

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -2 EXAMINATION- 2024

B.Tech-VII Semester (CSE/IT/ECE/CE/BT/BI)

COURSE CODE (CREDITS):14B1WBT739 (3)

MAX. MARKS: 25

COURSE NAME: Stem Cells and Regenerative Medicines

COURSE INSTRUCTORS: Dr. Udayabanu

MAX. TIME: 1 Hour 30 Minutes

**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	Islets of Langerhans contains alpha, beta and delta cells. Critically evaluate the function of alpha and beta cells.	CO3,4	5
Q2	“Endosteal” and “Vascular” niches. Do they have different roles? Justify and elaborate the role of osteoblasts as haematopoietic stem cells.	CO2,3	5
Q3	Nervous tissue consists of two cell types. Explain and indicate their function.	CO3	5
Q4	Summarize all the five developmental stages during adult hippocampal neurogenesis in the dentate gyrus of the hippocampus.	CO3,4	5
Q5	Design a strategy to identify biomaterials and its scaffold for the formulation of constructs to be used in stem cell therapy.	CO5	5