## BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI

(END SEMESTER EXAMINATION) CLASS: **MSC SEMESTER: II BRANCH:** BT SESSION: SP/19 SUBJECT: BT423 ANIMAL BIOTECHNOLOGY TIME: 3.00 Hrs. **FULL MARKS: 50 INSTRUCTIONS:** 1. The question paper contains 5 questions each of 10 marks and total 50 marks. 2. Attempt all questions. 3. The missing data, if any, may be assumed suitably. 4. Before attempting the question paper, be sure that you have got the correct question paper. 5. Tables/Data hand book/Graph paper etc. to be supplied to the candidates in the examination hall. \_\_\_\_\_\_ Define primary and secondary culture. How would you maintain a cell line? [5] What are stem cells? How would you classify the stem cells on the basis of their origin? [5] Q.1(b) What is cell synchronization? Explain the methods of cell synchronization with the help of diagram. [5] Q.2(b) What is infertility? Elaborate the types and cause of infertility. [5] Q.3(a) Diagrammatically explain the structure of adeno-virus. [5] What is vectors? How would you categorize the vectors? Q.3(b) [5] Q.4(a)How would you show your understanding of gene therapy? Emphasis of different types of gene therapy. [5] Q.4(b) What is xenotransplantation? Enlist the application of xenotransplantation. [5]

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Q.5(b) Define ethical issue. Show your understanding about ethical issue related to animal biotechnology.

[5]

[5]

Q.5(a) What are transgenic animals? Explain any one transgenic model.