

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
C1

(a) List **TWO (2)** main components of dynamic routing protocols.

Senaraikan DUA (2) komponen utama protokol dynamic routing.

[2 marks]
[2 markah]

CLO1
C2

(b) Discuss **TWO (2)** advantages of dynamic routing compared to static routing.

Bincangkan DUA (2) kelebihan dynamic routing berbanding static routing.

[4 marks]
[4 markah]

CLO2
C2

(c) Based on **Figure B1(c)**, identify the commands required to configure RIPv2 on R2.

Berdasarkan Rajah B1(c), kenal pasti arahan yang diperlukan untuk mengkonfigurasi RIPv2 pada R2.

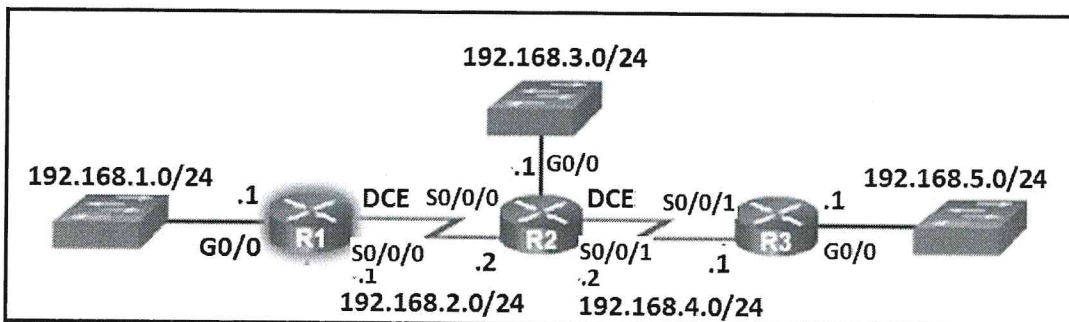


Figure B1(c) / Rajah B1(c)

[4 marks]
[4 markah]

CLO2
C3

(d) Refer to **Figure B1(d)**. Given that router R2 is already configured with RIPv2, conduct the RIPv2 configuration on router R1 so that all hosts from both network 192.168.2.0/24 and 172.16.17.0/24 are able to access the Internet.

Rujuk **Rajah B1(d)**. Diberikan router R2 sudah dikonfigurasi dengan RIPv2, laksanakan konfigurasi RIPv2 pada router R1 agar semua hos dari kedua-dua rangkaian 192.168.2.0/24 dan 172.16.17.0/24 dapat mengakses Internet.

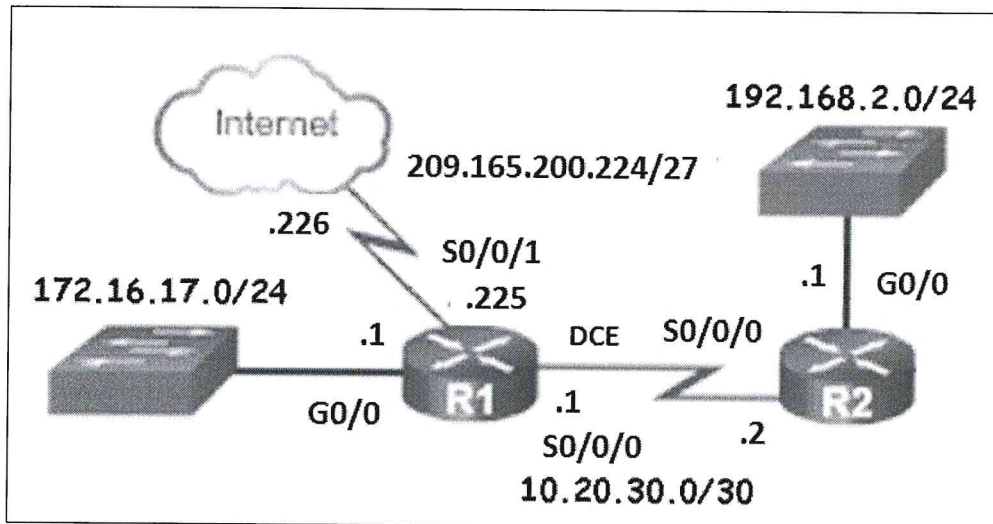
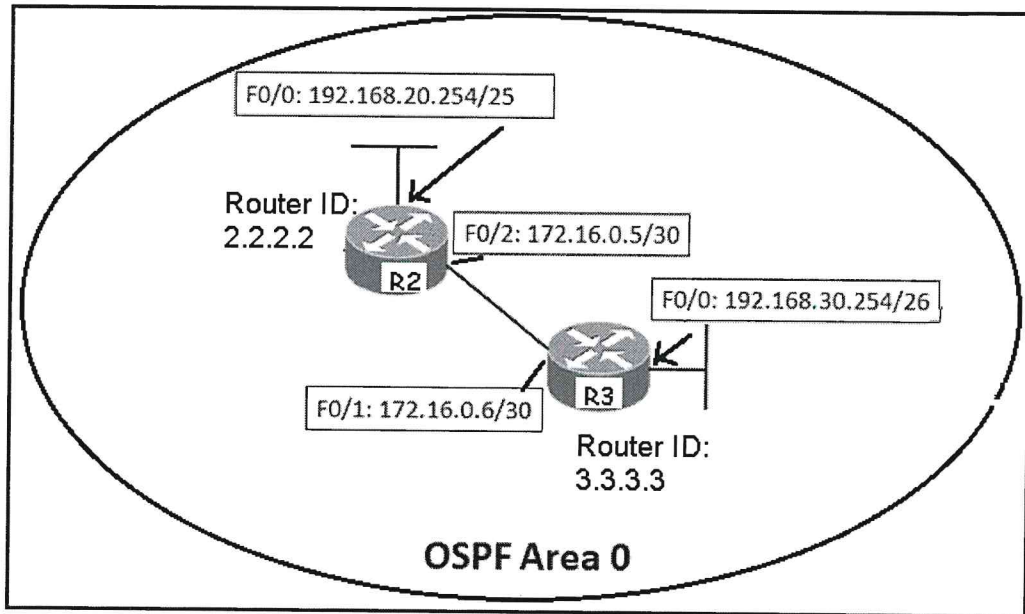


