**The City School
North Nazimabad Boys Campus**

**Date: 03-09-2016
Class: 9th
Subject: Computer Science
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Q1: Tickets are sold for a Theme Park at $20 each. If 20 tickets are bought the discount is 15%; if 30 tickets are bought the discount is 25%. The visitors can buy at least 3 tickets because only families are allowed and no more than 50 tickets can be bought in a single transaction.

Q2: A school with 1000 students wants to produce some information from the results of the four standard tests in Maths, Science and Computer Science. Each test is out of 100 marks. The information output should be the highest, lowest and average for each subject and the highest, lowest and average overall. All the marks need to be input.

Use pseudocode to write an algorithm to complete this task.

Q3: A sweet shop sells 500 different sorts of sweets. Each sort of sweet is identified by a unique four digit code. All sweets that start with a one (1) are chocolates, all sweets that start with a two (2) are toffees, all sweets that start with a three(3) are jellies and all other sweets are miscellaneous and can start with any other digit except zero.

Write an algorithm, using a flowchart or pseudocode which inputs the four-digit code for all 500 items and outputs the number of chocolates, toffees and jellies.

Q4: Explain the following concepts:

1. Memory Dump
2. Hexadecimal numbers as fault tracing tool
3. Why only hexadecimal numbers used to represent colors
4. Difference between Universally Administrated MAC Address and Locally Administrated MAC Address



Convert the following numbers into required number system.

1. (11100101)2=( )16
2. (11100101)2=( )10
3. (144)10=( )2
4. (A00)16=( )2
5. (AD89)16=( )10
6. (5000)10=( )16