

SULIT



BAHAGIAN PEPERIKSAAN DAN PENILAIAN
JABATAN PENDIDIKAN POLITEKNIK
KEMENTERIAN PENDIDIKAN MALAYSIA

JABATAN KEJURUTERAAN ELEKTRIK

PEPERIKSAAN AKHIR

SESI DISEMBER 2014

EC503: OPERATING SYSTEM

TARIKH : 07 APRIL 2015

MASA : 2.30 – 4.30 PETANG

Kertas ini mengandungi **SEPULUH (10)** halaman bercetak.

Bahagian A: Struktur(10 soalan)

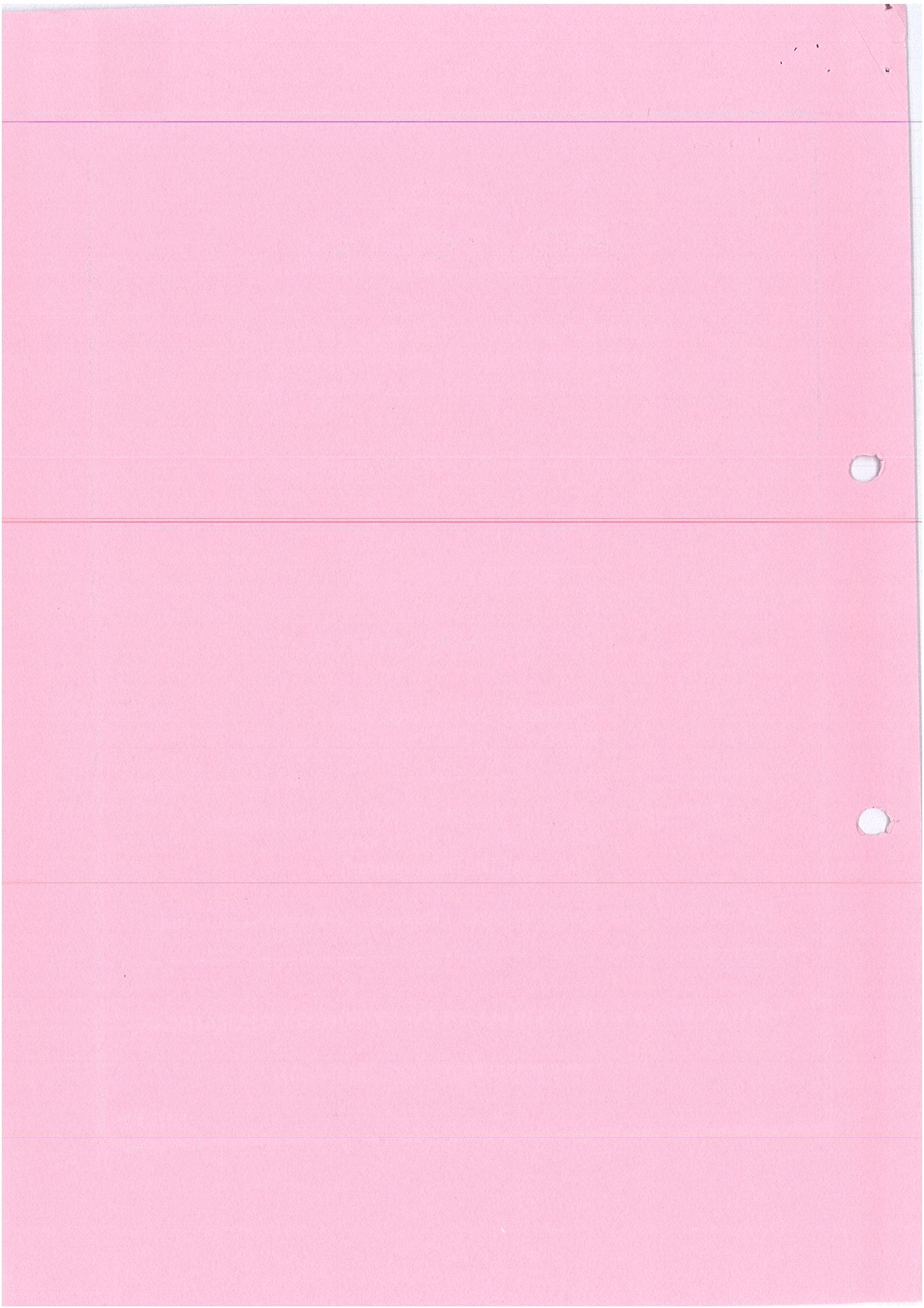
Bahagian B: Esei (3 soalan)

Dokumen sokongan yang disertakan : ~~Kertas Graf, Formula dsb~~ / Tiada

JANGAN BUKA KERTAS SOALAN INI SEHINGGA DIARAHKAN

(CLO yang tertera hanya sebagai rujukan)

SULIT



SECTION A: 40 MARKS

BAHAGIAN A: 40 MARKAH

INSTRUCTION:

This section consists of **TEN (10)** structured questions. Answer **ALL** questions.

