JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -1 EXAMINATION- 2026

B.Tech-VII Semester (Open Elective)

COURSE CODE (CREDITS): 18B1WPH731 MAX. MARKS: 15

COURSE NAME: Nanotechnology

COURSE INSTRUCTOR: Ragini Raj Singh MAX. TIME: 1 Hour

Note: *(a) All questions are compulsory.*

(b) The candidate is allowed to make Suitable numeric assumptions wherever required for solving problems

(c) Use of calculator is allowed

Q.No	Question	CO	Marks
Q1	**(a)** Disscus nanomaterials in one dimension, two dimensions and three dimensions with examples.	1	**1.5**
	(b) Why materials behave differently at nanoscale , discuss main reasons behind this.		**1.5**
	(c) Short notes on applications of Nanomaterials in: (i) Nano drug encapsulation (ii) Wearables and smart implants (iii) Energy		**3**
Q2	**(a)** Discuss +ve and –ve photo resists. How does light changes materials solubility?	1	**2**
	(b) Discuss self-assembled monolayer along with their importance.		**1.5**
Q3	**(a)** What does different values of ΔG signifies?	2	**2**
	(b) Why does C>C0 leads to nucleation?		**1.5**
	(c) What is nucleation rate $RN=nP\Gamma$? Explain contribution of each term.		**2**

JUIT TEST-1 EXAMINATION- AUG-2026

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