

Code No: 07A51104

**R07**

**Set No. 2**

**III B.Tech I Semester Examinations, November 2010**

**BASIC CLINICAL SCIENCES-II**

**Bio-Medical Engineering**

**Time: 3 hours**

**Max Marks: 80**

**Answer any FIVE Questions  
All Questions carry equal marks**

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1. Write short notes on

(a) CSSD

(b) Operation Theatre organization. [8+8]

2. (a) Classify joints. Explain about the degree of movement at each type of joint.

(b) List rehabilitative procedures in orthopedics. [8+8]

3. Effect of radiation on Bone Marrow.

(a) Describe the protection measures taken in a hospital during radiation dosage and therapy.

(b) Explain the permissible exposures to radiation and its hazards. [8+8]

4. (a) Explain in detail of thyroid diseases & cancer functional studies.

(b) Give a brief description of Haematological scan. [8+8]

5. (a) Explain the mechanism of respiration.

(b) Explain how arterial blood pressure and blood flow are monitored/measured. [8+8]

6. (a) Explain the types of blood transfusions.

(b) What are the functions and characteristics of blood? [8+8]

7. (a) Explain the therapeutic uses of radio isotopes.

(b) Give the procedure for liver and spleen scanning i.e Reticuloendothelial imaging. [8+8]

8. (a) Give the classification of tumors.

(b) Explain the physical and chemical modifying factors. [8+8]

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**R07****Set No. 4****III B.Tech I Semester Examinations, November 2010****BASIC CLINICAL SCIENCES-II****Bio-Medical Engineering****Time: 3 hours****Max Marks: 80**

**Answer any FIVE Questions**  
**All Questions carry equal marks**

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1. (a) Explain the biological effects of radiation on embryo and its harmfulness.  
(b) Write a note on somatic effects. [8+8]
2. (a) Explain about the imaging procedures of the thyroid and the cardiovascular system?  
(b) What are the difficulties encountered in diagnosis and treatment of pancreatic diseases? [8+8]
3. (a) Explain about different illumination setups inside the operation theatre.  
(b) Write short notes on artificial respiration. [8+8]
4. (a) What are the complicated fractures and role of Reduction Replacements in Orthopaedics?  
(b) Classify joints. Explain about the degree of movement at each type of joint. [8+8]
5. (a) Write in brief about cardiovascular monitors.  
(b) Explain the different types of Anaesthesia. [8+8]
6. (a) Explain ionizing radiation and non-ionizing radiation.  
(b) Explain the types of radiation damage. [8+8]
7. (a) Describe briefly the determination of distribution of radioactive material within the body.  
(b) Write a note on Metastatic bone diseases. [8+8]
8. (a) What is blood pathology and how is it investigated.  
(b) Describe about exchange transfusion. [8+8]

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**R07****Set No. 1****III B.Tech I Semester Examinations, November 2010****BASIC CLINICAL SCIENCES-II****Bio-Medical Engineering****Time: 3 hours****Max Marks: 80**

**Answer any FIVE Questions**  
**All Questions carry equal marks**

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1. Explain the terms.
  - (a) Blood flows
  - (b) Mechanism of respiration. [8+8]
2. Explain the techniques of imaging the cardio vascular system. [16]
3. (a) What are the various renal function tests?
  - (b) Write about Radio immunoassay? [8+8]
4. (a) Explain in brief how a patient is monitored during surgery.
  - (b) Write in brief about respiratory monitors. [8+8]
5. (a) Explain the types of ionizing radiation.
  - (b) Explain what is Fractionation. [8+8]
6. (a) Describe the Somatic effects of radiation.
  - (b) Explain the Biological effect of radiation on genetic tissue.
  - (c) Give an account of effects of radiation on the embryo. [6+5+5]
7. (a) What is rehabilitation and role played by it in orthopaedics.
  - (b) Classify joints [12+4]
8. (a) What are the precautions that you will take before and during transfusion of blood in the hospital patient?
  - (b) Name three common diseases related to blood parameters and give details of the investigations and other manifestations related to each of the disease. [8+8]

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**Set No. 3**

**III B.Tech I Semester Examinations, November 2010**  
**BASIC CLINICAL SCIENCES-II**  
**Bio-Medical Engineering**

**Time: 3 hours**

**Max Marks: 80**

**Answer any FIVE Questions**  
**All Questions carry equal marks**

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1. (a) Explain about the radio isotopes in Therapy?  
(b) Write a note on Blood flow analysis. [8+8]
2. (a) Explain how anesthetic gases are useful during surgery.  
(b) Discuss the monitoring of critical parameters of the patient during surgery. [8+8]
3. Describe the mechanism of gas exchange and enumerate the indications for artificial respiration. [16]
4. (a) Explain the different transfusion-transmitted diseases.  
(b) What are the disorders of blood? [8+8]
5. (a) Discuss broad principles suitable for treatment of common fractures.  
(b) Explain in detail a ball and socket joint. Give examples. [8+8]
6. (a) Explain the genetic effects of radiation?  
(b) Explain the biological effects of radiation on the Reproductive organs. [8+8]
7. (a) Describe about different types of radio isotopes used in radio therapy.  
(b) Oxygen effect. [8+8]
8. (a) Give the details of respiratory system scan.  
(b) Give a brief description about PET. [8+8]

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