2010-11 IMAGING

SRI DEVARAJ URS ACADEMY OF HIGHER EDUCATION & RESEARCH

(A DEEMED TO BE UNIVERSITY)

B.Sc. Allied Health Sciences Second Year (Semester-III)

Examination March - 2012

Time : 2.30 Hrs. **Max. Marks : 80]**

SUBJECT : Medical Physics

Q.P Code : AHS- 111

Your answers should be specific to the questions asked.
Draw neat labelled diagrams wherever necessary.

LONG ESSAY **2 X 10 = 20 Marks**

1. Write briefly about principles and construction of image intensifier.
2. Name the types of tomography. What is substraction radiography.

SHORT ESSAY (Answer any Six) **6 X 5 = 30 Marks**

3. Stationary grids
4. Flurosopic screen
5. MMR-Mass Miniature Radiography
6. Angle of anode inclination
7. Filament circuit
8. Magnification radiography
9. Multi section cassettes
10. Uses of focal spot test tools

SHORT ANSWERS (Answer any Ten) **10 X 3 = 30 Marks**

11. Winconsin test cassette
12. Cones
13. Grid controlled X-ray tube
14. Use of shunts (switches)
15. Cordless mobile X-ray equipment
16. Light beam collimateks
17. General principles of cieaning routine
18. Full wave rectification
19. Portable and mobile x-ray units
20. Construction of high tension cables
21. Write briefly about recording the intensified image
22. What are the principles of cleaning routines.

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B.Sc. Allied Health Sciences Second Year (Semester-III)

Examination March - 2012

Time : 2.30 Hrs. **Max. Marks : 80]**

SUBJECT : Paper – I

Physics of Radiology & Radiation Physics

Q.P Code : AHS-110

Your answers should be specific to the questions asked.
Draw neat labelled diagrams wherever necessary.

LONG ESSAY **2 X 10 = 20 Marks**

1. Draw a diagram & describe in detail about X-ray tube components.
2. What is luminoscent screen? Describe in detail about intensifying screen layers.

SHORT ESSAY (Answer any Six) **6 X 5 = 30 Marks**

3. Properties electromagnetic radiation.
4. Uses of radioactive nuclides.
5. What are radiation protection devices
6. Principles of semiconductors
7. Alternating current
8. What is rectification
9. What is thermionic emmision
10. Detectors of nuclear radiation

SHORT ANSWERS (Answer any Ten) **10 X 3 = 30 Marks**

11. Kirchaff's law
12. Fundamentals of electricity
13. What is attenuation co-efficients
14. Biological effect of radiation
15. Linear energy transfer and biological effectiveness
16. Coloumb's law
17. PN junction
18. Half value rectifier
19. Semiconductors
20. Radioactive nuclitdes
21. Gas filled radiation detectors
22. RAD

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