

May-2012 Biomedical

Biomedical - NLMN - U
(R)

Sem-VII (REV)

Networking & Information system in medicine

Con. 4528-12.

(REVISED COURSE)

(3 Hours)

YTIET/LIB/ENGG/BM/SEM VII/NI SM/30 MAR 2012
[Total Marks : 100]

- N.B. : 1. Questions NO. 1 is compulsory.
2. Attempt any four questions from the remaining six questions.
3. Number to the right indicate full marks
4. Assume suitable data wherever necessary.



- Q1. (a) What is Cryptography? Define the terms secret key, private key and public key. (5)
(b) Explain client server model in detail. (5)
(c) Write down the facilities provided by PACS to a radiologist (10)
- Q2. (a) Explain the image quality factors like Spatial Resolution, Contrast Resolution and noise. (8)
(b) Discuss the PACS strategic business plan for technical section (12)
i) Technical Readiness
ii) PACS Management
- Q3. (a) Draw and explain the integration of information transfer between RIS/HIS/PACS with a suitable diagram. (10)
(b) Explain the Radiological Information System with suitable diagram. (10)
- Q4. (a) Enumerate the various steps from a radiologists perspective to extract clinically useful information from the medical images. (10)
(b) Explain the addressing system used in TCP/IP protocols (Physical, Logical, Port, Specific address] (10)
- Q5. (a) Explain the Distributed model of PACS (Circa model 1995) (10)
(b) Explain the concept of D.A.S, S.A.N and N.A.S. (10)
- Q6. (a) Explain Message Confidentiality and Entity Authentication in detail. (10)
(b) Explain OSI model in detail (10)
- Q7. Write short notes on: (Any four) (20)
a. DSL.
b. LAN topologies..
c. Ethernet.
d. Legal socio-economic issues affecting Teleradiology.
e. DICOM.