Reg. No. : | | | | | | | | | | |

Question Paper Code: 99D74

B.E. / B.Tech. DEGREE EXAMINATION, MAY 2022

Open Elective

Civil Engineering

19UBT974- Nano medicine in Cancer treatment

(Common to CSE,EEE, ECE, MECH, IT , Chemical and Agriculture Engineering branches)

(Regulation 2019)

Duration: Three hours | Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 2 = 20 Marks)

1.	How can you diagnose or detect cancer?	CO1- U
2.	Suggest the different modes of cancer treatment	CO1- U
3.	Elaborate the idea of Abraxane	CO1- U
4.	List out the barriers to nanovector delivery	CO1- U
5.	What are the various cellular uptake mechanisms of nanomaterials	CO1- U
6.	State the function of hydrogels	CO1- U
7.	Highlight the importance of "Pegylated streptokinase as clot buster"	CO2- Ana
8.	How Scaffold is used for dermal regeneration	CO2- Ana
9.	How biosafety is different from bioethics?	CO1- U
10.	Give out the key points related to Adoption and diffusion	CO1- U

PART – B (5 x 16= 80 Marks)

11.	(a)	"Cancer is a devastating disease that projects multiple vulnerability throughout the cell". Elucidate the hallmarks in cancer in detail	CO2- Ana	(16)
		Or		
	(b)	Imagine that you are selected as a patient care taker in Cancer Department. Develop a detailed note about your experience at the hospital and how will you manage them to overcome their mental stress. Write in detail by drawing your imagination and humane quality	CO2- Ana	(16)

12.	(a)	Explain the various cellular uptake mechanisms of nanomaterials	CO2- Ana	(16)
		Or		
	(b)	Imagine that you are a Scientist working in a Nanomedicine for cancer treatment. Design and Develop a novel research idea and strategy. Write in detail by drawing your imagination and scientific temper in relevance to nanotechnology applications in cancer	CO2- Ana	(16)
13.	(a)	Explain the mechanism of "Photoablation and hyperthermia" and also mention how it plays a role in cancer diagnosis and treatment	CO2- Ana	(16)
		Or		
	(b)	How Biochips, Micro arrays &BioMEMs have revolutionised the modern era of medcine.Discuss in detail	CO2- Ana	(16)
14.	(a)	Prepare a case study and discuss in detail about the "Apligraf as dermal matrix for organogenesis"	CO4- E	(16)
		Or		
	(b)	A press release said the " Pegylated streptokinase as clot buster" has been precisely engineered through decades of research. Discuss its mechanism and importance	CO4- E	(16)
15	(a)	Explain the various Ethical & Social issues associated with use of biotechnology research	CO1- U	(16)
		Or		
	(b)	How will you distinguish Bioethics from business ethics? Explain in detail	CO1- U	(16)