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

(MCH 0822) AUGUST 2022 Sub. Code: 1976

M.Ch. – REPRODUCTIVE MEDICINE AND SURGERY

Paper I – BASIC SCIENCES APPLIED TO REPRODUCTIVE ENDOCRINOLOGY / ASSISTED REPRODUCTIVE TECHNOLOGY

Q.P. Code: 181976

Time: Three Hours **Maximum: 100 Marks**

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

1. Discuss the stages of spermatogenesis. Globozoospermia: diagnosis and Management.

2. Discuss the process of embryo implantation. Explain the ways to improve the implantation.

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

1. Oral Ovulogens: What are the options and describe the protocols for PCOS.
2. How will you evaluate and manage Non-obstructive azoospermia?
3. Discuss the evaluation and management of hirsutism.
4. Describe the physiology of LH and its role in IVF treatment.
5. Acrosome reaction and capacitation.
6. Role of GnRh- agonist in Infertility treatment.
7. What are the factors which results in infertility in endometriosis?
8. Regulation of spermatogenesis.
9. Role of insulin sensitizers in ART.
10. Diagnostic tests for female genital tuberculosis.

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

(MCH 0124) JANUARY 2024 Sub. Code: 1976

M.Ch. – REPRODUCTIVE MEDICINE AND SURGERY

PAPER I – BASIC SCIENCES APPLIED TO REPRODUCTIVE ENDOCRINOLOGY / ASSISTED REPRODUCTIVE TECHNOLOGY

Q.P. Code: 181976

Time: Three Hours **Maximum: 100 Marks**

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

1. Describe the physiological role of anti mullerian hormone. Discuss the role of AMH estimation in reproductive medicine.

2. Describe the mechanism of action of various ovulation triggers. Discuss the importance of biochemical monitoring following administration of ovulation triggers in In Vitro Fertilization (IVF).

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

1. Describe the various tests for ovulation in the fertility work up.
2. Describe the mechanism of action for GnRH antagonist and GnRH agonist for down regulation in In Vitro Fertilization treatment.
3. Describe the different phenotypes of polycystic ovarian syndrome (PCOS)
4. Describe the role of DNA fragmentation testing in unexplained infertility.
5. Discuss the role of serum progesterone estimation in frozen embryo cycles.
6. Discuss the role of diagnostic laparoscopy in fertility work up.
7. Briefly compare the predictive capacity of Anti Mullerian hormone versus antral follicle count (AFC)for ovarian response during in vitro fertilization (IVF) treatment.
8. Describe the physiological process of oocyte activation.
9. Describe the diagnostic pathway for non-obstructive azoospermia.
10. Describe the pathophysiology of endometriosis.

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

(MCH 0225) **FEBRUARY 2025** **Sub. Code: 1976**

M.Ch. BRACH XIV – REPRODUCTIVE MEDICINE AND SURGERY

PAPER I – BASIC SCIENCES APPLIED TO REPRODUCTIVE ENDOCRINOLOGY / ASSISTED REPRODUCTIVE TECHNOLOGY

Q.P. Code: 181976

Time: Three Hours **Maximum: 100 Marks**

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

1. Discuss the role of oogenesis and significance of Anti- Mullerian hormone in clinical scenario.
2. Describe role of hormonal evaluation in IVF cycle.

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

1. What are the causes of hirsutism? Discuss the evaluation and treatment of hirsutism.
2. Discuss about different ovarian reserve tests.
3. Discuss about abnormal fertilization.
4. Discuss various genetic causes of recurrent miscarriage.
5. Describe different phenotype of polycystic ovarian syndrome and what is its clinical significance.
6. Describe various microbe responsible for pelvic inflammatory disease and its effect on infertility.
7. What are the genetic factors responsible for male factor infertility.
8. Discuss role of DNA fragmentation in unexplained infertility.
9. Describe morphological grading of blastocyst.
10. Describe the ultrastructure of sperm and its clinical significance in male infertility.

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

(MCH 0126) **JANUARY 2026** **Sub. Code: 1976**

M.Ch.– REPRODUCTIVE MEDICINE AND SURGERY

PAPER I – BASIC SCIENCES APPLIED TO REPRODUCTIVE ENDOCRINOLOGY / ASSISTED REPRODUCTIVE TECHNOLOGY

Q.P. Code: 181976

Time: Three Hours **Maximum: 100 Marks**

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

1. Discuss the pathophysiology for polycystic ovarian syndrome. Describe the different phenotypes of PCOS and briefly describe their clinical outcomes following fertility treatment.

2. Describe the stages of spermatogenesis and the pathophysiology for fertilization failure for IVF and ICSI. Briefly describe the treatment options following fertilization failure following IVF and ICSI.

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

1. Describe two cell two gonadotrophin theory.

2. Describe the mechanism of action for different ovulation trigger during IVF and discuss the utility of post-trigger monitoring in IVF.

3. Describe the pathophysiology of endometriosis.

4. Critically evaluate the role of DNA fragmentation test for male partner evaluation.

5. Discuss the diagnostic accuracy of Hysterosalphingo Contrast Sonography (HyCoSy).

6. Discuss the impact of the choice of tubal test for unexplained infertility on subsequent fertility and treatment outcomes.

7. Discuss the different diagnostic criteria for PCOS and their advantages and limitations.

8. Describe the non-invasive methods for the diagnosis for endometriosis.

9. Describe the predictive factors for successful sperm retrieval following micro TESE for non-obstructive azoospermia.

10. Describe the pathophysiology of Turner's syndrome and briefly enumerate the steps for pre-fertility treatment evaluation.

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