

Code.No: 07A71102

R07

SET-1

IV B.TECH – I SEM EXAMINATIONS, NOVEMBER - 2010
TELEMEDICINE
(BIO-MEDICAL ENGINEERING)

Time: 3hours**Max.Marks:80**

Answer any FIVE questions
All questions carry equal marks

- - -

1. a) Explain in detail about the block diagram of telemedicine system.
b) Define the following terms:
 - i) Telemedicine.
 - ii) Tele health.
 - iii) Telecare. [10+6]
2. a) Explain the telecommunication system components with neat diagrams.
b) Write the types of antennas depending on requirements. [8+8]
3. a) Explain in detail about the jurisdictional issues in telemedicine.
b) Write about the secure data transmission. [8+8]
4. a) Explain in detail the telepathology in multimedia databases.
b) Write about the controlled sampling security. [8+8]
5. Write in detail about telesurgery problems for space applications. [16]
6. Write the importance of Tele-oncology in telemedicine. [16]
7. a) Explain the importance of protocols in telemedicine.
b) Write short notes on standards to followed in DICOM. [8+8]
8. Explain the importance of video phone based PSTN system. [16]

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SET-2

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Time: 3hours**Max.Marks:80**

Answer any FIVE questions
All questions carry equal marks

- - -

1. a) Write in detail about the origin and development of Telemedicine.
b) Write any two essentials of Telemedicine and Telecare. [8+8]
2. a) Explain the telecommunication technologies in detail.
b) Write about the Image display system. [8+8]
3. a) Write the importance of telemedicine malpractice in detail.
b) Write about Secure Network Access. [8+8]
4. a) Explain the color images of sufficient resolution.
b) Write briefly about the confidentiality tools. [8+8]
5. Write the applications of telesurgery in a Noval Machine Interface for Scaled Telesurgery. [16]
6. Explain in detail about the Catriology and the key role in Telemedicine. [16]
7. Write the importance of Video conferencing in telemedicine. [16]
8. a) Write the key role of following in telemedicine:
i) Encryption.
ii) Cryptology.
b) Explain the phases of Encryption. [6+10]

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SET-3

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Time: 3hours**Max.Marks:80**

Answer any FIVE questions
All questions carry equal marks

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1. a) Explain the organs of Telemedicine.
b) Write the limitations of Telemedicine. [8+8]
2. a) Explain in detail about the integration and operational issues.
b) Write about the Video conferencing system. [8+8]
3. a) Write the details of Ethical and legal aspects of the internet.
b) What is the importance of data protection and security? [8+8]
4. a) Explain in detail about the basic parts of Teleradiology system.
b) Write a short note on following terms:
i) Spatial resolution.
ii) Dynamic range. [10+6]
5. Write the some applications of Telesurgery using Robotic system. [16]
6. Explain in detail about the theoretical and practical aspects of Tele-oncology and its current as well as future applications. [16]
7. a) Write briefly about circuit and packet switching.
b) Explain about the data exchange process. [8+8]
8. a) Explain in detail the mechanisms of Encryption.
b) Write short notes on following protocols:
i) TCP/IP
ii) ISO-OSI. [10+6]

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SET-4

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Time: 3hours**Max.Marks:80**

Answer any FIVE questions
All questions carry equal marks

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1. a) Write in details of modern Telemedicine and Tele-care.
b) Explain advantages of telemedicine in military applications. [8+8]
2. a) Explain in detail about the information and transmission types in Telemedicine.
b) Write brief notes on following networks:
i) POTS
ii) PSTN
iii) ANT. [8+8]
3. a) Write the intellectual property rights importance in Telemedicine.
b) Write in detail about the confidentiality Patient Right. [8+8]
4. a) Explain the importance of Image acquisition systems in Teleradiology.
b) Write in detail about the Interactive control of color. [8+8]
5. Explain the Telesurgery system for Intravascular Neurosurgery. [16]
6. Explain in detail about Tele-oncology current and future applications for improving cancer care globally. [16]
7. a) Explain the Data Security and Standards in telemedicine in detail.
b) Write in detail the phases of Encryption. [8+8]
8. Explain the importance of Video phone based ISBN. [16]
