NATIONAL SCHOOL OF BUSINESS MANAGEMENT

BSc in Management Information Systems (Special) (NSBM)– 19.2/20.1
BSc (Honours) in Software Engineering (NSBM)– 19.2/20.1
BSc (Honours) in Computer Science (NSBM)– 19.2/20.1
BSc (Hons) Management Information Systems (UCD)– 19.2/20.1

Year 02 Semester 02 Examination
18th October 2019
CN201.3 Computer Networks

Instructions to Candidates

1) **Answer any four (4) questions.**

2) **Time allocated for the examination is five (05) hours (Including downloading and uploading time)** . (Note: **No email submissions are accepted under any condition.**)

3) Weightage of Examination: 60% out of final grade

4) Download the paper, provide answers to the selected questions in a word document.

5) Please upload the document with answers (Answer Script) to the submission link before the submission link expires

6) Answer script should be uploaded in PDF Format

7) Under any circumstances E-mail submissions would not be taken into consideration for marking. Incomplete attempt would be counted as a MISSED ATTEMPT.

8) The Naming convention of the answer script – Module Code_Subject name_Index No

9) You must adhere to the online examination guidelines when submitting the answer script to N-Learn.

10) Your answers will be subjected to Turnitin similarity check, hence, direct copying and pasting from internet sources, friend's answers etc. will be penalized.

Question 01- 25 Marks

a) Explain how a 128-bit address (IPv6) have overcome the complex problems in routing created by the 32 bit addressing (IPv4).

10 marks

b) Explain factors you will consider in selecting the suitable network topology for a given scenario.

6 marks

c) Explain why it's important to reduce the number of layers in high performance clusters and grids taking Spine and leaf as the example.

9 marks

Question 02- 25 Marks

a) Explain why the switching is treated as a layer 2 (Data Link Layer) function? Can it be done on a different layer in the OSI 7-layer reference model? Explain and justify the answer.

9 marks

b) Why do we have to use a mixture of guided and unguided transmission mediums in providing a communication solution.

8 marks

c) State and explain the factors we need to consider in selecting a location to housed telecommunication closet in a building to house active component.

8 marks

Question 03- 25 Marks

a) Explain why the governance of infrastructure (like network) is important in enterprise environments?

8 marks

b) Explain the difference of block retrieval and object retrieval models in data storage system based on network impact on the network.

8 Marks

c) Explain the importance of monitoring KPI (key Performance Indicators) network infrastructure.

9 marks

Question 04- 25 Marks

a) Explain how the device capabilities impact in to network requirements, taking an example and explain it detail.

8 marks

b) Explain the how the connected network active components going to impact the data flow in the network. You may use an example to explain it.

8 marks

c) Explain why its impotent to maintain the correct balance between Interconnectivity and Hierarchical data flow on a network.

5 marks

d) What changers CYOD/BYOD will bring to the network logical design and implementations.

4 marks

Question 05- 25 Marks

a) Explain how we can defend our network perimeter security from external attacks providing any technical diagrams to support.

7 marks

b) Explain the factors you will consider in making the decision on the fire wall deployment architecture if you have choice of sandwich design over layered design.

8 marks

c) Briefly explain factors you will consider in creating subnetworks (subnets) indicating how those factors contribute in the process.

10 marks

Question 06- 25 Marks

a) Explain the key areas where the network management is focused on in enterprise infrastructure.

9 Marks

b) Explain the functionalities cover under fault management in ISO security management process.

8 marks

c) Briefly explain the requirement of using both the SNMP pools and traps for effective monitoring of an event.

8 marks

-END OF THE PAPER-