

Visvesvaraya Technological University, Belagavi

CBCS Scheme: 2015-16

MODEL QUESTION PAPER

Clinical Instrumentation – I (15BM53)

Time: 3 hrs.

Max. Marks: 80

Note: Answer any FIVE full questions, choosing one full question from each module.

Module 1

1. a. Discuss the voltage and time calibration of normal Electrocardiogram. **(06 Marks)**
b. Write a note on Stokes – Adams Syndrome. **(05 Marks)**
c. Describe Atrial Flutter with its typical Electrocardiogram. **(05 Marks)**

OR

2. a. Explain the types of abnormal Sinus rhythms with their ECG. **(07 Marks)**
b. Define Ventricular Fibrillation. With figures, explain the phenomenon of Circus movement in Cardiac muscle. **(05 Marks)**
c. Give the causes for the first and second Heart sounds. **(04 Marks)**

Module 2

3. a. With block diagram, explain the typical instrumentation layout of catheterization Laboratory. **(06 Marks)**
b. Discuss the technique for monitoring foetal heart sounds. **(06 Marks)**
c. What is Oximetry? Give the principles of Invitro Reflexion Oximetry. **(04 Marks)**

OR

4. a. List the sequence of operation in arrhythmia monitoring instruments. **(04 Marks)**
b. Discuss the recording unit for Ambulatory monitoring with block diagram. **(06 Marks)**
c. Write a note on skin reflectance oximeters. **(06 Marks)**

Module 3

5. a. Define Aphakia. List the causes of Aphakia. **(06 Marks)**
b. Explain the procedure for testing Visual Acuity using Snellen's chart. **(06 Marks)**
c. Write a note on lens material used in Spectacles. **(04 Marks)**

OR

6. a. With figure explain the outflow system of aqueous humour. **(07 Marks)**
b. Discuss the types of contact lenses. **(05 Marks)**
c. Describe the Maddox wing test. **(04 Marks)**

Module 4

7. a. Explain the principle and technique for measuring IOP using Schiottz tonometer. **(08 Marks)**
b. Describe the optical principle, technique and applications of Indirect Ophthalmoscope. **(08 Marks)**

OR

8. a. Discuss the basic methods of illumination using Slit lamp examination. **(06 Marks)**
b. Define Keratometry. Explain the types of Keratometer. **(06 Marks)**
c. Give the applications of Gonioscopy. **(04 Marks)**

Module 5

9. a. Define Cataract. List the morphological classification of Cataract. **(07 Marks)**
b. What is Vitrectomy? List the types of Vitrectomy. **(04 Marks)**
c. Give the therapeutic applications of Lasers. **(05 Marks)**

OR

10. a. With figures, discuss the major classes of intraocular lenses based on the method of Fixation. **(06 Marks)**
b. With figures, explain the surgical technique of trabeculectomy for Glaucoma. **(10 Marks)**

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