

MSc Sem.-2 Examination

408

CE & ART

May-2025

Time : 2-30 Hours]

[Max. Marks : 70

Q.1A	Describe the procedure for oocyte retrieval and explain the criteria for oocyte selection in IVF cycles	7
Q.1B	Write a detailed note on advanced sperm selection technique for ICSI: MACS.	7
OR		
Q.1A	Write a detailed note on advanced sperm selection technique for ICSI: Microfluidics	7
Q.1B	Describe the grading of oocytes based on morphology.	7
Q.2 A	Write a note on IVM.	7
Q.2 B	Describe the step-by-step technique of intracytoplasmic sperm injection (ICSI) and its significance	7
OR		
Q.2 A	Discuss different types of human embryo biopsy.	7
Q.2 B	Explain the working principle of assisted oocyte activation.	7
Q.3 A	Explain the types of embryo culture systems used in IVF laboratories and their advantages.	7
Q.3 B	Explain Time-lapse embryo assessment system.	7
OR		
Q.3 A	Discuss the criteria for embryo quality evaluation using morphology.	7
Q.3 B	Explain in detail: protocol for Embryo transfer.	7
Q.4 A	What are the basic criteria required for sperm donation according to ART law in India.	7
Q.4 B	Describe ZIFT, GIFT and Embryo Reduction in brief.	7
OR		
Q.4 A	What are the basic criteria required for Oocyte donation according to ART law in India.	7
Q.4 B	Explain the ART Bill 2021 guidelines for Surrogacy.	7
Q.5	Answer the Following Short Questions (Any 7)	14
1	List any two parameters for oocyte selection during IVF.	
2	Name two advantages of microfluidics over conventional sperm selection.	
3	List any two cytoplasmic inclusions in Oocyte morphology with appropriate diagram.	
4	What is ICSI?	

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5	Mention two indications for assisted hatching.	
6	List any two essential instruments used for ICSI.	
7	Name any two time-lapse imaging systems in embryo culture.	
8	Mention two indications for Assisted oocyte activation.	
9	Mention advantages of USG-guided embryo transfer.	
10	What is the difference between embryo donation and Surrogacy.	
