Programme: M. Sc. Physics

SEMESTER - II			
ELECTIVE - II A. BIO-MEDICAL INSTRUMENTATION			
Code :21PPHE21	**Hrs/Week: 6**	**Hrs/Semester:90**	**Credits: 4**

Course Outcomes:

CO No.	Upon completion of this course, students will be able to	PSOs addressed	CL
CO 1	Define resting and action potentials	1	Re
CO 2	Classify the uses of electrode paste	1	Ap
CO 3	Discuss the principle of operation of different types of transducers	1	Un
CO 4	Interpret the output of bio potential recorders such as ECG, EEG and EMG	1	Ev
CO 5	Investigate internal and external pacemakers	1	An
CO 6	Illustrate the working of different kinds of radiation monitoring instruments	1	Ap
CO 7	Recognise the importance of computers in medicine	1	Un
CO 8	Evaluate the need for various imaging techniques such as Computer Tomography, Thermography and MRI	1	Ev

SEMESTER - III			
ELECTIVE -III	**B. ENERGY SOURCES**		
Code: 21PPHE32	**Hrs/Week: 6**	**Hrs/Semester:90**	**Credits: 4**

Course Outcomes:

CO No.	Upon completion of this course, students will be able to	PSOs addressed	CL
CO 1	outline the technologies that are used to harness the power of solar energy	1	An
CO 2	discuss the positive and negative aspects of solar energy in relation to natural and human aspects of the environment	5	Un
CO 3	Summarize the structure of biomass.	8	Ev
CO 4	Assess economic factors affecting geothermal energy production	5	Ev
CO 5	Analyse and critically evaluate emerging geothermal technologies.	8	An
CO 6	Compare chemical energy to mechanical energy.	1	An
CO 7	Write the uses of Hydrogen energy	5	Cr
CO 8	List the main characteristics (advantages/disadvantages) for fuel cells.	8	Ap

SEMESTER - I			
Core - III	**Electronics and Experimental Methods**		
Code : 19PPHC13	**Hrs/Week: 6**	**Hrs/Semester: 90**	**Credits:4**

Course Outcome

CO No.	Upon completion of this course, students will be able to	PSO addressed	CL
CO - 1	discuss the working principle of Tunnel Diode, photodiode, LED, LCD, photo conductor and Gunn diode	1	Un
CO - 2	define Hall Effect	1	Re
CO - 3	sketch waveform generators such as Square wave generator,triangular wave generator and Schmitt trigger	1, 3	Ap
CO - 4	discuss the functions of registers and counters	1	Un
CO - 5	describe the different types of registers	1	Un
CO - 6	explain the working of D/A and A/D converters	1	Un
CO - 7	identify the working mechanism of different types transducers	1	Un
CO - 8	recognise intrinsic and extrinsic semiconductors	1	Un

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