



NATIONAL SCHOOL OF BUSINESS MANAGEMENT

Year 1 Semester 1

CS101.3 - Introduction to Computer science - 20.2 Batch

In – Class Test

30 th November 2020

Part B

Question 01

(Total-50 marks)

a) Convert the following numbers to their binary equivalents.

- I. 524_8
- II. 127_{10}
- III. $4B5_{16}$

b) Convert the following numbers to Decimal equivalents.

- I. 1100110_2
- II. 5480_8
- III. 44_{16}

c) Add the following two numbers

$$3B_{16} + A4_{16}$$

d) Represent -609 and +329 in:

- I. Binary coded Decimal Representation method
- II. Zoned Decimal Representation method
- III. Packed Decimal Representation method

e) Magnetic disk has 8 platters, 40,000 tracks on each surface and 150 sectors per track. The capacity of a sector is 2 KB. Compute the capacity of a Track, Surface, Cylinder and Disk.

Question 02**(Total-25 marks)**

By considering the computer network in NSBM Green university as for example answer the following questions.

- I. What are the benefits of computer network for different users involved with the university?
- II. Considering the size of the organization which type of a network is more suitable?
- III. What are the factors need to be considered in choosing a network topology?
- IV. Discuss the advantages and disadvantages of network topology STAR
- V. What are the possible network risks associated with the university network?