Figure B1(d) / Rajah B1(d)

[6 marks]
[6 markah]

CLO2
C3(e) Based on **Figure B1(e)**, conduct the configuration for router R3.*Berdasarkan Rajah B1(e), laksanakan konfigurasi untuk router R3.*Figure B1(e) / *Rajah B1(e)*[4 marks]
[4 markah]

CLO1
C2

(f) Explain the benefit for each of the following guideline from ACL best practices.

Terangkan manfaat untuk setiap garis panduan dari amalan terbaik ACL di bawah.

Guideline / Garis Panduan	Benefit / Manfaat
i. Base your ACL on the security policy of the organization. <i>Asaskan ACL anda mengenai dasar keselamatan organisasi</i>	
ii. Prepare a description of what you want your ACLs to do. <i>Sediakan penerangan mengenai apa yang anda mahu ACL anda lakukan.</i>	
iii. Use a text editor to create, edit, and save ACLs. <i>Gunakan editor teks untuk membuat, mengedit, dan menyimpan ACL.</i>	

[6 marks]
[6 markah]

CLO2
C3

(g) A network administrator had wrongly configured Access Control Entry (ACE) in R1. As shown in **Figure B1(g)**, the deny statement for host 192.168.10.99 needs to be replaced with host address 192.168.10.10. Conduct configuration commands to correct the mistake.

*Seorang pentadbir rangkaian telah salah mengonfigurasi Access Control Entry (ACE) dalam R1. Seperti yang ditunjukkan dalam **Rajah B1(g)**, pernyataan penafian untuk hos 192.168.10.99 perlu diganti dengan alamat hos 192.168.10.10. Laksanakan arahan konfigurasi untuk perbetulkan kesilapan tersebut.*

```
R1(config)# access-list 1 deny host 192.168.10.99
R1(config)# access-list 1 permit 192.168.0.0 0.0.255.255
```

Figure B1(g) / *Rajah B1(g)*

[4 marks]
[4 markah]

CLO2
C3

- (h) Based on **Figure B1(h)**, conduct IPv6 ACL configuration in R1 to block all traffic from LAN network in R3 from accessing LAN network in R1 by using ACL name “NO-R3-LAN-ACCESS”.

Berdasarkan **Rajah B1(h)**, laksanakan konfigurasi IPv6 ACL di R1 untuk menghalang semua lalu lintas dari rangkaian LAN di R3 daripada mengakses rangkaian LAN dalam R1 dengan menggunakan nama ACL “NO-R3-LAN-ACCESS”.