ARAHAN:

Bahagian ini mengandungi **SEPULUH (10)** soalan struktur. Jawab semua soalan.

CLO1
C1

QUESTION 1

- a) Define operating system. *is a set of program that use all of the software and all of the hardware*
- b) State **TWO (2)** products of operating system.
UNIX, IOS

SOALAN 1

- a) Takrifkan sistem pengoperasian.
- b) Nyatakan **DUA(2)** produk sistem pengoperasian.

[4 marks]

[4 markah]

CLO1
C2

QUESTION 2

Describe definition of System Call Interface.

SOALAN 2

Huraikan definisi Antaramuka Sistem Panggilan.

is a program that request for a service from an operating system's kernel. It provide the interface between a process and the operating system

[4 marks]

[4 markah]

CLO1
C3**QUESTION 3**List **FOUR (4)** types of user interface in operating system.

- Graphical user interface
- command line
- voice actuated
- web form

SOALAN 3Senaraikan **EMPAT (4)** jenis pengantaramuka pengguna bagi sistem pengoperasian.

[4 marks]

[4 markah]

CLO1
C1**QUESTION 4**

Distinguish between Web-Form Interface and Graphical User Interface.

allow the user to activate an operating system command by clicking on desktop icon using pointing device such as mouse or touch screen

SOALAN 4

Bezakan diantara 'Web-Form Interface' dengan 'Graphical User Interface'

[4 marks]

[4 markah]

CLO1
C2**QUESTION 5**

Explain virtual memory used in memory management.

SOALAN 5

Terangkan berkenaan ingatan maya yang digunakan di dalam pengurusan ingatan

[4 marks]

[4 markah]

CLO1
C2 QUESTION 6

Explain Best Fit algorithm used in dynamic memory management.

SOALAN 6

Terangkan berkenaan algoritma Best Fit yang diguna dalam pengurusan memory

[4 marks]

[4 markah]

CLO1
C2 QUESTION 7

Describe ONE (1) difference between multi programming and time sharing in operating system. Program that provide many program

SOALAN 7 only allow each program to use piece slice of CPU time
Huraikan SATU (1) perbezaan di antara pengaturcaraan berbilang dan perkongsian masa dalam sistem operasi

[4 marks]

[4 markah]

CLO1
C3 QUESTION 8

Interpret Contiguous Allocation method apply in operating system

SOALAN 8

Tafsirkan aplikasi kaedah "Contiguous Allocation" di dalam sistem operasi.

[4 marks]

[4 markah]

CLO1
C1 QUESTION 9

List TWO (2) differences between logical and physical addresses.

SOALAN 9

Senaraikan DUA (2) perbezaan di antara alamat logical dan alamat fizikal.

logic	P
process by software	
similar to process reading and writing	the

[4 marks]

[4 markah]

SULIT

CLO1
C3**QUESTION 10**List **ONE (1)** advantage and disadvantage of Fixed-partition memory management.**SOALAN 10**Senaraikan **SATU (1)** kelebihan dan kelemahan pengurusan ingatan secara "Fixed-partition".

[4 marks]

advantage - fixed partition is static - number and size of a partition do not change [4 markah]

disadvan

SECTION B: 60 MARKS

BAHAGIAN B: 60 MARKAH

INSTRUCTION:

This section consists of **THREE (3)** essay questions. Answer all questions.

ARAHAN:

Bahagian ini mengandungi **TIGA (3)** soalan esei. Jawab semua soalan.

QUESTION 1

SOALAN 1

CLO1
C3

(a) List **FOUR (4)** functions of operating system.

Senaraikan EMPAT (4) fungsi sistem pengoperasian process a file

[4marks]

[4 markah]

CLO1
C2

(b) Differentiate between client-server model and virtual machine structure in operating system.

Bezakan antara client-server model dan virtual machine di dalam sistem pengoperasian.

[6 marks]

[6 markah]

CLO1
C3

(c)

“Command Line Interface (CLI) is old fashion user interface. But nowadays most people like to use Graphical User Interface (GUI).”

