

SULIT



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

JABATAN TEKNOLOGI MAKLUMAT DAN KOMUNIKASI

PEPERIKSAAN AKHIR

SESI I : 2022/2023

DFN30053: OPEN SOURCE OPERATING SYSTEM

TARIKH : 05 JANUARI 2023

MASA : 2.30 PM - 4.30 PM (2 JAM)

Kertas 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 MARK***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
C1

- (a)(i) State **TWO (2)** types of open source software licenses.
Nyatakan DUA (2) jenis lesen perisian sumber terbuka.

[2 marks]

[2 markah]

CLO1
C2

- (ii) Based on Figure B1(a)(ii). Explain the benefit of copyleft.
Berdasarkan Rajah B1(a)(ii). Terangkan faedah copyleft.

“Copyleft is all about user freedom where the source code of open source software is available to users”.

Figure B1(a)(ii) / *Rajah B1(a)(ii)*

[2 marks]

[2 markah]

CLO1
C1

- (b)(i) State **TWO (2)** types of Linux shell that are using C shell's syntax.
Nyatakan DUA (2) jenis shell Linux yang menggunakan sintaks C shell.

[2 marks]

[2 markah]

- (ii) Name **TWO (2)** types of desktop environment that are commonly used in Linux.

Namakan DUA (2) jenis persekitaran desktop yang biasa digunakan dalam Linux.

[2 marks]

[2 markah]

CLO1
C2

- (c)(i) Based on Figure B1(c)(i), explain the purpose of using this command in Linux shell by relating it to the Jasper current situation.

Berdasarkan Rajah B1(c)(i), terangkan tujuan menggunakan arahan ini dalam shell Linux dengan mengaitkannya dengan situasi semasa Jasper.

“Jasper is currently using BASH shell in his Linux platform. Then he enters the `chsh -s /bin/dash osos_n1` command in terminal.”

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

[2 marks]

[2 markah]

- (ii) Describe **TWO (2)** differences between Windowing System and Shell in Linux.

Terangkan DUA (2) perbezaan antara Sistem Windowing dan Shell dalam Linux.

[4 marks]

[4 markah]

CLO1
C1

- (d)(i) Define the function of /boot in Filesystem Hierarchy Structure (FHS).
Tentukan fungsi /boot dalam Filesystem Hierarchy Structure (FHS).

[2 marks]

[2 markah]

- (ii) List **TWO (2)** commands to display the contents of the text files in Linux.
Senaraikan DUA (2) arahan untuk memaparkan kandungan fail teks dalam Linux.

[2 marks]

[2 markah]

CLO1
C2

- (e)(i) Interpret the following command function.
Tafsirkan fungsi arahan berikut.

i. `cp lab1.txt lab2.txt home/user/PTask`

ii. `touch Politeknik/DDT.txt`

[4 marks]

[4 markah]

- (ii) Show the output when the command `grep -i 'cal' NETWORK.txt` and `head -2 NETWORK.txt` are applied at terminal based on Figure B1(e).

Tunjukkan output apabila arahan `grep -i 'cal' NETWORK.txt` dan `head -2 NETWORK.txt` digunakan pada terminal berdasarkan Rajah B1(e).

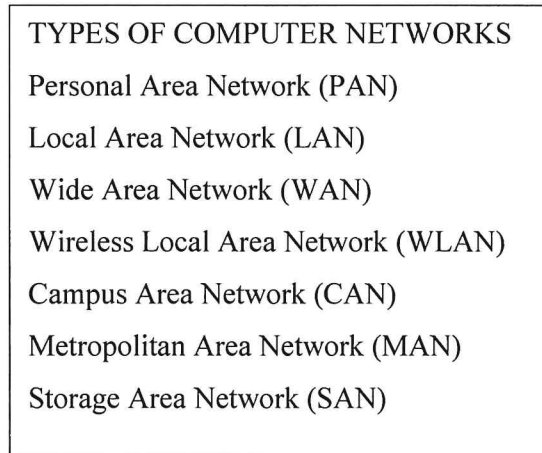


Figure B1(e) / *Rajah B1(e)*

[4 marks]

[4 markah]

- (iii) Differentiate between absolute path and relative path with **ONE (1)** directory path example respectively.

