

THE TAMIL NADU DR.M.G.R. MEDICAL UNIVERSITY

(MCH 0822)

AUGUST 2022

Sub. Code: 1977

M.Ch. – REPRODUCTIVE MEDICINE AND SURGERY

Paper II – PRINCIPLES OF EMBRYOLOGY / ANDROLOGY AND ART

Q.P. Code: 181977

Time: Three Hours

Maximum: 100 Marks

I. Elaborate on: **(2 x 15 = 30)**

1. Discuss about Quality control (QC) and Quality assessment (QA) in ART lab.
2. Poor ovarian reserve – What are the evidence-based strategies for management of poor responders?

II. Write notes on: **(10 x 7 = 70)**

1. Luteal support in IVF.
2. Role of hysteroscopy in Recurrent implantation failure (RIF).
3. CASA system in andrology lab.
4. Sequential versus Single culture media: What are the current implications?
5. Discuss the guidelines for setting up an IVF lab.
6. Critically analyse - Add-ons in ART lab.
7. Discuss about sperm selection options for ICSI.
8. AZF micro deletions.
9. Istanbul consensus on the morphological evaluation of the human embryo.
10. Medical management of oligozoospermia.

THE TAMIL NADU DR.M.G.R. MEDICAL UNIVERSITY

(MCH 0124)

JANUARY 2024

Sub. Code: 1977

M.Ch. – REPRODUCTIVE MEDICINE AND SURGERY

PAPER II – PRINCIPLES OF EMBRYOLOGY / ANDROLOGY AND ART

Q.P. Code: 181977

Time: Three Hours

Maximum: 100 Marks

I. Elaborate on: **(2 x 15 = 30)**

1. Describe the time lapse technology and critically evaluate the evidence for its use in ART.
2. Critically appraise the evidence for “freeze all” strategies in contemporary practice.

II. Write notes on: **(10 x 7 = 70)**

1. Critically evaluate the evidence for assisted hatching in ART.
2. Discuss the role of progesterone primed ovarian stimulation protocols in ART.
3. Critically evaluate the evidence for Intra cytoplasmic injection (ICSI) for non-male factor infertility.
4. Discuss the role of platelet rich -plasma (PRP) in ART.
5. Discuss the role of physiological intracytoplasmic sperm injection (PICSI) in ART.
6. Discuss the management strategies for the POSIEDON 3 and 4 groups.
7. Discuss the impact of oocyte numbers on IVF outcomes with regards to ovarian stimulation strategies.
8. Critically appraise the evidence for screening hysteroscopy before IVF.
9. Quality control and quality assurance steps for incubators used for embryo culture in the IVF lab.
10. Critically evaluate the role of addition of Luteinizing hormone (LH) during controlled ovarian hyperstimulation (COH) in ART.

THE TAMIL NADU DR.M.G.R. MEDICAL UNIVERSITY

(MCH 0225)

FEBRUARY 2025

Sub. Code: 1977

M.Ch. BRACH XIV – REPRODUCTIVE MEDICINE AND SURGERY

PAPER II – PRINCIPLES OF EMBRYOLOGY / ANDROLOGY AND ART

Q.P. Code: 181977

Time: Three Hours

Maximum: 100 Marks

I. Elaborate on:

(2 x 15 = 30)

1. Discuss the performance indicators of quality control in ART lab. What are the important steps to ensure these quality indicators while planning ART lab.
2. Discuss various measure to reduce multiple pregnancies during fertility treatment.

II. Write notes on:

(10 x 7 = 70)

1. Discuss role of oocyte activation in IVF treatment.
2. Describe various sperm preparation techniques for intrauterine insemination.
3. Critically appraise use of single step culture media for IVF treatment.
4. Discuss factors affecting the embryo transfer technique.
5. Critically appraise role of assisted hatching in IVF treatment.
6. Discuss the role of ovarian tissue cryopreservation.
7. Discuss sperm selection methods during ICSI (Intra cytoplasmic sperm injection).
8. Discuss trouble shooting for total fertilization failure.
9. Discuss about various incubators in IVF lab.
10. Role of air quality in IVF LAB.

THE TAMIL NADU Dr. M.G.R. MEDICAL UNIVERSITY

(MCH 0126)

JANUARY 2026

Sub. Code: 1977

M.Ch. – REPRODUCTIVE MEDICINE AND SURGERY

PAPER II – PRINCIPLES OF EMBRYOLOGY / ANDROLOGY AND ART

Q.P. Code: 181977

Time: Three Hours

Maximum: 100 Marks

I. Elaborate on:

(2 x 15 = 30)

1. In the IVF unit, there has been a sudden decline in laboratory culture conditions in previously optimally functioning lab. Describe the impact on the IVF program and how you will troubleshoot in the above scenario.
2. Describe the duostim protocol and its advantages and disadvantages. Critically evaluate the evidence for duostim protocol.

II. Write notes on:

(10 x 7 = 70)

1. Critically evaluate the evidence for growth hormone in assisted reproductive technology.
2. Discuss the mild stimulation approach for poor responders.
3. Discuss the use of ICSI for non-male factor in contemporary practice.
4. Discuss the advantages and disadvantages of sequential culture medium.
5. Discuss the role of progesterone-primed ovarian stimulation in IVF.
6. Critically evaluate the evidence for ultra-long protocol use for endometriosis in IVF.
7. Quality control and quality assurance steps for culture media in the IVF lab.
8. Discuss the use of Pre-implantation genetics (PGT-A) for unexplained recurrent pregnancy loss.
9. Discuss the clinical aspects of in-vitro maturation (IVM).
10. Discuss the perinatal outcomes following donor oocyte IVF.
