

Reg. No.

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B.E. / B.TECH. DEGREE EXAMINATIONS, MAY 2023

Second Semester

PH22251 – PHYSICS FOR BIOTECHNOLOGIST*(Biotechnology)***(Regulation - 2022)****TIME: 2 HOURS****MAX. MARKS: 60**

COURSE OUTCOMES	STATEMENT	RBT LEVEL
CO 1	Gain knowledge about properties of ultrasonics and applying in the medical field	3
CO 2	Enhance the knowledge of fiber reinforced materials and biosensors	3
CO 3	Apply various principles of spectroscopic materials and analyze various samples	4

PART- A (10 x 2 = 20 Marks)

(Answer all Questions)

	CO	RBT LEVEL
1. Mention two important radioisotopes and their uses in Nuclear medicine.	1	3
2. Compare ultrasonic image and X-ray radio graphical image.	1	4
3. What do you understand by nuclear medicine?	1	2
4. Distinguish the magneto and electro rheological fluid.	2	4
5. Compare fiber reinforced metals and fiber reinforced plastics.	2	4
6. Elucidate about the scintillation detector.	2	3
7. List the basic components of spectroscopic instruments.	3	2
8. Interpret Beer Lambert's law.	3	3
9. Mention any three regions of IR Spectrum.	3	2
10. Distinguish between Rayleigh Scattering and Raman Scattering.	3	4

PART- B (3 x 10 = 30 Marks)

	Marks	CO	RBT LEVEL
11. (a) Describe the principle, construction and working of Gamma ray camera.	(10)	1	2
(OR)			
(b) Describe the principle, construction and working of Photomultiplier tube.	(10)	1	2
12. (a) Discuss about various properties and applications of ceramics.	(10)	2	3
(OR)			
(b) Discuss in detail about the sensor and actuators.	(10)	2	3

13. (a) Explain the principle and working of scanning electron microscope, with a neat diagram. (10) 3 3

(OR)

(b) Describe the construction and working of UV-Vis double beam spectrophotometer and mention its major applications. (10) 3 3

PART- C (1 x 10 = 10 Marks)

(Q.No.14 is compulsory)

	Marks	CO	RBT LEVEL
14. Explain, in detail, about various ultrasonic scanners.	(10)	1	3
