

MSc Sem.-2 Examination

407

CE & ART

May-2025

Time : 2-30 Hours]

[Max. Marks : 70

Q.1A	Write a detailed note on the setup, functioning, and management of an Andrology laboratory.	7
Q.1B	Explain the set-up of a Level-1 ART Laboratory.	7
	OR	
Q.1A	Explain the maintenance and calibration of the instruments used in Andrology lab.	7
Q.1B	What are the technical aspects of establishing and maintaining ART labs.	7
Q.2 A	Explain the difference between Level-1 and Level-2 ART lab.	7
Q.2 B	Explain the maintenance and calibration of the instruments used in IVF lab.	7
	OR	
Q.2 A	Explain the major and minor instruments used in IUI lab.	7
Q.2 B	Explain the working principle and calibration of different types of incubators.	7
Q.3 A	Explain in detail- QC in IVF laboratory.	7
Q.3 B	What are IQC and EQAS measures to ensure optimum workflow in IVF lab?	7
	OR	
Q.3 A	What are SOPs? Explain detailed SOP for IUI procedure.	7
Q.3 B	Explain the record keeping and maintenance at ART laboratory for Quality assurance.	7
Q.4 A	What is DNA fragmentation? Explain any one method to assess sperm DFI in detail.	7
Q.4 B	Describe different types of swim up method for preparation of sperms in ART.	7
	OR	
Q.4 A	Write a brief note on Sperm Chromatin Dispersion test.	7
Q.4 B	Explain conventional Semen analysis with detailed protocol.	7
Q.5	Answer the Following Short Questions (Any 7)	14
1	Mention any two equipments used in cryopreservation.	
2	What is the principle of a laminar airflow cabinet?	
3	List any two maintenance activities for a centrifuge	
4	What does IQC stand for?	
5	Define EQAS.	
6	What is the purpose of sperm preparation?	
7	Name any three techniques used for sperm chromatin assessment.	
8	Mention any three advantages of automated sperm analysis.	
9	What is the role of an incubator in an Andrology lab?	
10	Define QA and QC.	