Exam Style Questions:
Explain what DATA STRUCTURES / ARRAYS you have used in your program.

Array1: maxparking [] = {8, 2, 2, 2, 2, 2, 4} CONSTANT array with fixed values
Data Type: INTEGER
Purpose: To store the maximum allowed parking hours in the week as per day selected.
Array 2: hourprice [] = {2, 10, 10, 10, 10, 10, 3} CONSTANT array with fixed values
Data Type: INTEGER
Purpose: To store the hour price of parking as per week day.

Name three variables that you have used in Task 1, Task 2 or Task 3 and state the purpose of each one.

Variable 1: arrivaltime
Data Type: INTEGER
Purpose: To input the arrival time in parking

Variable 2: Choice
Data Type: BOOLEAN
Purpose: To input choice of customer, whether he has Frequent Parking number or not?

Variable 3: frequentparknum
Data Type: INTEGER
Purpose: To store the calculated Frequent Parking number.

Name two constant you used for Task 1, Task 2 or Task 3 and state the purpose of each one.

Constant 1: morninghour = 8
Data Type: INTEGER
Value = 8
Purpose: Constant is used to store the morning parking time

Constant 2: eveninghour = 16
Data Type: INTEGER
Value = 16
Purpose: Constant is used to store the evening parking time

Constant 3: midnighthour = 24
Data Type: INTEGER
Value = 24
Purpose: Constant is used to store the midnight parking time
Q2(a) Explain how your program in Task 1 calculates the checkdigit of Frequent Parking Number:

Answer:

```
INPUT digit1, digit2, digit3, digit4, digit5
    frequentparknum = (5 * digit1) + (4 * digit2) + (3 * digit3) + (2 * digit4)
    checkdigit = 11 - (frequentparknum Mod 11)
```

Q2(b) Explain how your program in Task 1 verifies that checkdigit entered is correct or not? And explain how discount is calculated for correct Frequent Parking Number:

Answer:

```
OUTPUT("Do you have frequent parking number? True for yes, False for No")
INPUT choice
If choice = True Then
    OUTPUT("enter your 5 digit frequent Parking number, one digit at a time")
    INPUT digit1, digit2, digit3, digit4, digit5
    frequentparknum = (5 * digit1) + (4 * digit2) + (3 * digit3) + (2 * digit4)
    checkdigit = 11 - (frequentparknum Mod 11)
    If checkdigit = digit5 Then  //if checkdigit mathes digit5 entered
        If arrivaltime >= afternoonhour Then
            discount = parkingprice / 2  //50% discount applied
        Else
            discount = (parkingprice / 100) * 10  //10% discount applied
        End If
    Else
        discount = 0  //if checkdigit <> digit5 then no discount
    End If
Else
    discount = 0  //if user does not have FPN then no discount
End If
```

Q2(b) Explain how your program works in Task 1. You may include PSEUDOCODE, FLOWCHART or Program statements as your explanation.