

PAN AFRICA CHRISTIAN UNIVERSITY

BACHELORS OF INFORMATION COMMUNICATION TECHNOLOGY

END OF TERM EXAMINATION

DEPARTMENT: COMPUTING & INFORMATION TECHNOLOGY

COURSE CODE: BITBSIT205

CAMPUS: ROYSAMBU

COURSE TITLE: DATA COMMUNICATIONS & NETWORKS

EXAM DATE:

TIME:

INSTRUCTIONS

- This exam carry a total of SIX Questions of [10 Marks Each]
- Section One (I) is compulsory.
- Answer any 3(Three) Questions from Section Two (II)
- Read all questions carefully before attempting.

Section One Compulsory 10 marks

Question One.

- a) Using renowned characteristics compare & contrast between Analog and Digital signal in data communications. **[2 marks]**
- a) For an effective network management and operations, A network administrator has to consider various elements of effective network security. Illustrate how you shall use the following to reinforce and manage PAC University Network
 - i. Policy Management. **[2 marks]**
 - ii. Network Identity. **[2 marks]**
 - iii. Perimeter security. **[2 marks]**
 - iv. Data Privacy. **[2 marks]**

Section Two Attempt any Three Questions.

Question Two.

- a) Analyze the appropriate remedies for the following Data & network bottlenecks.
 - i. Crosstalk. **[3 marks]**
 - ii. Signal Attenuations. **[3 marks]**
- b) Discuss the following network characteristics used in assessing most network operations.
 - i. Performance **[2 marks]**
 - ii. Reliability. **[2 marks]**

Question Three

- a) Discuss when and how you would use the following network troubleshooting commands.
 - i. ifconfig. **[2 marks]**
 - ii. ping (ip/domain/computer name) -t **[2 marks]**
 - iii. nslookup **[2 marks]**
 - iv. Netstat **[2 marks]**
 - v. DxDiag **[2 marks]**

Question Four

- a) Analyze THREE major challenges associated with most wireless Network Implementations. **[6 marks]**

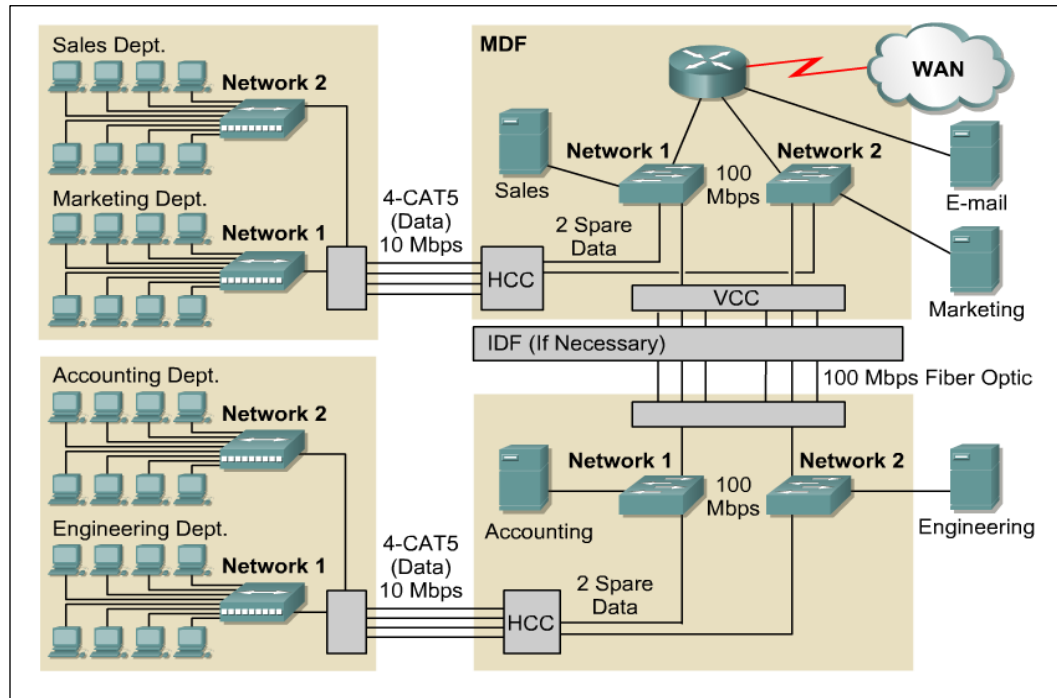
- b) Analyze TWO transmission impairment experienced in Guided Network operations and how each could be avoided. **[4 marks]**

Question Five.

Discuss functions and operation of an Intrusion detection system. **[10 marks]**

Question Six.

- a) Study the diagram shown below then debate the concepts arising therein.



i. MDF **[2 marks]**

ii. IDF **[2 marks]**

iii. HCC **[2 marks]**

- b) Illustrate the cable arrangements on how you would terminate Straight through UTP or STP copper cable using *ANSI/TIA/EIA-568-B*, standards. **[4 marks].**

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