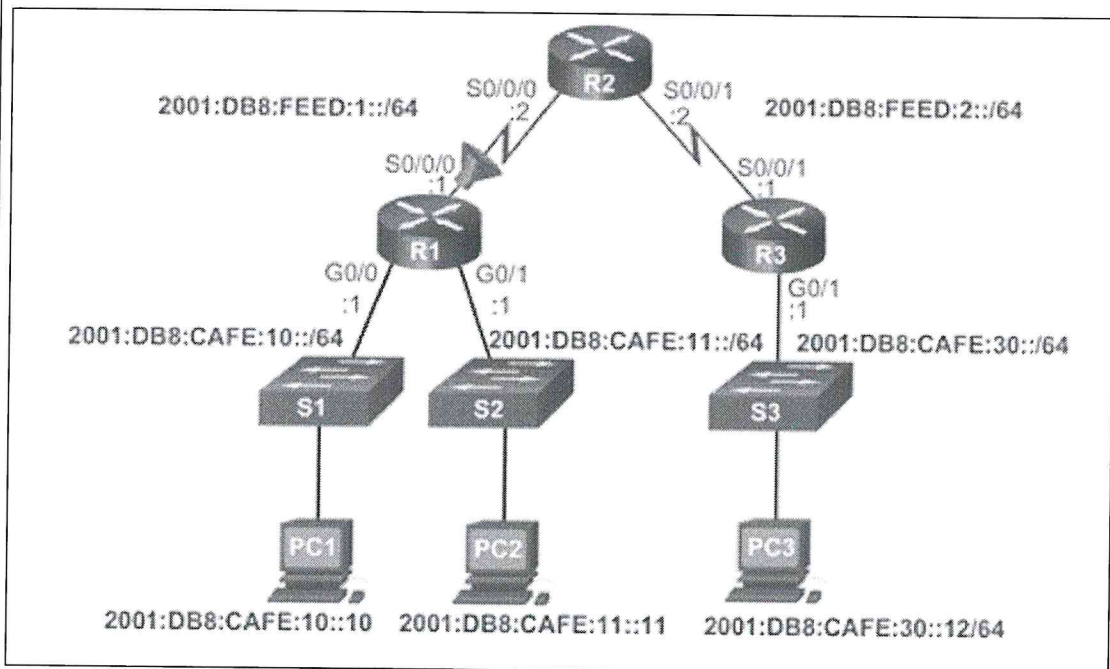


Figure B1(h) / Rajah B1(h)

[5 marks]

[5 markah]

QUESTION 2
SOALAN 2

CLO1
C2

- (a) Explain **TWO (2)** disadvantages of Network Address Translation (NAT).

Terangkan DUA (2) kelemahan Network Address Translation (NAT).

[4 marks]
[4 markah]

CLO2
C3

- (b) You are required to configure Internet access on a router for a network as shown in **Figure B2(b)**. The ISP has provided the company with six (6) public IP addresses of 198.18.184.105 – 198.18.184.110. The company has 14 hosts that need to access the internet simultaneously. The hosts in the company LAN have been assigned private space addresses in the range of 192.168.100.17 – 192.168.100.30. Implement NAT configuration required for this task.

*Anda dikehendaki untuk mengkonfigurasi akses Internet pada penghala untuk rangkaian seperti yang ditunjukkan dalam **Rajah B2(b)**. ISP telah menyediakan syarikat dengan enam (6) alamat IP awam 198.18.184.105 - 198.18.184.110. Syarikat ini mempunyai 14 host yang perlu mengakses internet serentak. Host di LAN syarikat telah diberikan alamat ruang peribadi dalam julat 192.168.100.17 - 192.168.100.30. Buatlah konfigurasi NAT yang diperlukan untuk tugas ini.*

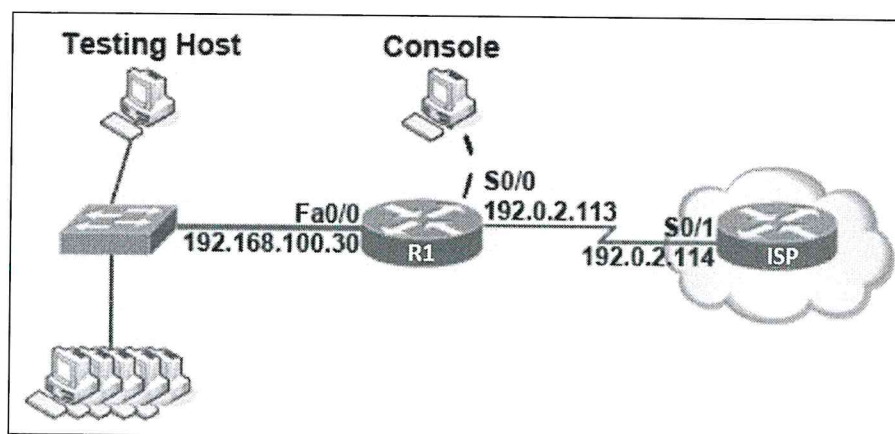


Figure B2(b) / Rajah B2(b)

