

SULIT



**KEMENTERIAN PENDIDIKAN TINGGI
JABATAN PENDIDIKAN POLITEKNIK DAN KOLEJ KOMUNITI**

**BAHAGIAN PEPERIKSAAN DAN PENILAIAN
JABATAN PENDIDIKAN POLITEKNIK DAN KOLEJ KOMUNITI
KEMENTERIAN PENDIDIKAN TINGGI**

JABATAN TEKNOLOGI MAKLUMAT DAN KOMUNIKASI

PEPERIKSAAN AKHIR

SESI I : 2025/2026

DFK30053 : OBJECT ORIENTED PROGRAMMING

TARIKH : 28 NOVEMBER 2025

MASA : 3.00 PETANG – 5.00 PETANG (2 JAM)

Kertas soalan ini mengandungi **DUA PULUH (20)** halaman bercetak.
Bahagian A: Objektif (30 soalan)
Bahagian B: Struktur (2 soalan)
Dokumen sokongan yang disertakan : Tiada

JANGAN BUKA KERTAS SOALAN INI SEHINGGA DIARAHKAN

(CLO yang tertera hanya sebagai rujukan)

SULIT

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

This section consists of **TWO (2)** structured questions. Answer **ALL** questions.

ARAHAN:

Bahagian ini mengandungi DUA (2) soalan berstruktur. Jawab SEMUA soalan.

QUESTION 1**SOALAN 1**

- | | | |
|------|---|-------------------------|
| CLO1 | (a) (i) List TWO (2) anatomy of a Java program.
<i>Senaraikan DUA (2) anatomi bagi program Java.</i> | [2 marks]
[2 markah] |
| CLO1 | (ii) Describe TWO (2) concepts of Object-Oriented Programming.
<i>Huraikan DUA (2) konsep Pengaturcaraan Berorientasikan Objek.</i> | [4 marks]
[4 markah] |
| CLO1 | (b) (i) List TWO (2) types of access modifier in Java.
<i>Senaraikan DUA (2) jenis 'access modifier' dalam Java.</i> | [2 marks]
[2 markah] |
| CLO1 | (ii) Define a constructor in Java.
<i>Terangkan pembina dalam Java.</i> | [2 marks]
[2 markah] |

- CLO1 (iii) Define method overloading in Java.
Terangkan 'method overloading' dalam Java.
- [2 marks]
[2 markah]

- CLO1 (c) Based on the scenario in Figure B1(c), answer the questions below.
Berdasarkan senario dalam Rajah B1(c), jawab soalan di bawah.

Mouse has its own characteristics like brand, color and type of mouse. This mouse can be moved to select the task in computer.
Tetikus mempunyai ciri tersendiri seperti jenama, warna dan jenis tetikus. Tetikus ini boleh digerakkan untuk memilih tugas dalam komputer.

Figure B1(c) / *Rajah B1(c)*

- CLO1 (i) Differentiate between variable and method. Give an example based on the scenario in Figure B1(c).
- Bezakan antara pembolehubah dan kaedah. Berikan satu contoh berdasarkan senario di dalam Rajah B1(c).*

[3 marks]
[3 markah]

- CLO1 (ii) Identify class, attributes and method from the scenario.
Kenalpasti kelas, atribut dan kaedah daripada senario.

[3 marks]
[3 markah]

CLO1

(iii) Illustrate a class diagram based on answer in (c)(ii). The class and all its member must be in `public` access modifier.

Lukis gambarajah kelas berdasarkan jawapan di (c)(ii). Kelas dan semua ahli mestilah dalam 'access modifier' public.

[3 marks]

[3 markah]

QUESTION 2

SOALAN 2

- CLO1 (a) (i) List **TWO (2)** types of selection statements and **TWO (2)** types of repetition statements in Java.

*Senaraikan **DUA(2)** jenis pernyataan pemilihan dan **DUA(2)** jenis pernyataan ulangan dalam Java.*

[4 marks]

[4 markah]

- CLO1 (ii) Explain **TWO (2)** differences between single dimensional and multi dimensional arrays.

*Terangkan **DUA (2)** perbezaan antara dimensi tunggal dan dimensi berbilang tatasusunan.*

[4 marks]

[4 markah]

- CLO1 (iii) Based on the following segment code in Figure B2(a)(iii), identify the output.
Berdasarkan kod segmen di dalam Rajah B2(a)(iii), kenalpasti output.

```
public static void main(String[] args) {  
    for(int x = 12; x < 20; x=x+2)  
        System.out.println("Value of x : "+x);  
}
```

Figure B2(a)(iii) / Rajah B2(a)(iii)

[4 marks]

[4 markah]

CLO1 (iv) Rewrite the segment code in Figure B2(a)(iii) using `do..while` statement.

Tulis semula kod segmen dalam Rajah B2(a)(iii) menggunakan pernyataan `do..while`.

[4 marks]

[4 markah]

CLO1 (b) (i) Based on the Table B2(b)(i), identify appropriate string method for following description.

Berdasarkan Jadual B2(b)(i), kenalpasti metod string yang sesuai untuk penerangan berikut.

Table B2(b)(i) / Jadual B2(b)(i)

	Description	Method in string
a.	To concatenate two strings.	
b.	To convert a string to an integer number.	

[2 marks]

[2 markah]

CLO1 (ii) Describe **TWO (2)** types of inheritance in Java.

*Huraikan **DUA (2)** jenis perwarisan dalam Java.*

[4 marks]

[4 markah]

CLO1

(iii) Based on the code in Figure B2(b)(iii), answer the following questions.

Berdasarkan kod di dalam Rajah B2(b)(iii), jawab soalan berikut.

```

class Animal {
    void sound() {
        System.out.println("Animal makes a sound");
    }
}

class Dog extends Animal {
    void sound() {
        System.out.println("Dog barks");
    }
}

public class Test {
    public static void main(String[] args) {
        Animal a = new Dog();
        a.sound();
    }
}

```

Figure B2(b)(iii) / *Rajah B2(b)(iii)*

Identify superclass, subclass and output of the program.

Kenalpasti 'superclass', 'subclass' dan program output.

[3 marks]

[3 markah]

CLO1

(c) (i) List **TWO (2)** built-in Java packages.*Senaraikan **DUA (2)** pakej Java terbina-dalam.*

[2 marks]

[2 markah]

CLO1

(ii) State **TWO (2)** programming best practices in development.*Nyatakan **DUA (2)** amalan terbaik pengaturcaraan dalam pembangunan.*

[2 marks]

[2 markah]

(iii) Based on the code in Figure B2(c)(iii), answer the following questions.

Berdasarkan kod dalam Rajah B2(c)(iii), jawab soalan berikut.

```
public class ExceptionTest {
    public static void main(String[] args) {
        try {
            int[] numbers = {10, 20, 30};
            System.out.println("Value: " + numbers[3]);
            System.out.println("This line will not be printed.");

        } catch (ArrayIndexOutOfBoundsException e) {
            System.out.println("Exception caught.");
        }
        finally{
            System.out.println("This is finally block.");
        }
        System.out.println("Program continues after exception.");
    }
}
```

Figure B2(c)(iii) / *Rajah B2(c)(iii)*

CLO1

a. Trace the output for the code in Figure B2(c)(iii).

Jejak output untuk kod di dalam Rajah B2(c)(iii).

[3 marks]

[3 markah]

CLO1

b. Describe briefly the cause of this output.

Terangkan secara ringkas punca output ini.

[2 marks]

[2 markah]

SOALAN TAMAT