**Cat 2**

**1.**

**#include <stdio.h>//fixed the include directive**

**int main() {//Fixed the main function declaration**

**int number;**

**printf("Enter an integer number: ");//Fixed the printf statement and added a colon for clarity**

**scanf("%d", &number);// Fixed the scanf format specifier**

**if (number < 100) {// Fixed the if condition**

**printf("Your number is smaller than 100.\n");//Fixed the printf statement and logic**

**}else{**

**printf("Your number contains more than two digits.\n");//Corrected the message for clarity and correctnes**

**}**

**return 0;//Added return statement**

**}**

**2.**

**#include <stdio.h>**

**int main() {**

**int customerID, unitConsumed;**

**float chargesPerUnit, totalBill, surcharge, netAmount;**

**char customerName[50];**

**// Prompt for customer details**

**printf("Enter Customer ID: ");**

**scanf("%d", &customerID);**

**printf("Enter Customer Name: ");**

**scanf("%s", customerName);**

**printf("Enter Units Consumed: ");**

**scanf("%d", &unitConsumed);**

**// Determine charges per unit based on consumption**

**if (unitConsumed <= 300) {**

**chargesPerUnit = 1.75;**

**} else if (unitConsumed <= 600) {**

**chargesPerUnit = 2.00;**

**} else if (unitConsumed <= 800) {**

**chargesPerUnit = 3.00;**

**} else {**

**chargesPerUnit = 4.00;**

**}**

**// Calculate total bill**

**totalBill = unitConsumed \* chargesPerUnit;**

**// Apply surcharge if bill exceeds Kshs 500**

**if (totalBill > 500) {**

**surcharge = totalBill \* 0.2;**

**netAmount = totalBill + surcharge;**

**} else {**

**netAmount = totalBill;**

**}**

**// Ensure minimum bill is Kshs 200**

**if (netAmount < 200) {**

**netAmount = 200;**

**}**

**// Display output**

**printf("\nCustomer ID: %d\n", customerID);**

**printf("Customer Name: %s\n", customerName);**

**printf("Units Consumed: %d\n", unitConsumed);**

**printf("Charges per Unit: %.2f Ksh\n", chargesPerUnit);**

**printf("Total Amount to Pay: %.2f Ksh\n", netAmount);**

**return 0;**

**}**

**3.**

**Q3**

**#include <stdio.h>**

**int main() {**

**double salary, tax;**

**printf("Enter your yearly salary: ");**

**scanf("%lf", &salary);**

**if (salary <= 400000) {**

**tax = salary \* 0.01;**

**} else if (salary <= 1000000) {**

**tax = 4000 + (salary - 400000) \* 0.15;**

**} else {**

**tax = 4000 + 90000 + (salary - 1000000) \* 0.25;**

**}**

**printf("Tax to be paid: %.2lf\n", tax);**

**return 0;**

**}.**