

	<p>7. Which of the following is not a type of non-invasive method of sex determination of embryos?</p> <p>a) Immunological assay of HY antigen b) Quantification of X-linked enzyme c) Barr bodies d) Differential growth of male and female embryo</p> <p>B) State the following statement is true or false and provide justification for both the cases (5)</p> <p>1. Restriction enzymes type I cannot be used for genetic engineering purposes. 2. Assisted hatching breaks the endometrium layer of the embryo. 3. FSH hormone is used to synchronize the estrous cycles of the donor and recipient cows. 4. Non-radioactive probes are safer than radioactive probes. 5. Covishield is a type of DNA vaccine.</p>			
Q.2	<p>Short answer questions (2*5 = 10)</p> <p>1. Differentiate between linkers and adaptors. 2. Why the estrous cycle needs to be synced between the donor and recipient animals? 3. What are the disadvantages of using artificial insemination method for conservation programs? 4. What is in vitro maturation of oocytes? 5. Define vaccine adjuvant with some examples.</p>	10	CO1, CO2, CO3, CO4, CO5	BT1, BT2, BT3
Q.3	<p>Answer the questions in brief (3*2 = 6)</p> <p>1. How can animal biotechnology be applied in the conservation of endangered species? 2. Differentiate between slow freezing and vitrification</p>	6	CO3, CO4	BT1, BT2, BT3
Q.4	<p>Answer any 3 in detail (4*3 = 12)</p> <p>1. Describe the Gubler-Hoffman reaction of cDNA synthesis? What are the advantages and disadvantages of this method? 2. Explain the stages of vaccine development in brief. 3. What is the procedure for embryo transfer in cattle? 4. How are X and Y sperms different from each other?</p>	12	CO1, CO3, CO4, CO5	BT1, BT2, BT3

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