



**SRI DEVARAJ URS ACADEMY OF HIGHER EDUCATION & RESEARCH**  
(A DEEMED TO BE UNIVERSITY)

**B.Sc. Allied Health Sciences Second Year Semester-IV**

**October 2023 Examination**

**B.Sc. Radiotherapy Technology (RTT)**

**Time: 2.30 Hrs.**

**Paper – I**

**[Max. Marks: 80]**

**Applied Anatomy & Pathology**

*Your answers should be specific to the questions asked.*

*Draw neat labelled diagrams wherever necessary.*

*(Use separate answer booklet for Section A & B)*

**Section – A**

**Applied Anatomy (40 Marks)**

**Q.P Code : K4555**

**LONG ESSAY**

**1 X10 = 10 Marks**

1. Describe the stomach under following headings

(3+2+3+2)

a) location and parts b) blood supply c) lymphatic drainage d) applied anatomy

**SHORT ESSAY**

**3X 5 = 15 Marks**

2. Discuss the anatomy and functions of the paranasal sinuses.

3. Discuss the relations of shoulder joint

4. Explain the anatomical features and functions of the diaphragm.

**SHORT ANSWERS**

**5 X 3 = 15 Marks**

5. What are the three functions of the larynx?

6. Name the coverings of testis

7. What are the three major divisions of the brain?

8. Name the parts of pancreas

9. List the bones that participate in skeleton of the hand

**Section – B**

**Applied Pathology (40 Marks)**

**Q.P Code : K4556**

*(Use separate answer booklet for Section-B)*

**Long Essay**

**1x10 = 10 Marks**

1. Classify and describe the etiopathogenesis, morphology, clinical course, spread and complications of Lung cancer

**Short Essay**

**3x5 = 15 Marks**

2. Describe the etiopathogenesis, morphology, clinical course, spread and complications of Seminoma

3. Classify Lymphomas

4. Describe the etiopathogenesis, morphology and clinical course of Breast Carcinoma

**Short Answers**

**5x3 = 15 Marks**

5. Pap smear

6. Describe the microscopy of Squamous cell carcinoma

7. Name 03 types of CNS tumors

8. Etiopathogenesis of bladder cancer

9. Name 03 benign soft tissue tumors



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**Paper – III**

**[Max. Marks : 80]**

**Radiation Biology and principles of Radiotherapy**

**Q.P Code : K4570**

*Your answers should be specific to the questions asked.*

*Draw neat labelled diagrams wherever necessary.*

**LONG ESSAY**

**2 X 10 = 20 Marks**

1. Explain the physics and chemistry of Radiation absorption
2. Explain the Multidisciplinary management of cancer. Write in brief about Radiotherapy, chemotherapy and Surgery for the treatment of cancer.

**SHORT ESSAY**

**6X 5 = 30Marks**

3. Describe the characteristics of stochastic and deterministic effects of ionising radiation. Give an example for each effect.
4. Explain the Cell cycle and radiosensitivity of cells in each phase of cell cycle.
5. Describe the radiation effects in the developing embryo and fetus.
6. Write in detail about TNM staging of cancer.
7. Write in details about Principles of Radiation protection.
8. Explain the chromosomal aberrations secondary to radiation.

**SHORT ANSWERS**

**10 X 3 = 30 Marks**

9. Define oxygen enhancement ratio (OER) and give a value for low LET radiation.
10. Define Relative biological effectiveness.
11. Name 6 common Side effects of chemotherapy
12. Name the 3 most important modalities of cancer treatment.
13. Write about the Cause of death in ca. cervix and ca. oesophagus.
14. Name three acute side effects of Radiotherapy to pelvis and their treatment.
15. Name three late side effects of Radiotherapy to Head and neck.
16. Explain three principles of care during sedation/anaesthesia.
17. Name the 3 staging systems commonly used for cancer
18. Explain the importance of fractionation in outcome of radiation therapy.