Use the aspects given to compare the different between CLI and GUI:

- i. Ease of use
- ii. Control
- iii. Multitasking

using both

iv. Appearance

v. Speed

faster

slower

"Command Line Interface (CLI)" adalah cara lama dalam proses antaramuka. Tapi kini ramai pengguna lebih gemar menggunakan antaramuka "Graphical User Interface (GUI)"

Gunakan aspek diberi bagi membezakan diantara CLI dengan GUI:

- i. Mudah digunakan
- ii. Kawalan
- iii. Multitasking
- iv. Appearance
- v. Kelajuan

[10 marks]

[10 markah]

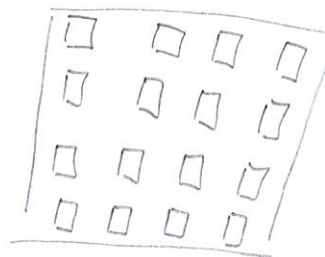
QUESTION 2

SOALAN 2

CLO1
C3

- (a) "Segmentation is also described as memory management scheme that supports user's view of memory."

Interpret statement above. Draw a figure to show your understanding on the statement above.



“Segmentation dikatakan sebagai pengurusan ingatan berdasarkan pandangan pengguna”

Tafsirkan kenyataan di atas. Lukis rajah untuk menunjukkan kefahaman anda berkaitan dengan kenyataan di atas.

[12 marks]

[12 markah]

CLO1
C3

(b) Based on the Diagram B2(b), interpret dynamic address translation.

Berdasarkan Rajah B2(b), taksirkan penterjemahan alamat secara dinamik.

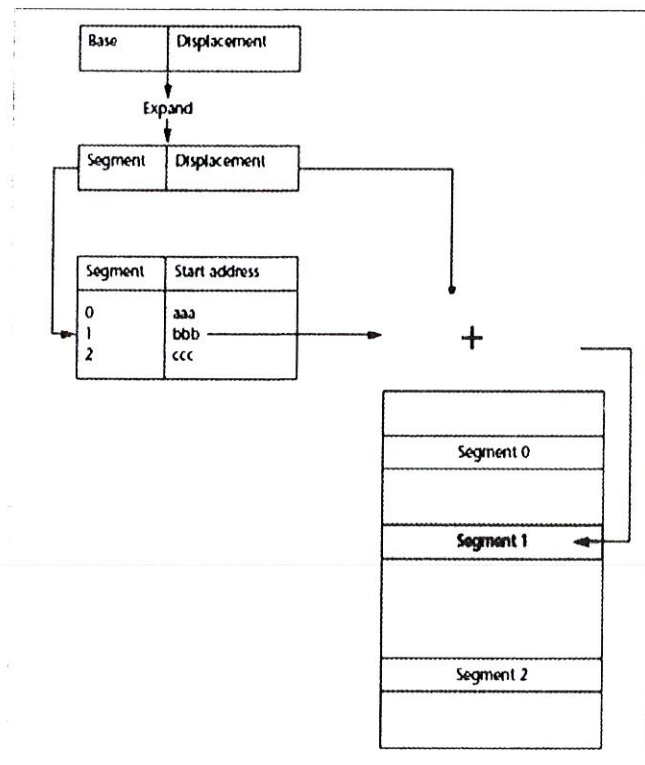


Diagram B2(b): Segmentation./Rajah B2(b)

[8 marks]

[8 markah]

Question 3

CLO1
C1

(a) List **TWO (2)** objectives of a file management system in operating system.

Senaraikan DUA (2) objektif sistem pengurusan fail dalam sistem pengoperasian

[4 mark]

[4 mark]

CLO1
C2

(b) Describe **THREE (3)** types of files structure below:

- i. Unstructured (Byte sequence) *read and write*
- ii. Structured (Record sequence) *read or write*
- iii. Tree *read,*

Huraikan TIGA (3) jenis struktur fail di bawah:

- i. *Tak berstruktur (Susunan Bait)*
- ii. *Berstruktur (Susunan Rekod)*
- iii. *Pokok*

[6 mark]

[6 mark]

CLO1
C2

(c) Differentiate in form of table between Contiguous allocation and Linked list allocation (disk blocks) of storing file following the aspect below:

- (i) Allocated File
- (ii) Add new file
- (iii) Read a file
- (iv) Advantages
- (v) Disadvantages

Bezakan (dalam bentuk jadual) antara bahagian bersempanan dengan bahagian senarai berangkai (cakera blok) bagi kaedah penyimpanan fail berdasarkan aspek berikut:

- (i) Lokasi fail
- (ii) Tambah fail baru
- (iii) Baca fail
- (iv) Kelebihan
- (v) Kelemahan

[10 marks]

[10 markah]

SOALAN TAMAT

