

Question Paper

Exam Date & Time: 11-Jan-2024 (02:30 PM - 05:30 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

Fifth Semester Makeup End Sem Examination January 2024 - Basic Clinical Science 1- BME 3151

BASIC CLINICAL SCIENCE - I [BME 3151]

Marks: 50

Duration: 180 mins.

Descriptive

Answer all the questions.

Section Duration: 180 mins

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| 1A) | List any three indications for use of cardiac pacemakers. | (3) |
| 1B) | Summarise any three anatomical differences between left and right ventricle. | (3) |
| 1C) | List the main components of intra aortic balloon pump(IABP). | (3) |
| 2A) | List any four ECG findings in right ventricular hypertrophy. | (4) |
| 2B) | What are the principles of radiation protection. | (3) |
| 2C) | With a graph show the Linear quadratic model. | (3) |
| 3A) | What is Acute radiation syndrome? What are the clinical features of the same . | (3) |
| 3B) | What is Brachytherapy? What are its types based on dose rate? | (4) |
| 3C) | Describe X-ray tube construction with schematic diagram. | (3) |
| 4A) | Write in details with appropriate diagrams about Compton effect and photoelectric effect | (4) |
| 4B) | Write in details about the steps of dark room film processing with appropriate diagrams. | (5) |
| 4C) | A 40-year patient has femur shaft fracture. He wants to return to sports very quickly. Which is the correct implant of choice? Plate or nail and why? | (2) |
| 5A) | Classify the joints and give examples of joints of with the 3 types of class/type levers (lever mechanisms). | (3) |
| 5B) | A patient underwent below knee amputation (20 cm above the ankle) and was given the SACH foot. Why is this a wrong choice of prosthetic fitting? | (3) |
| 5C) | Explain type of fracture healing in the presence of a plate fixation and Stages of fracture healing. | (4) |

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