

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

**(MCH 0822)**

**AUGUST 2022**

**Sub. Code: 1979**

**M.Ch. – REPRODUCTIVE MEDICINE AND SURGERY**

**Paper IV – RECENT ADVANCES IN ASSISTED REPRODUCTIVE  
TECHNOLOGY / EMBRYOLOGY, ETHICAL AND LEGAL ISSUES**

*Q.P. Code: 181979*

**Time: Three Hours**

**Maximum: 100 Marks**

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

1. Discuss various female fertility preservation: options and protocols.
2. Pre- implantation genetic testing (PGT): Discuss the evidence in ART treatment.

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

1. Ethics in third party reproduction.
2. Artificial intelligence in reproductive medicine.
3. Cross border reproductive care: pros & cons.
4. “Batch IVF programme” - Practical consideration.
5. Discuss the difference between WHO 2010 & WHO 2021 manual on semen analysis.
6. Role of Doppler studies in IVF treatment.
7. Role of Metabolomics in ART.
8. Kisspeptin use in Reproductive medicine.
9. Use of artificial intelligence in ART procedure.
10. Pros and Cons of New Surrogacy bill.

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

**(MCH 0124)**

**JANUARY 2024**

**Sub. Code: 1979**

**M.Ch. – REPRODUCTIVE MEDICINE AND SURGERY**

**PAPER IV – RECENT ADVANCES IN ASSISTED REPRODUCTIVE TECHNOLOGY / EMBRYOLOGY, ETHICAL AND LEGAL ISSUES**

*Q.P. Code: 181979*

**Time: Three Hours**

**Maximum: 100 Marks**

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

1. Describe the process of uterine transplant and discuss the ethical issues around the procedure.
2. Describe the surrogacy (regulation) act, 2021 and its implications on contemporary practice.

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

1. Discuss the effect of COVID vaccines on reproductive outcomes.
2. Discuss the strategy of oocyte accumulation for poor responders in IVF.
3. Describe the regulatory requirements for starting level II ART clinic as per ART law 2021.
4. Describe the regulatory requirements for starting ART bank as per ART law, 2021.
5. Discuss the role of stem cell therapy for thin endometrium.
6. Discuss the ethical aspects surrounding embryo disposition.
7. Discuss the fertility preservations options for adolescent boys.
8. Discuss the perinatal outcomes of pregnancies following surrogacy.
9. Discuss the predictive models for IVF outcomes.
10. Describe the automated vitrification method.

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

**(MCH 0225)**

**FEBRUARY 2025**

**Sub. Code: 1979**

**M.Ch. BRACH XIV – REPRODUCTIVE MEDICINE AND SURGERY**

**PAPER IV – RECENT ADVANCES IN ASSISTED REPRODUCTIVE  
TECHNOLOGY / EMBRYOLOGY, ETHICAL AND LEGAL ISSUES**

***Q.P. Code: 181979***

**Time: Three Hours**

**Maximum: 100 Marks**

**I. Elaborate on:**

**(2 x 15 = 30)**

1. What are the fertility preservation options in women diagnosed with breast cancer in different age groups? Discuss the COH protocols for fertility preservation.
2. Discuss about the evidence-based markers in Frozen Embryo transfer treatment cycle.

**II. Write notes on:**

**(10 x 7 = 70)**

1. Discuss about cross border Reproductive care – pros and cons.
2. Discuss the role of doppler studies to improve fertility treatment outcome.
3. Discuss ICSI (intracytoplasmic sperm injection) versus IMSI (injection of morphologically selected sperms).
4. Critically analyse Freeze – all cycles in ART (assisted reproductive technology) practice.
5. Discuss the role of IVM (In Vitro Maturation) in current ART practice.
6. Discuss the role of 3-D ultrasound in infertility.
7. Critically evaluate WHO -202 Semen analysis.
8. Write a note on social egg freezing.
9. Discuss the ethical issues with donor oocyte – IVF treatment.
10. Discuss the use of oral GnRH antagonist in severe endometriosis treatment.

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

**(MCH 0126)**

**JANUARY 2026**

**Sub. Code: 1979**

**M.Ch. – REPRODUCTIVE MEDICINE AND SURGERY**

**PAPER IV – RECENT ADVANCES IN ASSISTED REPRODUCTIVE TECHNOLOGY / EMBRYOLOGY, ETHICAL AND LEGAL ISSUES**

*Q.P. Code: 181979*

**Time: Three Hours**

**Maximum: 100 Marks**

**I. Elaborate on:**

**(2 x 15 = 30)**

1. Discuss the role of artificial intelligence in the field of assisted reproduction, its limitations and its future directions.
2. Outline the salient features of the Surrogacy Regulation Act 2021. Discuss its impact on the current ART practise and ethical issues with it.

**II. Write notes on:**

**(10 x 7 = 70)**

1. Discuss the requirements for setting up of level II ART clinic as per ART law 2021.
2. Discuss the role of the Elagolix (oral antagonist) in IVF.
3. Discuss the ethical issues around CRISPR gene editing.
4. Describe the use of microfluidics technology in male infertility.
5. Discuss the counselling and ethical considerations for oocyte cryopreservation for non-medical reasons.
6. Describe the role of endocrine-disrupting chemicals in infertility.
7. Describe the ovarian tissue cryopreservation techniques for fertility preservation.
8. Describe the impact of Vanishing Twins syndrome on obstetric outcomes.
9. Discuss the current status of non-invasive pre implantation genetic testing (niGPT).
10. Discuss the challenges of using immature sperms for ICSI.

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