

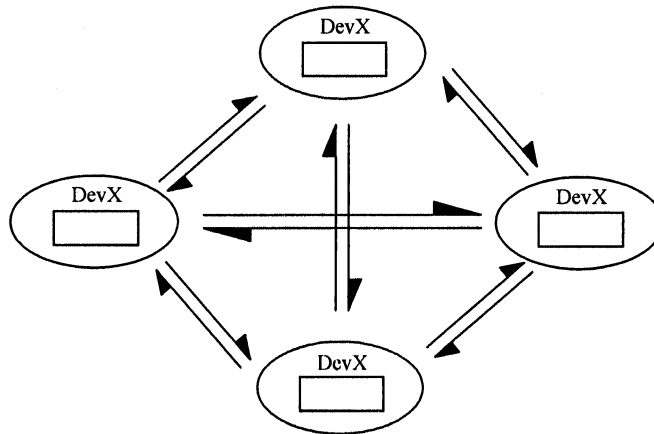
Paper 2B

	<b>Marks</b>
1. (a) Optical fibre. Long distance / less interference / high throughput	1+1
(b) (i) Major target user: Theme park staff Network application: Internal communication	1
(ii) Major target user: Theme park visitors Network application: Browse the park's information	1
(c) Provides access control. (more secure) Provides data traffic management.	1 1
(d) Advantage: It is less restriction on the location. (mobility) Disadvantage: The security issue might arise. / It may be less stable subject to the degree of the interference.	1 1
(e) (i) The increase in access points can improve the coverage of the wireless network. The increase in access points allows more mobile devices to connect to the network at the same time.	1 1
(ii) Control the network traffic and make sure that each visitor can enjoy a certain amount of the bandwidth.	1
(iii) The bottleneck of bandwidth occurs from the network backbone. The network bandwidth reaches the upper limit.	1
(f) (i) The backup should be created during the night time as it can minimize the impact on the network traffic.	2
(ii) Advantage: All data can be retrieved in every previous day. Disadvantage: The loading to the backup system is heavy. / The storage for the backup is largely consumed.	1 1

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|--------|--|--------------|
| 2. (a) | IP address: 192.168.1.X (X is not 0, 20 or 255)  | 1            |
|        | Subnet mask: 255.255.255.0                       | 1            |
|        | Default gateway: 192.168.1.Y (Y is not 0 or 255) | 1            |

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| (b) | Computer B is blocked so that no access to the computer is allowed. (firewall setting) | 1 |
|     | The access rights of Computer B is not granted to Computer A. (OS setting)             | 1 |

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| (c) (i) |  | 2 |
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| (ii) | It is more reliable as central dependency is eliminated. Failure of one peer does not affect the network much. | 1 |
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| (d) (i) | Name / ID / participating activities | 1×2 |
|---------|--------------------------------------|-----|

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| (ii) | The registration takes less time as participants do not need to spend much time to plug in the cable. | 1 |
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	It supports multiple connections.	1
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| (iii) | Used in social networking situations, such as sharing contacts and files /<br>Used in contactless payment systems /<br>Acting as electronic identity documents and keycards | 2 |
|-------|---|---|

		Marks
3.	(a) (i) P, Q or R + brief explanation	1+1
	(ii) Similarity: Content Filtering	1
	Difference: A firewall blocks access by closing the ports used for communication between networks while a proxy server blocks the browsing of some web sites (URLs).	1
	(b) (i) Once the first student has accessed the image files from the web site, the image files are cached in the proxy server. Other students accessing the image files will be faster because they can directly retrieve the image files from the proxy server instead of the Internet.	2
	(ii) The proxy server cannot stop running anonymous programs that harm computers. A firewall / anti-virus program can be supplemented in each workstation.	1 1
	Leaking of personal information such usernames and passwords might occur when the information was sent over the proxy server. (browsing info is recorded)	
	(iii) It is a connection with HTTPS or SSL. / The file/web page is firstly accessed. / The streaming is applied to the viewed web page.	1×2
	(c) (i) Save installation cost (money / installation time)	1
	Save running cost (scanning once for all workstations)	1
	(ii) Computer virus attacks in other ways (e.g. USB drive). The loading is increased.	1×2
4.	(a) (i) Release the loading of Switch P.	1
	It is difficult to control the connections with visitors' mobile devices.	1
	(ii) It has a better network security control of the web server.	1
	Increase the loading of Switch P.	1
	(iii) URL / IP level restriction + description	1+1
	(b) (1) Use IPCONFIG to see if the laptop computer can obtain the proper IP address	2
	(2) Use PING command to test the connection between the laptop computer and the AP / desktop computer / switch / router	2
	(3) Browse other websites to see if all websites cannot be accessed	2
	(c) (i) There are too many visitors. It is difficult to add all MAC addresses.	1
	The mobile devices of visitors might be changed from time to time. It is difficult to manage the update. (practicality/management)	1
	(ii) Hide SSID	1
	Use encryption method, e.g. WPA2	1