

**III B.Tech II Semester Supplementary Examinations,
November/December 2005
ADVANCED BIOMEDICAL EQUIPMENT
(Bio-Medical Engineering)**

Time: 3 hours

Max Marks: 80

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

1. Explain how computers aid the physicians in the hospital? [16]
2. Explain the basic function of an Audiometer with a suitable block diagram. [16]
3. Explain the working of Retinoscope with the help of a suitable diagram. [16]
4. Write a short note on artificial organs? Which materials are used for the above organs, explain in detail. [16]
5. Does Artificial Limb functions same as that of an Ordinary Limb? If yes, justify it. Draw suitable sketches also. [16]
6. Name the Heart Valves and locate them within the Heart by a suitable sketch. [16]
7. Name the different types of Exchangers and distinguish between them. [16]
8. How do you analyze Artificial Electronic Larynx Speech? [16]

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1. (a) What do you mean by Medical informatics Explain?
(b) List at least 8 advantages of computerization of hospitals?
2. Write a note on: I.A.B. P principle and its application [16]
3. (a) Explain the purpose of Hearing Aid.
(b) Name different types of Hearing Aids.
(c) Explain why Button Cells are used behind the Ear Hearing Aid [16]
4. (a) Define Organ, Artificial Organ.
(b) Suggest few Artificial organs. [16]
5. Write a note on :
(a) Artificial Limb
(b) Artificial Hand [16]
6. Draw any one type of tissue valve and explain it in a brief. [16]
7. Describe the general scheme of operation of Hemodialysis with the help of a suitable block diagram. [16]
8. How do you analyze Artificial Electronic Larynx Speech? [16]

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1. Explain the role of computer in biomedical engineering? [16]
2. Describe the different parts of the Human Ear and the various disorders in Ear. [16]
3. Describe the block diagram of Hearing Aid. [16]
4. (a) When Rejection occurs and how to overcome it.
(b) Is inflammation an active or passive process? If so, justify it. [16]
5. Does Artificial Hand functions same as that of an Ordinary Hand? If yes, justify it. Draw suitable sketches also. [16]
6. What are the qualitative requirements needed for a prosthetic heart valves? Specify some tissue values [16]
7. Draw the diagram of a simple Haemodialyser machine and explain. [16]
8. What is the procedure undertaken to analyze the artificial electronic larynx speech? [16]

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1. Mention the online and offline activities of outpatient registration module and pharmacy module in hospital information system? [16]
2. Draw the block diagram of Audiometer and explain function of each block. [16]
3. Explain the working of Retinoscope with the help of a suitable diagram. [16]
4. (a) Give the necessity of Artificial organs.
(b) Write a comment on 'Choice of Materials', used in the process of Artificial Organs. [16]
5. Does Artificial Limb functions same as that of an Ordinary Limb? If yes, justify it. Draw suitable sketches also. [16]
6. Draw any one type of tissue valve and explain it in a brief. [16]
7. Name the different types of Exchangers and distinguish between them. [16]
8. Write a short note on :
 - (a) Artificial Larynx.
 - (b) What do you mean by Speech?
 - (c) Define Larynx. [16]
