[LB 0212] **AUGUST 2012** **Sub. Code: 5004**

B.Sc. MEDICAL LABORATORY TECHNOLOGY

FIRST YEAR

PAPER IV – PHYSICS & PRINCIPLE OF INSTRUMENTATION

Q.P. Code : 725004

Time : Three hours **Maximum : 100 marks**

(180 Mins) Answer ALL questions in the same order.

I. Elaborate on:	**Pages (Max.)**	**Time (Max.)**	**Marks (Max.)**
1. Explain the principle of calorimetry and techniques used in medical laboratory.	7	20	10
2. Describe the construction and working of physical balance and its application in laboratory.	7	20	10
3. Describe about radiation personnel monitoring devices used in hospital.	7	20	10
II. Write notes on:			
1. Electromagnetic spectrum.	4	10	5
2. Distinguish between boiling and evaporation.	4	10	5
3. State Snell's law.	4	10	5
4. Rectifier.	4	10	5
5. Spectrometer.	4	10	5
6. Briefly write about artificial radioactivity.	4	10	5
7. Principle of radiation protection.	4	10	5
8. Incubator.	4	10	5
III. Short Answers on:			
1. Define turn ratio.	2	4	3
2. Temperature.	2	4	3
3. Define power and energy.	2	4	3
4. What is the relationship between wave length and frequency.	2	4	3
5. Liquid scintillation counter.	2	4	3
6. Focal length and magnification.	2	4	3
7. Specific heat capacity.	2	4	3
8. Define Half-life.	2	4	3
9. Thermostat.	2	4	3
10. Charged particle radiation.	2	4	3

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