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**B TECH
(SEM-VIII) THEORY EXAMINATION 2018-19
TELEMEDICINE**

Time: 3 Hours**Total Marks: 100****Note: 1.** Attempt all Sections. If require any missing data; then choose suitably.**SECTION A****1. Attempt all questions in brief. 2 x 10 = 20**

- a) Describe the fundamental concept of Telemedicine principle.
- b) Explain the applications of Telemetry and Tele-control systems.
- c) Explain Clinical networks.
- d) Explain the principle of Homecare.
- e) Explain the function of rural primary setups.
- f) Explain Medical image scanning.
- g) What are DSL?
- h) Describe the function of Routers.
- i) Explain the term Duty of care.
- j) Define IPR.

SECTION B**2. Attempt any three of the following: 10 x 3 = 30**

- a) Describe various methods of telemetry. Explain the principle of Optical Telemetry.
- b) What do you understand by Clinical parameters? Discuss the various Clinical parameters.
- c) Describe the capturing of medical signals and describe the data compression techniques. Explain the use of satellite communication systems in telemetry.
- d) Describe the methods for video production, editing and broadcasting with respect to video conferencing at Tele-medical workstations.
- e) Discuss the various Ethical standards in the implementation of Telemedicine.

SECTION C**3. Attempt any one part of the following: 10 x 1 = 10**

- (a) Explain the concept of State of the art-Telemetry standards. Describe some standards for telemetry.
- (b) Explain the principle & functional blocks of Electrical telemetry system.

4. Attempt any one part of the following: 10 x 1 = 10

- (a) Describe the concepts and principle of operation for Tele-pathology & Tele-surgery.
- (b) Describe Gastroenterology and its applications. Explain Tele-rehabilitation.

5. **Attempt any *one* part of the following:** **10 x 1 = 10**
- (a) Explain the Societal medico legal aspects of telemetry systems. Differentiate between Referral and Super specialty centers.
 - (b) Describe the voice & image transfer protocols in telemedicine.
6. **Attempt any *one* part of the following:** **10 x 1 = 10**
- (a) Describe the function of vital sign monitoring devices. Explain the use of Robotics and virtual reality devices with suitable examples.
 - (b) What are Tele-medical workstations? Explain the Neurological monitoring devices & Respiratory monitoring devices.
7. **Attempt any *one* part of the following:** **10 x 1 = 10**
- (a) State the various Licensure and accreditation processes. Describe the importance of Intellectual property rights.
 - (b) Discuss the Security and confidentiality features of Telemedicine. Explain the Malpractices in Telemedicine.