

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -3 EXAMINATION- 2025

B.Tech -VII Semester (BT/BI)

COURSE CODE (CREDITS): 14B1WBT739 (3)

MAX. MARKS: 35

COURSE NAME: Stem Cells and Regenerative Medicines

COURSE INSTRUCTORS: Dr. Udayabanu

MAX. TIME: 2 Hours

Note: (a) All questions are compulsory.

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

Q.No	Question	CO	Marks
Q1	Design a protocol for the particulate leaching technique used in the fabrication of scaffold for tissue engineering. Explain with a neat diagram.	CO5	5
Q2	Evaluate the material for its surface properties characterization suitable for tissue engineering. Discuss about the different methods with focus on wettability.	CO5	5
Q3	Summarize different dermal grafts that are clinically used. Mention the composition and function of any two commercial dermal grafts currently used.	CO4	5
Q4	An ideal liver scaffold should satisfy certain the conditions and should possess some characteristics like. Describe some suitable polymers and its properties.	CO4	5
Q5	Demonstrate a cell migration assay and haemocompatibility assay with a suitable method.	CO5	5
Q6	Explain the following tissue engineering scaffold material: a. Hydrogel. b. Ceramics. c. Acellular scaffold. d. Fibrous scaffold	CO5	2.5*4 = 10