

Part - A

- During fertilization, the enzyme which is useful for the penetration of sperm into the egg is,
 - Vessiculase
 - Transferase
 - Hydro oxylase
 - Hyaluronidase
- The process which the sperm undergoes before penetrating the ovum is
 - Spermiation
 - Cortical reaction
 - Spermiogenesis
 - Capacitation
- The male hormone Testosterone Secured by
 - Sertoli cells
 - Legdig cell
 - Epididymis
 - Prostate gland
- Which among the following does not belong to male reproductive system
 - Prostate gland
 - Corpus albicans
 - Cowper's gland
 - Bulbo-urethral gland
- The whole process of spermatogenesis takes place aout ____ days
 - 25
 - 42
 - 64
 - 72
- The dividing embryo takes _____ days to move to the uterus from the fallopian tube
 - 9-10
 - 14-15
 - 4-5
 - 2-3
- Which of the following is known as Nebenkern
 - Golgi body
 - Centriole
 - Nucleus
 - Mitochondrial spiral
- The spermatids are tranaformed into mature sperms by a process called _____
 - Spermiogenesis
 - Spermatogenesis
 - Spermiation
 - Gametogenesis
- The finger shaped _____ in the female reproductive system collect the ovum after ovulation
 - Infundibulum
 - Fimbriae
 - Ampulla
 - Isthmus
- Among the extra embryonic membranes the _____ is the outermost membrane.
 - Amnion
 - Chorion
 - Allantois
 - Vitellin membrane

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5. What is endometrium?

Part – C

III. Short Answer.

1. How the Scrotum acts as a ‘thermoregulator’?
2. What is meant by cryptorchism?
3. What are Leydig cells?
4. What is the function of amnion?
5. What is first trimester? Mention its significance.

Part – D

IV. Write in detail.

1. How is polyspermy avoided in humans?
2. Describe the process of spermatogenesis.
3. Describe the structure of human ovum with labelled diagram.
4. Placenta is an endocrine tissue. Justify.
5. Write briefly about the extra embryonic membranes.

3. REPRODUCTIVE HEALTH

Part - A

I. One Mark Questions

1. A contraceptive pills prevents ovulation by:
 - a) Blocking fallopian tube
 - b) Stimulating release of FSH & LH
 - c) Inhibiting release of FSH & LH
 - d) Causing immediate degeneration of released ovum
2. Match the Column-I with Column-II and select the correct option from the codes given below:

Column-I		Column-II	
A	Copper releasing IUD	i	LNG-20
B	Hormone releasing IUD	ii	Lippe sloop IUD
C	Non-medicated IUD	iii	Saheli
D	Minimum-pills	iv	Multiload-375

- a) A(iv), B(ii), C(i), D (iii)
- b) A(iv), B(i), C(iiii), D (ii)
- c) A(i), B(iv), C(ii), D (iii)
- d) A(iv), B(i), C(ii), D (iii)

3. Select the incorrect action of hormonal contraceptive pills from the following:
 - a) Inhibition of ovulation
 - b) Inhibition of spermatogenesis
 - c) Changes in cervical mucus impairing its ability to allow passage and transport of sperms
 - d) Alternation in uterine endometrium to make it unsuitable for implantation
4. Assertion: LNG-20 are often called as hormone releasing intrauterine systems (IUS)
Reason: They increase the viscosity of cervical mucus and thereby prevent sperms from entering the cervix
 - a) 'A' is true, 'R' is false
 - b) Both 'A' and 'R' are true, 'R' is the correct explanation of 'A'
 - c) 'A' is false, 'R' is true
 - d) Both 'A' and 'R' are true, but 'R' is not the correct explanation of 'A'
5. Which of the following is not a step in IVF treatment?
 - a) Testes stimulation
 - b) Ovarian stimulation
 - c) Egg retrieval
 - d) Fertilization and embryo culture
6. The family planning programme was initiated by India in
 - a) 1951
 - b) 1953
 - c) 1963
 - d) 1972
7. _____ are the ideal contraceptives for female who want to delay pregnancy
 - a) Oral contraceptive pills
 - b) Intrauterine Devices
 - c) Diaphragms, cervical caps & vaults
 - d) Tubectomy
 - e) Hepatitis-B
 - f) Syphilis
8. This prevents the children from sexual offences
 - a) PCPNDT
 - b) POCSO
 - c) Reproductive and Child Health Care RCH
 - d) UNDPs
9. Placental tissue to test for chromosomal abnormalities
 - a) *In vitro* fertilization
 - b) GIFT
 - c) ZIFT
 - d) Chorionic Villus Sampling
10. Identity the correct statement from the following:
 - a) 10000 to 100000 motile sperms are needed for *in vitro* fertilization
 - b) By simple surgery sperms are collected from male for *in vitro* fertilization
 - c) By using special media eggs are prepared
 - d) HCG injection is not need for *in vitro* fertilization.

Part – B

II. Very Short Answer.

1. Differentiate foeticide and infanticide
2. Explain about non-medicated IUDS
3. Differentiate GIFT from ZIFT
4. What is Saheli?
5. What is Mayer Rokitansky Syndrome?
6. Explain about chorionic villus sampling (CVS).
7. Mention the uses of fetoscope.

8. What is meant by ART (Assisted Reproductive Technology)?

Part – C

III. Short Answer.

1. What is statutory ban imposed on amniocentesis in India?
2. Mention the preventive measures taken by our Government to control population growth in our country.
3. Define: Tubectomy.
4. What is cryopreservation?
5. What is meant by surrogacy?
6. Explain about hormone releasing IUDS.
7. Define Azoospermia.

Part – D

IV. Write in detail.

1. Test-tube baby is the solution for many forms of Infertility. Explain this technique.
2. What is ART? Write any two techniques.
3. Define birth control. Explain about temporary birth control methods.

Part - A

1. ABO blood group in man is controlled by

2. Which of the following phenotypes in the progeny are possible from the parental combination $A \times B$?

- ### 3. XO type of sex determination and XY type of sex determination are examples of

4. “Universal Donor” and “Universal Recipients” blood group are _____ and _____ respectively.

- 5. Which of the following is incorrect regarding ZW-ZZ type of sex determination?**

- 6. Blood group antigens are in**

- 7. Butterfly shows _____ type sex determination.**

- ## 8. Null allele individuals

- 9. Karyotype was first prepared in _____**

- 10. Find the correct statement**

Haemophilia is common in men.

Haemophilia is caused by a recessive linked gene.

Haemophilia does not follow criss cross inheritance.

Haemophilia patients have excess thromboplastin.

Part – B

II. Very Short Answer.

1. Define multiple alleles.
2. Explain the sex determination in human being.
3. What is the Karyotype?
4. What are holandric genes?
5. Why do we call Haemophilia as Bleeder's disease?

Part – C

III. Short Answer.

1. What is Lyonisation?
2. What is the reason for colourblindness?
3. Barr Body is inactive chromosome – discuss?
4. Differentiate Homogametic and heterogametic sex determination.

Part – D

IV. Write in detail.

1. Explain the genetic basis of ABO blood grouping man.
2. Discuss the genic balance mechanism of sex determination with reference to Drosophila?
3. Describe extra Chromosomal inheritance.