

Code No: 07A41101

R07

Set No. 2

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

Time: 3 hours

Max Marks: 80

Answer any FIVE Questions
All Questions carry equal marks

1. Write short notes on the following:

(a) Characteristics of primary muscle disease.

(b) Characteristics of cerebellar lesions are. [8+8]

2. What are the basic surgical instruments you know of? Enumerate them and list the uses of each of them? [16]

3. Write short notes on :

(a) Esophagogastroduodenoscopy

(b) Colonoscopy

(c) Proctosigmoidoscopy. [16]

4. What are arterial and venous Doppler studies? What are the principles governing each of them? [16]

5. What are the typical configurations of heart valve prosthesis? [16]

6. Discuss in detail the step-by-step description of peritoneal dialysis (a CAPD exchange). [16]

7. Why dialyser analysis is required? What are the parameters to be analyzed and explain any two parameters in detail? [16]

8. (a) Explain the principle of CT.

(b) Evaluation of Suspected Epilepsy by ELECTROENCEPHALOGRAPHY. [8+8]

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Set No. 4

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

Time: 3 hours

Max Marks: 80

Answer any FIVE Questions
All Questions carry equal marks

1. Describe the events of cardiac cycle. [16]
2. Discuss about Intracorporeal assist devices. [16]
3. Describe about the dialysate composition for Hemodialysis. [16]
4. (a) Define clearance, ultra filtration rate.
(b) Name and discuss different types of Peritoneal Dialysis Techniques.
(c) Write a note on Adequacy of Dialysis. [4+6+6]
5. Draw reflex arc with its components. Explain Response in Disorders of Neuromuscular Transmission. [16]
6. Cardiac defibrillator cum monitor - how does this function what are the uses and risks? [16]
7. Sketch the proposed Intravertebral disc and label it. [16]
8. Robotic surgery and Lindbergh operation. [16]

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R07**Set No. 1****II B.Tech II Semester Examinations, December 2010****BASIC CLINICAL SCIENCES-I****Bio-Medical Engineering****Time: 3 hours****Max Marks: 80****Answer any FIVE Questions****All Questions carry equal marks**

1. Write short notes on the following:

(a) Homeostasis.

(b) Ultra filtration.

[8+8]

2. What is laparoscopic surgery and what are the areas of expertise presently available? How is it performed? [16]

3. What are the different types of infusion used in infusion pump? What are the safety features available in infusion pumps? [16]

4. What is acoustical impedance and how is it used in imaging? What are four different modes of ultrasound imaging? [16]

5. Describe in detail about the symptoms and causes of diseases of Spinal Cord. [16]

6. Write short notes on the following:

(a) Blood leak detector.

(b) Ultrafiltrate monitor.

(c) Flow meter.

[5+5+6]

7. A previously healthy 26-year-old junior doctor asks your advice. She has been choking on drinks for 2 weeks and last night a patient complained about her slurred speech. She is extremely anxious because her uncle died of motor neuron disease. She lives on her own in a hospital flat; she has not registered with a GP. On examination she is anxious and breathless. Her speech is nasal and becomes softer as she talks. Her palatal movements are reduced. Her tongue looks normal. Her jaw-jerk is normal. Examination of the other cranial nerves is normal. She has no limb wasting, fasciculation or weakness. Her reflexes are brisk. There is no sensory loss.

(a) What is the most likely diagnosis?

(b) How would you manage her case?

[8+8]

8. What is magnetic stimulation of cardiac muscle and what are its implications in cardiac pacing? [16]

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Set No. 3

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

Time: 3 hours

Max Marks: 80

Answer any FIVE Questions
All Questions carry equal marks

1. Explain the principle of operation as neuromuscular stimulators. [16]
2. Describe the urinary system anatomy. What are the complications of Uretric stenting? [16]
3. When considering a kidney transplant would the best match be between a husband and wife or between a brother and sister? Explain your answer. [16]
4. Explain the working of Continuous Cycling Peritoneal Dialysis process. [16]
5. Write short notes on the following:
 - (a) Key features of Duchenne muscular dystrophy.
 - (b) Key features of myotonic dystrophy. [8+8]
6. How do you maintain the operation theater sterile? Discuss your layout plan? [16]
7. Write a note on organization of ICCU? [16]
8. What is intrinsic component theory proposed for electrocardiogram? What are its future implications? [16]