*Bezakan antara laluan mutlak dan laluan relatif dengan **SATU (1)** contoh laluan direktori masing-masing.*

[4 marks]

[4 markah]

QUESTION 2**SOALAN 2**CLO1
C1

(a) Define root user in Linux system environment.

Definisikan pengguna 'root' dalam sistem persekitaran Linux.

[2 Marks]

[2 Markah]

CLO1
C2

(b) Referring to Figure B2(b), answer the question below.

Dengan merujuk Rajah B2(b), jawab soalan di bawah.

```
sandra@fedora:~ cat /etc/passwd
root:x:0:0:root:/root:/bin/bash
sandra:x:1000:1000,,,:/home/sandra:/bin/bash
ahmad:x:1001:1001,,,:/home/ahmad:/bin/bash
didi:x:1002:1002,,,:/home/didi:/bin/bash
hafiz:x:1000:1000,,,:/home/hafiz:/bin/bash
```

Figure B2(b) / *Rajah B2(b)*(i) List **TWO (2)** user added by Sandra. By default, Sandra is superuser.*Senaraikan **DUA (2)** pengguna yang ditambah oleh Sandra. Dimana Sanda adalah superuser.*

[2 marks]

[2 markah]

(ii) Interpret userdel hafiz.

Tafsirkan userdel hafiz.

[2 marks]

[2 markah]

CLO1
C2

(c) Referring to Figure B2(c), answer the question below.

Dengan merujuk Rajah B2(c), jawab soalan di bawah.

```
fatini@ubuntu:~ ls -l
total 0
-rw-rw-rw- 1 fatini fatini 0 2022-10-07 09:50 Myubuntu
drw-rw-rw- 1 fatini fatini 0 2022-10-07 09:50 Myubuntu1
```

Figure B2(c) /Rajah B2(c)

(i) Identify the function of `ls -l` command in Figure B2(c).*Kenal pasti fungsi arahan `ls -l` dalam Rajah B2(c).*

[2 marks]

[2 markah]

(ii) Identify the type of Myubuntu and Myubuntu1.

Kenal pasti jenis Myubuntu dan Myubuntu1.

[2 marks]

[2 markah]

CLO1
C1(d) Name **TWO (2)** journaling filesystem in Linux.*Namakan **DUA (2)** journaling filesystem dalam Linux.*

[2 marks]

[2 markah]

CLO1
C2

(e) Question 2 (e) (i) and 2 (e) (ii) are based on Figure B2(e).

Soalan 2 (e) (i) dan 2 (e) (ii) merujuk kepada Figure B2(e).

```
root@HP-VirtualBox: /home/rose # fdisk /dev/sda
Command (m for help): m
Command action
d-
p-
n-
q-
```

Figure B2(e) / *Rajah B2(e)*

(i) Interpret the function of `fdisk /dev/sda`.

Tafsirkan fungsi `fdisk /dev/sda`.

[2 marks]

[2 markah]

(ii) Show the output when applying `d`, `p`, `n` and `q` after enter `fdisk /dev/sda` command is applied at terminal.

Terangkan dapatan apabila menggunakan `d`, `p`, `n` dan `q` selepas memasukkan arahan `fdisk /dev/sda` dalam terminal.

[4 marks]

[4 markah]

CLO1
C2

- (f) Referring to Figure B2(f), answer the questions below.
Dengan merujuk Rajah B2(f), jawab soalan di bawah.

```

root@ubuntu-VMWare:/# mkdir newfs ← STEP 1
root@ubuntu-VMWare:/# ls ← STEP 2
bin cdrom etc init.img lost+found mnt opt root selinux dev
home lib media
root@ubuntu-VMWare:/# mount /dev/sda1 /newfs ← STEP 3
root@ubuntu-VMWare:/# ls /newfs/ ← STEP 4
bin cdrom etc init.img lost+found mnt opt root selinux dev
home lib media
root@ubuntu-VMWare:/# umount /dev/sda1 /newfs ← STEP 5

```

Figure B2(f) / *Rajah B2(f)*

- (i) Interpret the function of `mount /dev/sda1 /newfs`.

Tafsirkan fungsi `mount /dev/sda1 /newfs`.

[2 marks]

[2 markah]

- (ii) Explain each process of the command line interface from **STEP 1** until **STEP 5**.

*Terangkan setiap proses bagi command line interface dari **STEP 1** sehingga **STEP 5**.*

[5 marks]

[5 markah]

END OF QUESTION**SOALAN TAMAT**