[6 marks]
[6 markah]

CLO1
C3

(c) One of the features of IPv6 is that hosts can get an address automatically. The way this feature works is that the router on the network periodically broadcast the address that the network uses. Then the hosts add unique information to the part of address. The combination will result with a new IPv6 address. Relate **TWO (2)** situations to show the use of DHCPv6 Server implementation rather than auto-configuration.

*Salah satu ciri IPv6 ialah host boleh mendapatkan alamat secara automatik. Cara kerja ini berfungsi adalah melalui penghala di rangkaian secara berkala menyiarkan alamat yang digunakan oleh rangkaian. Kemudian host menambah maklumat unik ke bahagian alamat. Gabungan ini akan menghasilkan alamat IPv6 baru. Kaitkan **DUA (2)** keadaan untuk menggambarkan penggunaan pelaksanaan pelayan DHCPv6 dan bukannya konfigurasi auto.*

[4 marks]

[4 markah]

CLO2
C3

(d) Refer to **Figure B2(d)**. Implement appropriate command(s) to configure “DHCPv6” router based on the step provided below.

Rujuk **Rajah B2(d)**. Buatlah arahan yang sesuai untuk mengkonfigurasi router “DHCPv6” berdasarkan langkah yang disediakan di bawah.

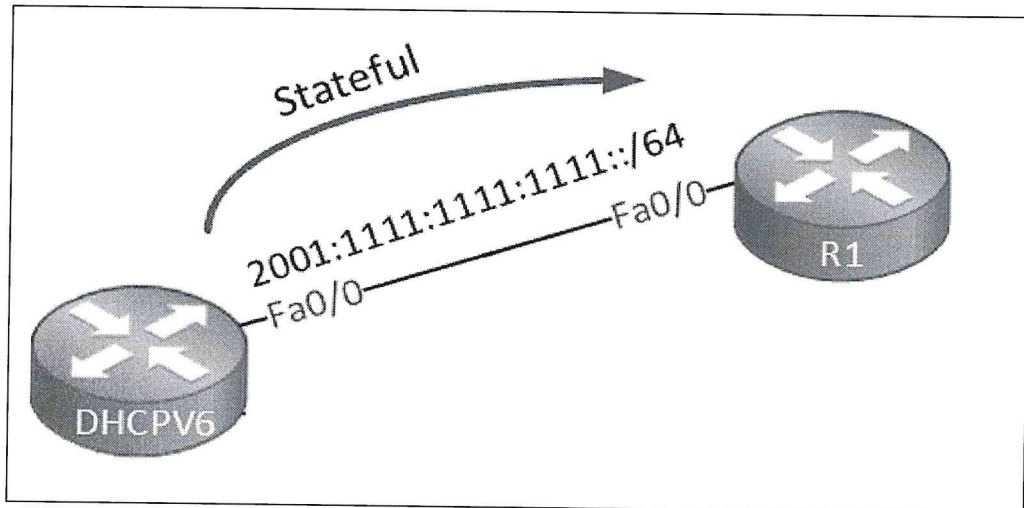


Figure B2(d) / Rajah B2(d)

- i. Enable IPv6 Routing.
Aktifkan IPv6 Routing.
- ii. Configure DHCPv6 Server Pool by using “STATEFUL” for pool name.
Konfigurasi Kolam Pelayan DHCPv6 dengan menggunakan “STATEFUL” untuk nama kolam.
- iii. Configure ONE DHCPv6 Server Parameter using any of the following information.
Konfigurasi Parameter Pelayan DHCPv6 menggunakan maklumat berikut.

DNS: 2001:4860:4860::8888
Domain: dfn5013.com

- iv. Configure DHCPv6 Interface.
Konfigurasi antara muka DHCPv6.

[6 marks]
[6 markah]

SOALAN TAMAT