17NT563

(08 Marks)

(10 Marks)

(10 Marks)

Fifth Semester B.E. Degree Examination, Dec.2019/Jan.2020 **Nanodevices and Applications**

Max. Marks: 100 Time: 3 hrs. Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

1	0	Discuss about scintillation detector and gas filled detectors.	(10 Marks)
1	a. h	Discuss about pressure sensors, types of pressure measurements and its application	ions.
	υ.	Discuss about present series of	(10 Marks)
		OP.	
		OR	(12 Marks)
2	a.	Explain in details about optical sensors, and light sources.	(08 Marks)

Module-2

Discuss about the principle, structure and applications of magnetic sensors.

2	•	Explain about nano structured gas sensors and its performance factors.	(10 Marks)
	1	Discuss about nano mechanical sensors.	(06 Marks)
	c.	Write a short note on Plasmon Resonance sensors with nano particles.	(04 Marks)

OR

1	0	Discuss about one-dimensional gas sensor	and its classificati	ion based on the a	irangement or
4	a.		0,0		(12 Marks)
		nano-structures.			(08 Marks)
	1_	Explain about nano-ontical sensors.		Cay	(00 Marks)

Module-3

		Brief about preparation of polymeric nanofibre.	(10 Marks)
5	a.	Brief about preparation of polymeric hand rention its advantages.	(10 Marks)

Discuss about nano imprint lithography and

		The second secon		(15 Marks)
6	a.	Write a detailed note on NEMS fabrication.		(05 Marks)
		Explain stencil lithography.	CAY	(05 1111115)

Module-4

		D: 1 Dhoto induced electron transport in DNA.	(10 Marks)
7	a.	Discuss about Photo induced electron transport in DNA.	(10 Marks)
		DILL C 11 compagetes	(10 Marks)

Explain about DNA-Gold nano conjugates.

OR

	-	viv. 1 1 1-topic devices based on DNA	(10 Mains)
8	a.	Write about electronic devices based on DNA.	(10 Marks)
	h	Describe the electrical manipulation of DNA on metal surface.	(10 141113)
	D.	Describe the offering	

Module-5

		Discuss the applications of biosensor based instruments to the bioprocess industry	y. (10 Marks)
9	a.	Discuss the applications of bioscusor substitutions	(10 Marks)
		his consors in clinical analysis.	(IU Maiks)

Explain about non-invasive biosensors in clinical

OR

		D: a shout biosensors for environmental applications.	(
10	a.	Briefly explain about biosensors for environmental applications.	(05 Marks)
		T 1: 1 - 1 Pio reactor	(00 1.1111)
	b.	Explain about Bio-reactor.	(05 Marks)
			(00 11141110)

U.	LAPlain account	
c.	Discuss about Biocore.	

2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice. Important Note: 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.