Question 1: YouTube Video Quality Selection Scenario: A user is watching a YouTube video and the platform must select the appropriate video quality based on two conditions: - Internet speed - Whether the user selected "Auto" mode or manual mode. 💡 Logic Steps : - Ask if the user selected "Auto" or "Manual" mode. - If "Auto": - If internet speed > 10 Mbps → Play 1080p - Else if speed > 5 Mbps → Play 720p - Else if speed > 2 Mbps → Play 480p - Else → Play 240p If "Manual": - Ask for selected quality (e.g., 240p, 480p, 720p, 1080p) - Play the selected quality Expected Understanding: Learn to handle multiple nested conditions and simulate real-time decision logic.

ANS:

```
mode = input("Enter mode:")
if mode == "auto":
    speed = int(input("Enter your internet speed in Mbps: "))
    if speed >10:
        print("playing 1080p")
    elif speed > 5:
        print("playing 720p")
    elif speed > 2:
        print("playing 480p")
    else:
        print("playing 240p")
elif mode == "manual":
    quality = (input("select required quality:"))
    if quality in ['240p', '480p', '720p', '1080p']:
        print(f"Playing video in {quality} quality.")
    else:
        print("Invalid quality selected. Please choose from 240p, 480p, 720p, 1080p")
else:
    print("please select proper mode")
```

output:

```
Enter mode:auto
```

Enter your internet speed in Mbps: 15

playing 1080p

Enter mode:manual

select required quality:240p

Playing video in 240p quality.

Question 2: Hotstar Subscription Plans Scenario: Based on the user's subscription type and payment status, show what content they can access. Logic Steps : - Ask for subscription type: Free, Super, or Premium - Ask for payment status: Active or Expired - If subscription is Free: - Allow only basic content - If subscription is Super: - If Active → Allow sports + series (with ads) - If Expired → Show message to renew - If subscription is Premium: - If Active → Allow all content (no ads) - If Expired → Show message to renew Expected Understanding: Apply if-elif-else within multiple levels and handle real-world choices.

ANS:

```
sub = input("Enter subscription type: free, Super or Premium: ")
Payment_status = input("Enter your payment status: Active or Expired: ")
if sub == "free":
    print("Only basic content is allowed:")
elif sub == "super":
    if Payment_status == "active":
        print("sports + series(with ads) are allowed:")
    elif Payment_status == "expired":
        print("Renew your subscription")
elif sub == "premium":
    if Payment_status == "active":
        print("All the content (no ads) is  allowed:")
    elif Payment_status == "expired":
        print("Renew your subscription")
else:
    print("Enter proper subscription")
```

output:

Enter subscription type: free, Super or Premium: free

Enter your payment status: Active or Expired: active

Only basic content is allowed:

Enter subscription type: free, Super or Premium: super

Enter your payment status: Active or Expired: active

sports + series(with ads) are allowed:

Enter subscription type: free, Super or Premium: premium

Enter your payment status: Active or Expired: expired

Renew your subscription

Question 3: Bank Loan Approval System Scenario: A bank checks whether a person is eligible for a loan based on credit score and salary. 💡 Logic Steps : - Ask user for credit score - If credit score >= 750: - Ask for monthly salary - If salary >= ₹30,000 → Approve Loan - Else → Ask to increase income - Else if credit score between 600–749: - Ask for co applicant - Else if credit score < 600: - Reject application Expected Understanding: Apply numeric ranges and combine them with nested conditions.

ANS:

```
score = int(input("enter your credit score:"))
if score >= 750:
    sal = int(input("enter your monthly salary:"))
    if sal >= 30000:
        print("loan approved")
    else:
        print("Your salary is too low to be approved")
elif score >= 600 and score <= 749:
    co_app = input("enter your co-applicant:")
    print("loan approved")
elif score < 600:
    print("Application Rejected")
```

output:

enter your credit score:800

enter your monthly salary:50000

loan approved

enter your credit score:800

enter your monthly salary:23000

Your salary is too low to be approved

enter your credit score:650

enter your co-applicant:maya

loan approved

enter your credit score:500

Application Rejected

Question 4: Swiggy – First-Time Order Offer Scenario: Swiggy wants to apply different discounts or free delivery based on whether the user is placing their first order and the cart value. Logic Steps : - Ask the user: “Is this your first order?” (Yes or No) - If Yes: - If cart value ≥ ₹149 → Apply “Free Delivery + 20% Off” - Else → Apply “Only Free Delivery” - If No: - If cart value ≥ ₹199 → Apply “₹50 Off” coupon - Else → “No offer applicable, add more items!” Expected Understanding: Use of if, elif, and else with nesting, and real-world decision making logic.

ANS:

```
order = input("Is this your first order?(YES or NO): ")
if order == "yes":
    cart = int(input("enter cart val:"))
    if cart >= 149:
        print("Free Delivery + 20% OFF applied")
    else:
        print("Free delivery applied")
elif order == "no":
    cart = int(input("enter cart val:"))
    if cart >= 199:
        print(" 50% OFF Applied")
    else:
        print("No offer applicable, add more items")
else:
    print("enter valid choice:")
```

Output:

Is this your first order?(YES or NO): no

enter cart val:178

No offer applicable, add more items

Is this your first order?(YES or NO): yes

enter cart val:150

Free Delivery + 20% OFF applied

Question 5: E-commerce Offer Eligibility Scenario: A user qualifies for a discount based on cart value and whether they are a first-time buyer. 💡 Logic Steps : - Ask if user is a first-time buyer (Yes or No) - Ask for cart total - If first-time buyer: - If cart ≥ ₹1000 → 30% discount - Else → 10% discount - If not a first-time buyer: - If cart ≥ ₹2000 → 15% discount Else → No discount Expected Understanding: Simulates nested offers and personalization logic.

ANS:

```
buyer = input("Are you a first-time buyer(YES or No): ")
cart_total = int(input("enter cart total:"))
if buyer == "yes":
    if cart_total >= 1000:
        print("30% discount applied")
    else:
        print("10% discount applied")
elif buyer == "no":
    if cart_total >= 2000:
        print("15% discount applied")
    else:
        print("no discount")
else:
    print("enter valid choice")
```

OUTPUT:

Are you a first-time buyer(YES or No): yes

enter cart total:1050

30% discount applied

Are you a first-time buyer(YES or No): no

enter cart total:3000

15% discount applied

Are you a first-time buyer(YES or No): yes

enter cart total:670

10% discount applied