3/22

1006E561

Candidate's Seat No :_____

M.Sc Sem.-2 Examination
P - 410
Medical Physics
June 2022

Time : 2-00 Hours] **[Max. Marks : 50**

Instructions: All questions in **Section – I** carry equal marks.
Attempt any **Three** questions in **Section – I.**
Questions in **Section – II** is **COMPULSORY.**

Section – I

Q-I A. Describe the Synovial Joint with two examples. 7

B. Describe the types of circulations with two examples. 7

Q-II A. Write the difference between smooth, cardiac and skeleton muscle. 7

B. Describe the lymphatic drainage of human being. 7

Q-III A. Digestion of Proteins. 7

B. Composition and functions of Gastric juice. 7

Q-IV A. Regulation of Heart rate. 7

B. Regulation of Respiration. 7

Q-V A. What are the risks from ionizing radiation associated with medical x-rays? 7

B. What are the common occupational hazards associated with performing medical imaging procedures? 7

Q-VI A. What are the responsibilities of medical Physicist? 7

B. What are the most common side effects of radiation therapy? 7

Q-VII A. Describe cellular adaptation in detail. 7

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B. Define neoplasia and mention difference between benign and malignant neoplasm. 7

Q-VIII A. Describe active and passive immunity 7

B. Describe normal cell structure and function 7

Section – II

Q-IX MCQs 8

1. Sesamoid bone is---

A. Humerus B. Tibia

C. Patella D. Talus

2. The first bone to ossify in membrane is----

A. Scaphoid. B. Clavicle.

C. Fibula D. Femur

3. Myopia can be corrected with

A. Concave lenses B. Convex lenses

C. Cylindrical lenses D. None of above

4. Fibrinogen is concerned with

A. Transport of substances B. Colloidal osmotic pressure

C. Clotting of blood D. Defense mechanisms

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5. Where do MRI signals come from?

A. Hydrogen atoms (H)
B. Water molecules (H_2O).
C. The hydrogen nucleus (^1H)
D. None of these

6. Positron Emission Tomography (PET) the image is created by detection of

A. Positions
B. Augur electrons
C. Characteristic x-rays
D. Annihilation photons

7. Hypertrophy is a type of

A. Cell injury
B. Cell adaptation
C. Carcinoma
D. Cell ageing

8. In Turner syndrome the number of chromosomes are

A. 45
B. 46
C. 47
D. 42

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