2 x 2.5)

      (a) $(12.56)_8 = (?)_2$

      (b) $(EF)_{16} = (?)_{10}$

4.   Briefly describe the functions of memory unit and discuss its various parts.

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

6.   State the working principle of a Ink-jet printer.

7.   Describe different topologies used in computer network.

Group – C

(Long Answer Type Question)   3 x 15 = 45

Answer *any three* of the following

8.   With a suitable diagram, briefly explain the major components and their functions of CPU.

9.   a)   Explain the different tasks that can be performed through Excel.

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

                                                                        8 + 7

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

      b)   Write the differences between MSWord and NotePad.

                                                                    2 + 8 + 5

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

      b)   What is supernetting ? Create three subnets with 64 IP addresses.

      c)   Given one IP address of a classless group of IP as 167.199.170.37/28. Find out the 1st address, Last address and total number of addresses in that group.

                                                                    3+(2+5)+5

12.   a)   Compare 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)

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

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

      c)   What is degree of multiprogramming and response time ?

                                                                        8+4+3