**COMSATS INSTITUTE OF INFORMATION TECHNOLOGY,**



**ISLAMABAD.**

Department of Computer Science

Terminal Examination Spring-2021

**Subjective Part**

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**C. Code & Title:** *CSC 241* – *Object Oriented Programming*  **Dated:** 12th, July , 2021

**Maximum Marks**: 25 **Time Allowed:** 60 minutes

1. Suppose you are designing a “shopManagement” application in Java using OOP. Your shop management application contains the following classes.
   1. Shop (For the management operations of products like insertion, deletion etc.…)
   2. ShopItem (Contains the details related to products)
   3. Mobilephone (sample product of shop)
   4. LED (sample product of shop)

You are required to create class “shoppingCart”. This class should contain the following methods along with constructor, accessor and mutator methods.

* 1. BuyMobile //buy mobile and update shop and cartList
  2. BuyLED //buy LED and update shop and cartList
  3. Checkout //storage of items of cart
  4. ShowDetailCart //display cart items using tostring()

2. Ruuner class for “shopManagement” is provided below.

package ShopManagement;

import java.util.ArrayList;

public class CartRunner {

public static void main(String[] args) {

// TODO code application logic here

Shop s = new Shop("shop.dat");

// Add items to shop

s.addItemToShop(new MobilePhone("samsung", "blue", true, "M-123", 5000));

s.addItemToShop(new LED("EVO", "SONY", 50, "L-456", 1000));

s.addItemToShop(new MobilePhone("huawei", "black", true, "M-789", 7000));

s.addItemToShop(new LED("Haier", "silver", 60, "L-258", 6000));

System.out.println("Items in the shop = "+ s);

System.out.println();

//Create an empty shopping Cart

ShoppingCart sc = new ShoppingCart(s, "cart-123");

//Add Items to the shopping Cart

sc.buyMobile("samsung");

sc.buyLED("EVO");

sc.buyMobile("huawei");

//Print Contents in the sopping cart

System.out.println("Detailed Contents of Shopping Cart = " );

sc.showDetailCart();

//Cancel order of some items

sc.cancelOrder("L-456");

System.out.println("\nShopping Cart (after cancelling order)= " );

sc.showDetailCart();

//Finally checkout

sc.checkOut();

System.out.println("Total cost of shopping = " + sc.getTotalCost());

//Save cart details to file

sc.writeCartToFile();

System.out.println();

//

System.out.println("Remaining Items in the shop = "+ s);

}

}

The output of the runner will be:

