

## Task 1

(a) Ad-hoc networks are commonly used in PANs. What does PAN stand for?

P \_\_\_\_\_ A \_\_\_\_\_ N \_\_\_\_\_

(b) Wireless ad-hoc networks are commonly used when connecting your smartphone to a laptop. Identify three reasons why we might connect our smartphone to our laptop in this way.

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

(c) The alternative to an ad-hoc network, is an “infrastructure” network where we connect via a central device like a router. Generally speaking, an Ad-Hoc network is cheaper to set up than an Infrastructure network. Why is this?

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## Task 2

(a) Below are four statements regarding Open Wi-Fi connections. Identify which statements are true and which are false.

	True	False
1. Open Wi-Fi is where you connect your laptop to your phone to share its connection.	<input type="checkbox"/>	<input type="checkbox"/>
2. Open Wi-Fi doesn't require a password in order to connect to it.	<input type="checkbox"/>	<input type="checkbox"/>
3. Open Wi-Fi encrypts all data that is being transmitted over it.	<input type="checkbox"/>	<input type="checkbox"/>
4. Any data being sent over Open Wi-Fi could be intercepted & stolen.	<input type="checkbox"/>	<input type="checkbox"/>

(b) Open Wi-Fi is commonly used in restaurants and cafés. Why do you believe they use this?

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(c) Secure Wi-Fi connections usually use encryption. What type of encryption is used on Wi-Fi?

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### Task 3

There are a number of performance issues with ad-hoc networks. Explain these issues below.

Issue	Explanation
<b>Maximum Speed</b>	
<b>Maximum Range</b>	
<b>Interference</b>	

### Task 4

Samuel commutes by train a lot as part of his job. While on the train he tethers his laptop to his smartphone in order to use its mobile broadband. However, at times he finds he loses his internet connection.

Explain two potential issues that might be the cause for Samuel's loss of internet.

1. \_\_\_\_\_  
\_\_\_\_\_
2. \_\_\_\_\_  
\_\_\_\_\_