Index Number: _____ SEAC05/s2.21s



MATRICULATION AND SECONDARY EDUCATION CERTIFICATE EXAMINATIONS BOARD

SECONDARY EDUCATION APPLIED CERTIFICATE LEVEL 2021 SUPPLEMENTARY SESSION

SUBJECT: Information Technology

PAPER NUMBER: Synoptic – Unit 2
DATE: 3rd November 2021
TIME: 9:00 a.m. to 11:05 a.m.

THIS PAPER SHOULD BE RETURNED TO THE INVIGILATOR AFTER THE EXAMINATION.

Answer **ALL** questions in the space provided. You may answer either in English or in Maltese.

Scenario

- *LJB Insure* is an insurance company.
- The managers are thinking about improving their network infrastructure.

Qı	uestion 1	K-1 (6 marks)
a.	Define the term 'network'.	
		(2)
b.	Outline TWO advantages and TWO disadvantages of networks.	
	Advantage 1:	
		(0.5)
	Advantage 2:	
	Disadvantage 1:	
	Disadvantage 2:	
	Disadvantage 21	
c.	Differentiate between client-server and peer-to-peer architectures in security.	
		(2)

Question 2

• The managers of LJB Insure know that different networks and network topologies exist. • They know that the selection of a network mainly depends on the geographical area. a. Name **TWO** different types of networks apart from LAN and PAN: Type of network 1: _____ (1)Type of network 2: _____ (1)b. Different types of networks were chosen for the company. For each scenario, outline the chosen type of network based on geographical area. Scenario 1 A Local Area Network (LAN) is to be implemented within the main offices of the company which are located in a building block in Marsaxlokk. Outline of network: _____(1) Scenario 2: Employees should be able to connect their personal computer devices, such as smartphones, tablets and laptops, through a Personal Area Network (PAN) while at work. Outline of network: _____(1)

This question continues on next page

K-2 (8 marks)

. Networks can be in	Networks can be implemented using different network topologies.				
Describe the ring a	Describe the ring and mesh topologies.				
					(1) (1)
					(4)
					()
uestion 3					K-5 (8 marks)
Some network protocon. Identify which TW					
	FTP	HTTPS	SFTP	HTTP	
Secure Protocol 1:					(1)
Secure Protocol 2:					(1)
Outline the was of	the TWO seems			find in Ourabia	2-
. Outline the use of		re networking p	rotocois identi	ned in Questio	III 3d.
Use of Secure Prot	ocol 1:				
					(1)
Use of Secure Prot	rocol 2:				(1)
330 37 300010 1100	.0001 21				
					(1)

С.	One of the employees of the company suggested using DHCP. Describ benefits of DHCP.	e the use and	TWO
			(4)
Qı	uestion 4	K-7 (8 m	arks)
	te managers of <i>LJB Insure</i> want to give different permissions to the files the company's network.	and folders av	ailable
э.	List TWO different types of file/folder sharing permissions.		
	File/Folder sharing permission 1:		(1)
	File/Folder sharing permission 2:		(1)
-	Outline the TWO file/folder sharing permissions listed in Question 4a.		
٠.			
	Outline of permission 1:		
	Outline of permission 2:		
			(1)

 Describe a different situation where each fi should be used. 	Describe a different situation where each file/folder sharing permission listed in Question 4a should be used.			
	(4)			
Question 5	K-8 (8 marks)			
LJB Insure want to protect their computers fro				
	in network security timeats.			
a. List FOUR network security threats.				
Network security threat 1:	· ,			
	(0.5)			
Network security threat 3:	(0.5)			
Network security threat 3:	(0.5)			
b. State FOUR protection measures which can	be implemented to protect networked devices.			
Protection measure 1:	(0.5)			
Protection measure 2:	(0.5)			
Protection measure 3:	(0.5)			
Protection measure 4:	(0.5)			

	Outline FOUR protection measures which can be implemented to protect a wireless network.		
	(4		
estion 6	C-3 (12 marks		
JB Insure has setup their network infrastructure.			
The network allows for both wired and wireless connections. Employees are already using the network even though security me	asures are not yet in place		
State FOUR possible repercussions of using <i>LJB Insure</i> unsecured	network.		
Repercussion 1:			
Repercussion 2:	-		
Repercussion 3:			
Repercussion 4:			
Explain each of the FOUR repercussions stated in Question 6a.			
Explanation of repercussion 1:			

This question continues on next page.

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	Explanation of repercussion 2:	
	Explanation of repercussion 3:	
	Explanation of repercussion 4:	
:	Justify TWO protection measures which can be used to secure the ne Each measure should be justified based on ease of installation and effe	
		(4)