Conditional Logic Problems

Question 1   Any integer is input by the user. Write a program to find out whether it is an odd number or even number.

Question 2   Find the absolute value of a number entered by the user.

Question 3   Write a program to calculate the total expenses. Quantity and price per item are input by the user and discount of 10% is offered if the expense is more than 5000.

Question 4   Write a program to determine whether the seller has made profit or incurred loss. Also determine how much profit he made or loss he incurred. Cost price and selling price of an item is input by the user.

Question 5   If the ages of Ram, Sulabh and Ajay are input by the user, write a program to determine the youngest of the three.

Question 6   Write a program to check whether a triangle is valid or not, when the three angles of the triangle are entered by the user. A triangle is valid if the sum of all the three angles is equal to 180 degrees.

Question 7   Any year is input by the user. Write a program to determine whether the year is a leap year or not.

Question 8   In a company an employee is paid as under:
If his basic salary is less than Rs. 1500, then HRA = 10% of basic salary
and DA = 90% of basic salary.
If his salary is either equal to or above Rs. 1500, then HRA = Rs. 500
and DA = 98% of basic salary.
If the employee's salary is input by the user write a program to find his gross salary.

Question 9   Write a program to calculate the monthly telephone bills as per the following rule:
Minimum Rs. 200 for upto 100 calls.
Plus Rs. 0.60 per call for next 50 calls.
Plus Rs. 0.50 per call for next 50 calls.
Plus Rs. 0.40 per call for any call beyond 200 calls.

Question 10   Write a program to find the roots of and quadratic equation of type ax2+bx+c where a is not equal to zero.

Question 11 The marks obtained by a student in 5 different subjects are input by the user. The student gets a division as per the following rules:
Percentage above or equal to 60 - First division
Percentage between 50 and 59 - Second division
Percentage between 40 and 49 - Third division
Percentage less than 40 - Fail
Write a program to calculate the division obtained by the student.

Question 12 Any character is entered by the user; write a program to determine whether the character entered is a capital letter, a small case letter, a digit or a special symbol. The following table shows the range of ASCII values for various characters.

Characters	ASCII Values
A – Z	65 – 90
a – z	97 – 122
0 – 9	48 – 57
special symbols	0 - 47, 58 - 64, 91 - 96, 123 – 127