

Networking & Information system in Medicine.

(19)

BE/VII/CBGS/BM/NIS in MED
QP Code : 6169

[Revised Course]

(3 Hours)

[Total Marks : 80

- N.B. : (1) Question no. 1 is compulsory
 (2) Attempt any three questions from the remaining five questions.
 (3) Make assumptions wherever necessary and state them

1. Explain the following (Any four)

- (a) Circuit switching
- (b) Different types of Ethernet
- (c) Structure of IPV4
- (d) Basic structure of HL7 message
- (e) Network Attached Storage

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2. (a) Given :

Number of needed subnets: 1000
 Number of needed usable hosts: 60
 Network Address: 165.100.0.0

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- Find
- (i) Custom subnet mask
 - (ii) Total number of subnets
 - (iii) Total number of host addresses
 - (iv) Number of usable addresses
 - (v) Number of bits borrowed

(b) With example explain classless and class full addressing .

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3. (a) With suitable example explain RSA algorithm

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(b) Explain TCP/IP Model in detail.

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4. (a) Draw a labeled diagram and explain the components of PACS.

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(b) With a neat diagram, explain the integration of information between HIS/RIS/PACS

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5. (a) Explain the DICOM data communication model

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(b) Describe the Patient Information Reconciliation (PIR) workflow

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6. Write short notes on (Any 4)

(a) Substitution Cipher

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(b) Supernetting

(c) LAN Topologies

(d) HIPPA

(d) web-based PACS model