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Examination Answer Books

12 Pages

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3. The answers must be legibly written. The Examiners can either ignore illegible script or have it typed and the expense of typing charged to the candidate.
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(see note 2 below)

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1	Student Number	192 642
2	Title of Examination Paper	Networking and Cyber Security
3	Module Code	ACCA4024
4	Date and Time of Examination	16/05/22 5pm
5	Examination Venue	Handli
6	Seat Number	
7	Number of Answer Books handed in	

[illegible]

- i) WiFi, RFID and Bluetooth (1)
- ii) Transport, sends data through use of Internet to the network X. network
- iii) 2048 bytes X. 1518.
- iv) ~~As the network does not have reserved usable hosts~~ ~~yes it is having reserved usable hosts~~ ✓ (3)
- v) True, DHCP assigns dynamic IP addresses ✓ (3)
- vi) False, private IP's are for internal networks ✓ (2)
- vii) True X
- ix) True ✓ (2)
- x) True X. Q1 - 11 marks.

2) OSI's 7 different layers are

Application (7) → Presentation (6) → Session (5) (1)
 → Transport (4) → Network (3) → Data Link (2) ✓
 → Physical (1) ✓

Application is the software in use, Presentation is how it is used, Session is the address that is currently being carried out, Transport is the data being sent over, Network is how the data is sent over, Data Link is the process of sending the data through, Physical is the wires and hardware for the process. (1)

TCP's different layers are

Application (4) → Transport (3) → Internet (2) ✓
 → Network (1)

The OSI and TCP models are the different methods of transferring data through a network securely. ✓ ①

The main differences between the two are.

OSI has 7 layers TCP/IP has 5, OSI is 20 bytes while TCP is 5, OSI is vertical while TCP is horizontal. ✓ ①

Q2 - 5

theoretical address type

- 3) IP addresses are a string of numbers and full stops used to provide data on an online platform. Data link is possible for IP addresses. IPv4 is 32 bytes while IPv6 is 128 bytes, IPv6 was created to give more addresses / more storage for sites. ✓ ①
- IPv6 class

A. 1-127 - used for a large number of ports. ✓ ①

B. 128-193 - ~~used for local area network~~

C. 194-233 - used for local area network

Network address translation is used to classify IP addresses. A MAC address is a physical type of address used to identify a machine. The OSI layer responsible for MAC addresses would be the transport layer. ✓ ①

Q3 - 4.

4. Network ports on firewalls can be used to prevent any unauthorised potentially harmful machines from accessing your network, hardware firewalls can prevent someone who shouldn't be able to access your network from doing so physically (e.g. network cable) while a software firewall prevents these types of people from doing so wirelessly. A demilitarised zone can be used as it can also be used as a place to test any new potential exploits and before adding them to the firewall. Intrusion detection systems are ideal but physically odd it can be an alarm system to let you know if an intruder is in the networking room, and usually if someone is trying to access something they shouldn't be then it can notify the network administrator.

Q4 Part A - 6 marks

- ii) Modem is a device which transfers data through a phone line, not a smart device, - Transport

Switch is a device which transfers data through to machines through a wired connection, smart device - Transport

Router is a device which can provide data through wired and wireless connections by having an IP address - Smart device - Data link

Hub - the main star data access hub which sends out data through a wired connection - not intelligent - network

Q4 part B - 4 marks

Q4 total marks - 10

5)

- i) Encryption ~~✓~~, ~~and~~ ip address ~~✓~~
- ii) Encryption ~~✓~~, ip address filtering ~~✓~~ ①
- iii) SSH ~~✓~~, DNS ~~✓~~ ①
- iv) NSlookup ~~✓~~, Tracert ~~✓~~ ①
- v) A ~~✓~~ and C ~~✓~~ ①

Q5 - 4.