if-elif-else python practice question

[1] The given number is odd or even.

[2] The given number is positive or negative or zero.

[3] The given number is of one digited or two digited or three digited or more than three digited.

[4] The entered number is smallest 4 digit number or not.

[5] The given character is an uppercase letter or lowercase letter or a digit or a special character.

[6] The given year is a leap year or not.

[7] The given number is divisible by 5 or not.

[8] Find maximum number out of given three numbers.

[9] Find minimum number out of given three numbers.

[10] Write a program that reads three positive numbers a, b, c and determines whether they can form the three sides of a triangle.

[11] Whether the triangle will be an obtuse-angle, or a right-angle or an acute-angle triangle.

[12] If the triangle is an acute angle triangle, determine further whether the triangle is equilateral, isosceles, or scalene.

[13] A toy vendor supplies three types of toys: Battery Based Toys, Key-based Toys, and Electrical Charging Based Toys. The vendor gives a discount of 10% on orders for battery-based toys if the order is for more than Rs. 1000. On orders of more than Rs. 100 for key-based toys, a discount of 5% is given, and a discount of 10% is given on orders for electrical charging based toys of value more than Rs. 500. Assume that the numeric codes 1,2 and 3 are used for battery based toys, key-based toys, and electrical charging based toys respectively.
Write a program that reads the product code and the order amount and prints out the net amount that the customer is required to pay after the discount.

[14] A function f is defined as follows :

$$f(x) = ax^3 - bx^2 + cx - d, \quad \text{if } x > k$$
$$= 0, \quad \text{if } x = k$$
$$= -ax^3 + bx^2 - cx + d, \quad \text{if } x < k$$

Write a program that reads a, b, c, d, k and x and prints the value of f(x).

[15] Write a program to do the following operations :
Read any two positive integer numbers (say n1 & n2) and one character type operator (say opr). Note that opr is any mathematical operator.
Depending upon the operator, do the appropriate operation. e. g. if opr is '+' then the display the value obtained by evaluating the expression (n1 + n2).

[16] The Paschim Gujarat Vij Company Ltd. computes the electricity bill based on the following matrix:

Units Consumed	Charges
0-100	0.50 per unit
101-200	Rs. 50 plus Rs. 1 per unit over 100 units
201-300	Rs. 150 plus 1.50 per unit over 200 units
> 300	Rs. 300 plus Rs.2 per unit over 300 units

Ask user to enter the Past meter reading and current meter reading.
Find the units consumed.
Compute the bill according to given matrix.

[17] A cloth showroom has announced the following discounts on the purchase of specific items :

Amount	Shorts	Pants	Shits/T-Shirts
0-100	–	3%	5%
101-200	5%	8%	10%
201-300	10%	12%	15%
Above 300	18%	20%	22%

Ask user to enter the amount and assign following code for the items such as sh for shorts, p for pans and sht for shirts/t-shirts.
Compute the discount and net amount paid by customer.

[18] BSNL has three categories of customers: Industrial, Bulk Institutional and Domestic. The rates for these are tabulated below :

Category	Units	Rate
Commercial	Minimum up to 5000 units	Rs. 1500
	Next 5000 units	Rs. 0.25 per unit
	Next 10000 units	Rs. 0.23 per unit
	Above this	Rs. 0.20 per unit
Institutional	Minimum up to 5000 units	Rs. 1800
	Next 5000 units	Rs. 0.30 per unit
	Next 10000 units	Rs. 0.28 per unit
	Above this	Rs. 0.25 per unit

Domestic	Minimum up to 100 Units	Rs. 75
	Next 100 Units	Rs. 1.25 per unit
	Next 200 Units	Rs. 2.00 per unit
	Above this	Rs. 2.50 per unit

Ask user to enter customer category, Units.
Compute the bill as per given criteria.
Print bill in proper format.

[19] A transport company charges the fare according to following table:

Distance	Charges
1-50	8 Rs./Km
51-100	10 Rs./Km
> 100	12 Rs/Km

Ask user to enter the distance and compute the fare.

[20] The Sardar Patel Cricket Stadium, Motera has the following rates for different types of seats:
Ordinary – 2500
Pavillion – 3500
Upper Pavillion – 4500
Commentary Box – 6000
VIP – 8000
They are giving 10% discount for online booking and 8% discount for advance booking and no discount is given for booking on match day from ticket window.
Ask user to enter the booking type like online, advance or window booking.
Ask user to select the types of seats.
Compute the amount and print the ticket with proper format.