

SECOND YEAR B.Sc (MRT) DEGREE EXAMINATION - 2015

PAPER IX - RADIOTHERAPY – PART 1

Model Question Paper

Answer all questions

Time 3 hrs

Max Marks: 100

Essays

10 x 3 = 30

1. Describe the staging of nasopharynx. Discuss in detail the steps of radiotherapy planning, portals with special emphasis on newer modalities.
2. Describe the management of stage III B carcinoma of cervix. Methods to improve the results of treatment. Describe the radiation portals.
3. Describe the radiotherapy techniques in the treatment of medulloblastoma.

Short notes

8 x 5 = 40

4. Cell survival curve
5. Relative biological effectiveness
6. Oxygen enhancement ratio.
7. LET
8. Hypofractionation
9. Oestrogen receptors
10. Linear accelerator
11. Hematological syndrome

Answer briefly

10 x 3 = 30

12. Differentiate between palliative and radical treatment
13. Radio sensitizers and protectors
14. HVL
15. Simulator
16. Immobilization techniques
17. Beam modifiers
18. ALARA principles
19. Linear quadratic equation.
20. Classification of cytotoxic drugs.
21. The factors influencing the choice of radical or palliative treatment.

Q.P.CODE:

Reg. No.

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PAPER VIII - RADIATION PHYSICS I

Model Question Paper

Answer all questions

Time : 3 hrs

Max Marks: 100

Essays

3 x 10 = 30

1. Describe in detail the basic interactions between x-rays and matter.
2. Describe in detail the production, properties and process of x-ray generation.
3. Explain the construction and working of intensifying screens. Factors in which intensification depends. Discuss the advantages of rare earth screens.

Short Notes

8 x 5 = 40

4. Spontaneous and stimulated emission.
5. Grid cut off and its reason .
6. X-ray image intensifier tube.
7. Filters.
8. Heel effect.
9. Cooling mechanism in x-ray tubes.
10. GM counter.
11. Line focus principle.

Answer briefly

10 x 3 = 30

12. Write the materials and methods required for manual processing of x-ray films.
13. Focal spot.
14. Thermionic emission.
15. CT number.
16. Grid .
17. Self rectification .
18. Narrow and broad beams.
19. KERMA.
20. Exposure.
21. Effective and equivalent dose.

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PAPER X - RADIO DIAGNOSIS I

Model Question Paper

Answer all questions

Time : 3 hrs

Max Marks: 100

Essays

3 x 10 = 10

1. Describe in detail the dark room chemistry.
2. Describe the paranasal sinuses and the radiographic anatomy of paranasal sinuses and also the various projections to demonstrate paranasal sinuses.
3. Describe briefly about practical aspects of pediatric radiography.

Short Notes

8 X 5 = 40

4. Radiographic technique of zygomatic arch.
5. Radiographic technique of sacro-iliac joints.
6. Intensifying screen.
7. Bed side radiography.
8. Describe various dental radiographic techniques.
9. Fog in x-ray film, film storage and safe light.
10. Write short notes on mastoid process and jugular foramina.
11. Describe in detail about grids.

Answer briefly

10 x 3 = 30

12. Radiological images.
13. Fluoroscopic screens.
14. Moving grid.
15. Radiographic cones.
16. Single coated and double coated radiographic films.
17. X-ray developer and fixer.
18. Latent image formation.
19. Fluorography.
20. Dental radiography.
21. Photographic density and film storage.

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PAPER - XI – PATHOLOGY

Model Question Paper

Answer all questions

Time : 3hrs

Max Marks : 100

Essays

3 x 10 = 30

1. Define tissue repair. Describe the process of healing by second intention. Mention the factors which influence the healing of wounds.
2. Describe the etiology, gross and microscopic appearance of carcinoma cervix.
3. Discuss about rheumatic heart disease.

Short Notes

8 x 5 = 40

4. Chemical carcinogens.
5. Hemophilia.
6. Infarction.
7. Pneumonia.
8. Megaloblastic anemia.
9. Fatty liver.
10. Peptic ulcer.
11. Leprosy.

Answer Briefly

10 x 3 = 30

12. Mention the causative organisms of different types of malaria.
13. Renal calculi.
14. List common chemical carcinogens.
15. List types of necrosis.
16. Gross appearance of carcinoma stomach.
17. Radiation injury.
18. Gall stones.
19. List differences between benign & malignant tumors.
20. Microscopy of hydatid cyst.
21. Peripheral blood picture of hypochromic microcytic anemia.