SECTION A : 80 MARKS

BAHAGIAN A : 80 MARKAH

INSTRUCTION:

This section consists of **FOUR (4)** structured questions. Answer **ALL** questions.

ARAHAN:

*Bahagian ini mengandungi **EMPAT (4)** soalan berstruktur. Jawab **SEMUA** soalan.*

QUESTION 1

SOALAN 1

CLO1
C1

(a) State **TWO (2)** differences between closed sources and open sources operating system.

*Nyatakan **DUA (2)** perbezaan antara sistem operasi sumber tertutup dan sumber terbuka.*

[4 marks]

[4 markah]

CLO1
C3

(b) Show **FOUR (4)** types of operating system structure supported by explanations.

*Tunjukkan **EMPAT(4)** jenis struktur sistem pengoperasian disertai penerangan.*

[8 marks]

[8 markah]

CLO1
C3

(c)   Complete the table 1 for various types of operating system.

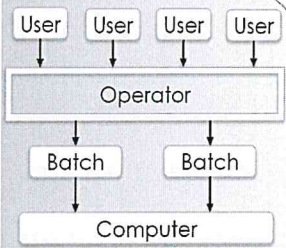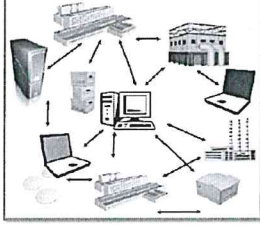*Lengkapkan jadual 1 untuk pelbagai jenis sistem pengoperasian.*

Type of Operating System	(1 Mark)	Distributed Operating System	(1 Mark)
Features (2 points)	• _____ • _____ (2 Marks)	• _____ • _____ (2 Marks)	• That allows end users to run more than one program at a time . • When one program is waiting for I/O transfer, there is another program ready to utilize the CPU, its possible for several job to share the time of the CPU.
Diagram			(2 Marks)

Table 1/*Jadual 1*

[8 marks]

[8 markah]

QUESTION 2

SOALAN 2

CLO1
C2

(a) Explain **TWO (2)** types of user interface in Operating System.

*Terangkan **DUA (2)** jenis antara muka di dalam sistem pengoperasian .*

[4 marks]

[4 markah]

CLO1
C3

(b) Sketch and explain logical I/O and physical I/O by using diagram .

Lakar dan terangkan logic I/O dan fizikal I/O menggunakan gambarajah.

[8 marks]

[8 markah]

CLO1
C3

(c) Show the boot up process of a personal computer with the correct sequence.

Tunjukkan langkah-langkah proses 'boot up' bagi komputer peribadi dengan urutan yang betul.

[8 marks]

[8 markah]

QUESTION 3
SOALAN 3

CLO1
C1

(a) Define resident and transient routines and give example for each of that routines .

Takrifkan resident dan transient rutin dan berikan contoh bagi setiap satunya.

[4 marks]

[4 markah]

CLO1
C3

(b) Sketch a diagram to explain the process of the memory swapping techniques.

Lakarkan gambarajah untuk menerangkan tentang proses 'memory swapping techniques'.

[8 marks]

[8 markah]

CLO1
C3

(c) Show the implementation of disk cache concept in operating system using a suitable diagram.

Tunjukkan pelaksanaan konsep sorok cakera di dalam sistem pengoperasian dengan menggunakan gambar rajah yang sesuai.

[8 marks]

[8 markah]

QUESTION 4

SOALAN 4

CLO1
C1

(a)   List **FOUR (4)** scheduling algorithms to optimize the CPU utilization.

*Senaraikan **EMPAT (4)** algoritma penjadualan untuk mengoptimakan penggunaan CPU.*

[4 marks]

[4 markah]

CLO1
C2

(b)   Figure 4(a) shows the file storing system using allocation method. Based on the figure, fill in the file allocation table below.

Rajah 4(a) menunjukkan penstoran fail yang menggunakan kaedah 'allocation'. Berdasarkan rajah, penuhkan jadual peruntukan fail di bawah.
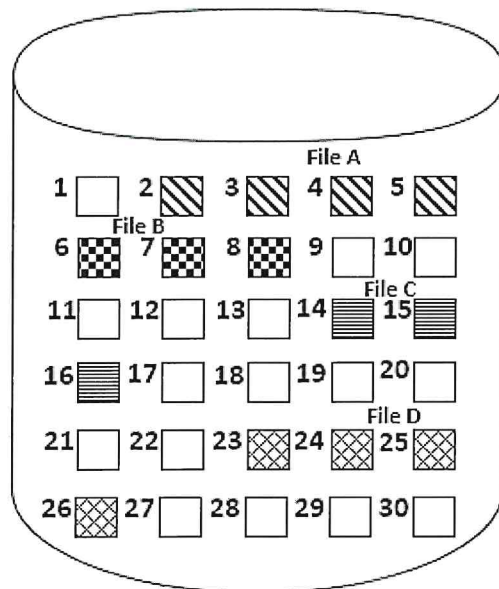

File	Start Block	Length

File Allocation Table
Jadual Peruntukan Fail

Figure 4(a)
Rajah 4(a)

[8 marks]

[8 markah]

SULIT

CLO1
C2

(c) Contiguous allocation is the simplest and easiest allocation method in storing file. However, this method has some drawback. Elaborate the major drawback when this method is applied.

Peruntukan bersambung adalah kaedah yang paling mudah dan ringkas dalam penyimpanan fail. Walaubagaimanapun, kaedah ini mempunyai beberapa kelemahan. Huraikan kelemahan paling utama apabila kaedah ini diaplikasikan.

[*8 marks*]
[*8 markah*]

SECTION B : 20 MARKS
BAHAGIAN B : 20 MARKAH

INSTRUCTION:

This section consists of **ONE (1)** essay question. Answer **ALL** question.

ARAHAN:

Bahagian ini mengandungi SATU (1) soalan esei. Jawab SEMUA soalan.

QUESTION 1
SOALAN 1

CLO1
C4

A staff member in your department request you to repair his damaged computer on his operating system.

As a Technical Expert, suggest **TWO (2)** appropriate options for the installation of new operating system if the staff uses the computers for the purpose of recording and updating data in word and excel software only. Determine **THREE (3)** reasons why you have chosen those options.

Seorang staf di jabatan anda meminta supaya anda membaiki komputer beliau yang mengalami kerosakan pada sistem pengoperasiannya.

Sebagai seorang Pakar Teknikal, cadangkan DUA (2) pilihan yang paling sesuai untuk proses pemasangan sistem pengoperasian yang baharu sekiranya staf ini hanya menggunakan komputer bagi tujuan perekodan dan kemaskini data dalam perisian word dan excel sahaja. Tentukan TIGA (3) alasan mengapa anda memilih pilihan - pilihan tersebut.

[20 marks]

[20 markah]

SOALAN TAMAT