

SECTION B: 55 MARKS***BAHAGIAN B: 55 MARKAH*****INSTRUCTION:**

This section consists of **TWO (2)** structured questions. Answer **ALL** questions in the answer booklet.

ARAHAN:

Bahagian ini mengandungi DUA (2) soalan berstruktur. Jawab SEMUA soalan di dalam buku jawapan yang disediakan.

QUESTION 1**SOALAN 1**

CLO1
C1

- (a) Define the meaning of object, attributes and method.
Berikan maksud objek, atribut dan metod.

[3 marks]

[3 markah]

CLO1
C3

- (b) Complete the class diagram in Figure B1 with the **CORRECT** declaration for the object Student.

Lengkapkan gambarajah kelas bagi Rajah B1 dengan perisytiharan yang BETUL untuk objek Student.

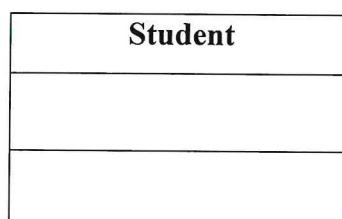


Figure B1/ Rajah B1

[2 marks]

[2 markah]

CLO1
C1

(c) State **THREE (3)** types of errors to troubleshoot the source code and give the explanation.

*Nyatakan **TIGA (3)** jenis ralat untuk menyelesaikan masalah kod sumber dan berikan penjelasan.*

[5 marks]

[5 markah]

CLO1
C1

(d) List down **TWO (2)** types of modifiers in Java.

*Senaraikan **DUA (2)** jenis pengubah di dalam Java.*

[2 marks]

[2 markah]

CLO1
C3

(e) State the type casting used in coding below and demonstrate the **OUTPUT**.

*Nyatakan jenis pemutus yang digunakan dalam kod di bawah dan demonstrasikan **OUTPUT**.*

```
{
    int i=200;
    double d=i;
    System.out.println(d);
}
```

[3 marks]

[3 markah]

CLO2
C3

(f) Implement the given coding below to a **do....while** coding.

*Laksanakan kod yang diberikan di bawah kepada kod **do....while**.*

```
public class Loop
{
    for(int=0; i<5; i++){
        System.out.println("I love Java Programming");
    }
}
```

[5 marks]

[5 markah]

CLO3
C3

(g) Halim got 65 marks in his exam. Produce an *if...else* statement to find Halim's grade based on the Table B2 given below.

Halim mendapat 65 markah dalam peperiksaannya. Hasilkan pernyataan if..else untuk mencari gred Halim berdasarkan Jadual B2 yang diberikan di bawah.

Marks	Grade
100 – 75	Excellent
74 – 40	Good
39 – 0	Fail

Table B2 / Jadual B2

[5 marks]
[5 markah]

QUESTION 2

SOALAN 2

CLO1
C2

(a) List **THREE (3)** types of inheritance in Java.

*Senaraikan **TIGA (3)** jenis pewarisan dalam Java.*

[3 marks]

[3 markah]

CLO1
C3

(b) Draw a diagram to represent a situation where there are three Animal. In the diagram, Animal_1 has three member which has four legs. Animal_2 has no member. Animal_3 has one member which can swim.

Lukis rajah untuk mewakili keadaan di mana terdapat tiga Animal. Di dalam rajah tersebut, Animal_1 mempunyai tiga ahli yang mempunyai empat kaki. Animal_2 tidak mempunyai ahli. Animal_3 mempunyai satu ahli yang boleh berenang.

[4 marks]

[4 markah]

CLO2
C2

- (c) Determine the **CORRECT** answer for the blanks number 1 to 5 based on the output as in Figure B3.

