

*Dr. Udaybhai*

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

Test -1, SEPT, EXAMINATION - 2016

M.Tech Ist Semester

COURSE NAME: Stem Cell & Regenerative Medicine

MAX.MARKS:15

COURSE CODE: 14B1WBT739

MAX.TIME: 1 HR.

COURSE CREDITS: 03

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Note: Carrying of mobile phones during examinations will be treated as a case of unfair means. Draw diagram where ever necessary.

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1. Explain a strategy to identify key genes for self-renewal and pluripotency in embryonic stem cells. [2Marks]
2. Write a note on nucleoplasmin. [2Marks]
3. With gene expression pattern how could you differentiate endocrine and exocrine development of pancreatic cells? [2Marks]
4. Why insulin secretion in response to glucose level and C-peptide were used as markers to characterize embryonic stem cell derived pancreatic cells? [2Marks]
5. What are the sources of transplantable hematopoietic stem cells? What is the application of immunostimulants in stem cell harvesting? [2Marks]
6. Define stem cell niche and explain its importance [2Marks]
7. How functional lymphocytes were developed from hESCs using a two step culture method? [3Marks]