

University Institute of Engineering & Technology
(Recognised Under Section 2(f) and 12B of UGC)
Kurukshetra University, Kurukshetra

THEORY EXAMINATION – JULY 2021	
B.TECH - BT	SEMESTER - VI

TIME – 4 Hrs.

M.M. - 75

PAPER - OEC-BT-302

SUBJECT- NANOBIO TECHNOLOGY

INSTRUCTIONS TO BE FOLLOWED

- The candidates will be required to attempt All questions in Part-A and Part-B (Compulsory Sections). Attempt any four questions from Part-C selecting at least one from each unit.
- Allotted time for examination is 4 hours that includes time for downloading the question paper, writing answers, scanning of answer sheets and uploading the sheets on the Attendance Sheet Cum Answer Sheet Uploading google form.
- The PDF files should be saved as Roll No. and Subject Code.
- Maximum Page Limit should be 36 (Thirty Six) for attempting the question paper on A4 sheets which could be downloaded and printed from the sample sheets given in the UIET Website.
- Over-attemptation should be avoided.
- Handwriting should be neat and clean and diagrams should be clear and contrasted.
- The candidate should not write their Mobile No. otherwise Unfair Means Case will be made.
- While attempting the paper, the candidate will use blue/black pen only.
- Before attempting the paper, the candidate will ensure that he/she has downloaded the correct question paper. No complaint for attempting wrong question paper by the candidate will be entertained.
- Candidate must ensure that he/she has put his/her signature on each page of the answer sheet used by him/her. Answer sheet without the signature of the candidate will not be evaluated.
- Attempt parts A, B & C separately. Do not inter-mix them. Write neatly & mention the question number clearly.

PART-A (15 Marks)

Q. No. – 1 Answer the following questions.

1	Define Nano biotechnology	2
2	What is sensor	1
3	Define Transducer	1
4	Define nanolithography	1
5	Define top down approach	1
6	Define actuating mechanism	1
7	Define Fullerenes	1
8	Define the carriers	1
9	Define inorganic device	1
10	Define Nanorobots	1
11	Define Nanoparicals	1
12	Define the Nanoshells	1
13	What is Atomic force microscopy	1
14	Write the Surface property of material	1

PART-B (20 Marks)

UNIT-I		
2	Describe the Nanofabrication	5
UNIT-II		
3	Describe the Recent development in BioMEMS	5
UNIT-III		
4	Describe the Dendrimers	5
UNIT-IV		
5	Describe the Benefits of Nano drug Delivery	5

PART-C (40 Marks)

UNIT-I		
6	Describe the Different techniques of material characterization briefly	10
7	Describe the DNA microarray technique in details	10
UNIT-II		
8	Describe the biosignal transduction mechanism	10
9	Describe the Case studies in microfluidic devices	10
UNIT-III		
10	Describe the Bucky balls and Bucky tubes	10
11	Describe the Quantam dot, nanocrystals and nanotubes	10
UNIT-IV		
12	Describe the application of Nano biotechnology in drug Delivery	10
13	Describe the Benefits of Nano-imaging agents	10