*Tentukan jawapan yang **BETUL** bagi tempat kosong nombor 1 hingga 5 berdasarkan output seperti dalam Rajah B3.*

Output:

Miles per gallons: 160.0

Figure B3 / *Rajah B3*

```

class 1 {
    int startMiles;
    int endMiles;
    double gallon;
    Car(int StartOdo, int endingOdo, double
gallons) { //constructors
        2 = gallons;
        3 = endingOdo;
        4 = StartOdo;
    }
    double 5 { //method
    double kira;
    kira=(endMiles-startMiles)/gallon;
    System.out.println("Miles per gallons : " +
kira);
    return kira;
    }
}
class Demo {
    public static void main(String arg[])
    {
    Car obj=new Car(100,500,2.5);
    obj.culculateMPG();
    }
}

```

[5 marks]
[5 markah]

CLO2
C3

- (d) Based on the UML class diagrams in Figure B4. Write a program to create super class and sub class.

Berdasarkan rajah kelas UML dalam Rajah B4, tuliskan program untuk mencipta 'super class' dan 'sub class'.

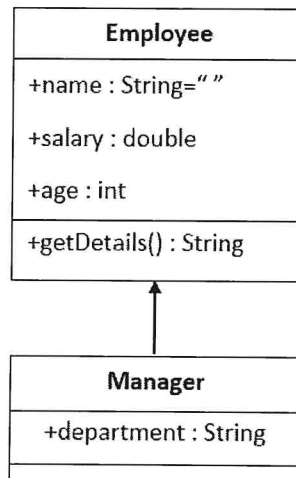


Figure B4 / Rajah B4

[6 marks]
[6 markah]CLO2
C4

- (e) Based on the UML class diagrams in Figure B5, construct a coding for public interface, called Flyer that supports three operations: takeoff, land and fly.

Berdasarkan rajah kelas UML dalam Rajah B5, bina satu kod untuk 'public interface' yang dikenali sebagai Flyer, yang menyokong tiga operasi: 'takeoff', 'land' and 'fly'.

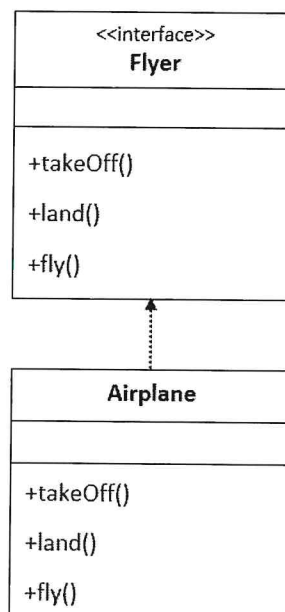


Figure B5 / Rajah B5

[5 marks]
[5 markah]

CLO3
C3

- (f) The Java programming language enables a class designer to specify that a superclass declares a method that does not supply an implementation. This is called an abstract method. The implementation of this method is supplied by the subclasses.
- Based on UML model in Figure B6, write a program to create Vehicle class. Vehicle is an abstract class with two public abstract methods.

Bahasa pengaturcaraan Java membolehkan pereka kelas membina 'superclass' mengistiharkan method yang tidak membekalkan pelaksanaan. Ini dipanggil 'abstract method'. Pelaksanaan method ini dibekalkan oleh 'subclass'.

Berdasarkan model UML dalam Rajah B6, tuliskan program untuk mencipta 'Vehicle class'. 'Vehicle' adalah 'abstract class' dengan dua 'abstract method' umum.

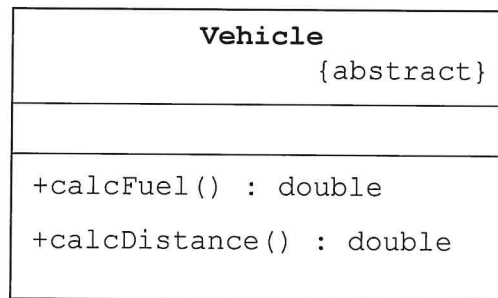


Figure B6 / Rajah B6

[5 marks]
[5 markah]CLO1
C1

- (g) List **ONE (1)** type of Thread in Java.
*Senarai **SATU (1)** jenis Thread dalam Java.*

[1 marks]
[1 markah]CLO2
C2

- (h) Describe **ONE (1)** way to create a thread.
*Huraikan **SATU (1)** cara untuk mencipta thread.*

[1 marks]
[1 markah]**SOALAN TAMAT**