

Dr. Vday

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT
T2 EXAMINATION APRIL 2018
B.TECH(BT) IV SEM

COURSE CODE: 10B11BT412

COURSE NAME: Cell Culture Technology

MAX. MARKS: 25

COURSE CREDIT: 4

MAX. TIME: 1hr 30m

Note: All questions are compulsory. Draw diagrams wherever necessary

1. Draw and explain the ideal growth curve for cells in an *in-vitro* cell culture. [3]
2. What is a continuous cell culture? Explain the methods for generating immortalized cell lines. [5]
3. Why passaging of cells are done in cell culture? How it is performed? [3]
4. Explain carbonate-bicarbonate buffer system in cell culture. What is the importance of CO₂. [2]
5. What are the basis for detection and quantification of apoptosis? Explain in detail using cell line based assay for apoptosis. [5]
6. What is a monoclonal antibody? Explain the steps involved in the production of monoclonal antibodies with an example. [5]
7. What is cell permeabilization and how is it done? [2]