

UNIVERSITY EXAMINATIONS

1ST SEMESTER 2022/2023 ACADEMIC YEAR

THIRD YEAR EXAMINATION FOR THE DEGREE OF
BACHELOR OF SCIENCE (ICT)

BICT 411: NETWORK SYSTEM ADMINISTRATION II

STREAM: R

TIME: 2 HRS

DAY: THURS [8.30AM – 10.30AM] DATE: 08/12/2022

THIS QUESTION PAPER CONSISTS OF THREE (3) PAGES

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QUESTION ONE (30 MARKS)

- (a) Windows Server Administration 2016 gives you the power to prevent attacks and detect suspicious activity with new features to control privileged access, protect virtual machines (VMs), and harden the platform against emerging threats. Discuss what Windows Server 2016 can do for you: (8 Marks)
- (b) Discuss The following pillars as used in windows administration server. (8 Marks)
 - (i) Software-defined datacentre
 - (ii) Software-defined compute
 - (iii)Software-defined storage
 - (iv)Software-defined networking
- (c) Explain how Windows Server 2016 delivers new ways to deploy and run your applications, whether on-premises or in Azure, using new capabilities such as Windows containers and the lightweight Nano Server deployment option. (8 Marks)
- (d) Discuss the following System release Center 2016 (6 marks)
 - (i) Device Management
 - (ii) Provisioning Investments
 - (iii)Monitoring For the category,
 - (iv) Automation Improvements

QUESTION TWO

- (a) Discuss the following Operations Management Suite platform pillars (8 Marks)
 - (i) Insights and Analytics
 - (ii) Security and Compliance
 - (iii)Automation and Control
 - (iv)Protection and Recovery
- (b) What is a Software-defined datacenter? (2 marks)
- (c) Discuss how Microsoft Hyper-V virtualization technology is important (2 Marks)
- (d) What is Nested virtualization (2 marks)
- (e) Discuss some of the new improvements to the Hyper-V Manager. Let's take a look at them (6 marks)

QUESTION THREE

- (a) What is True VM mobility (2 Marks)
- (b) Discuss Failover cluster (2 Marks)
- (c) Discuss the following clustering in Windows Server 2016. (10 Marks)

- (i) Cloud witness using Microsoft Azure
- (ii) Shared VHDX improvements
- (iii) Improved cluster logs
- (iv) Active memory dumps
- (v) Network name diagnostics
- (vi) Cluster operating system rolling upgrade
- (vii) Workgroup and multidomain clusters
- (viii) SMB multichannel and multi-NIC cluster networks
- (ix) VM improvements**

QUESTION FOUR

- (a) What is Active memory dump (2 Marks)
- (b) Discuss the term Cluster operating system rolling upgrade (4 Marks)
- (c) Discuss the following clustering domain: - (6 Marks)
 - (i) Single-domain clusters Clusters
 - (ii) . Multi-domain clusters
 - (iii). Workgroup clusters Clusters
- (d) What is Synchronous replication (2 marks)
- (e) Discuss Server-to-server and cluster-to-cluster replication (4 Marks)
- (f) Discuss on Configuring replication (2 Marks)

QUESTION FIVE

- (a) Discuss the following key things to know concerning Storage Replica as of the Windows Server 2016 (8 Marks)
 - (i) Network bandwidth and latency with fastest storage
 - (ii) The destination volume is not accessible while replicating When you configure replication
 - (iii) Different implementation of asynchronous replication
 - (iv) Storage Replica is not Hyper-V
- (b) Discuss the following tenets as used in network administration optimization service (12 marks)
 - (i) Fault Tolerance Storage Spaces
 - (ii) Accelerated Erasure Coding Storage Spaces
 - (iii) Efficient VM check-points Storage Spaces
 - (iv) Scalability Storage Spaces Direct can scale from 2 to 16 servers.
 - (v) Health Service Storage Spaces
 - (vi) The Health Service actively monitoring