

REVISION TEST SERIES-1

BIOLOGY

Maximum Marks: 35

SET A

Time: 1 ½ hours

General Instructions:

- (i) All questions are compulsory.
- (ii) The question paper has five sections and 16 questions. All questions are compulsory.
- (iii) Section–A has 6 questions of 1 mark each; Section–B has 4 questions of 2 marks each; Section– C has 4 questions of 3 marks each; Section– D has 1 case-based questions of 4 marks each; and Section–E has 1 question of 5 marks each.
- (iv) There is no overall choice. However, internal choices have been provided in some questions. A student has to attempt only one of the alternatives in such questions.
- (v) Wherever necessary, neat and properly labelled diagrams should be drawn.

SECTION A

1. Name the process that involves the transfer of pollen grains from anther to the stigma of another flower of same plant, which is functionally cross pollination but genetically similar to auto gamy
A) autogamy b) allogamy c) geitonogamy d) xenogamy
2. Match column A with column B ?

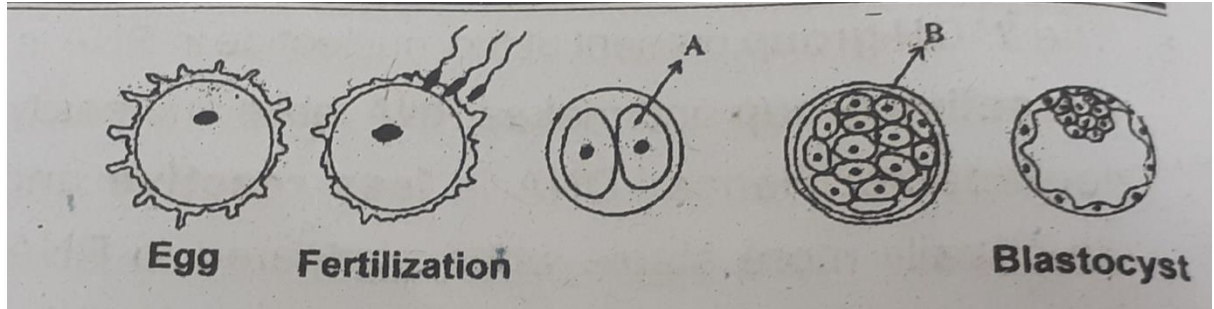
A	B
a. Luteinising hormone	Pregnancy hormone
b. Progesterone	Ovulation
c. Estrogen	Leydig cells
d. Testosterone	Ovary

3. How many pollen grains and ovules are likely to be formed in the anther and ovary of an angiosperm bearing 25 microspore mother cells and 25 megaspore mother cells respectively?
a. 50 pollen grains, 25 ovules b. 25 pollen grains, 100 ovules
c. 100 pollen grains, 25 ovules d. 100 pollen grains, 50 ovules
4. Name the part of the flower which the tassels of the corn cob represent
a. Pistil- stigma b. Anthers
c. Pistil – style c. filament
5. Which enzyme is present in sperm head?
a. Hyaluronic acid b. Lipase
c. Lysozyme d, Acrosome
6. Assertion: Ovule develops into mature seeds and ovary develops into fruits.
Reason: The fruits that develop only from ovary are called true fruits.
a) Both assertion and reason are correct
b) Assertion and reason both are incorrect
c) Assertion is incorrect but reason is correct
d) Assertion is correct but reason is incorrect

(6 x 1=6)

SECTION B

7.



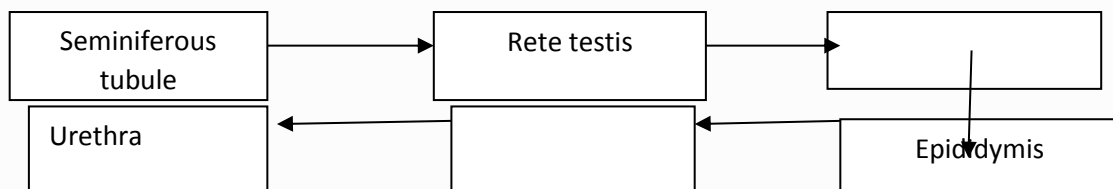
- a) What is A and B?
 - b) Name the two types of cells found in the blastocyst
 - c) Which layer of blastocyst is attached to the endometrium? And name that process
8. Write the location and function of the sertoli cells in humans.
 9. Coconut plant is monoecious while date palm is dioecious. Why are they called so?
 10. In the table given below, select and enter one correct device out of the following: Oral pill, Condom, Copper T, Saheli, Vasectomy, Diaphragm, Tubectomy, Cervical cap

Method of Birth Control	Device
1. Barrier	
2. IUD	
3. Surgical Technique	
4. Administering Hormones	

(4x2=8)

SECTION C

11. Three different flowers are given to you in the practical class.
 - i) Maize ii) Vallisneria iii) Rose
 You are asked to group them based on pollinating agents. Describe the adaptations of each flower related with the agents of pollination
12. Which is the triploid tissue in a fertilized ovule? How is the triploid condition achieved?
13. The path of sperm transport is given below. Provide the missing steps in blank boxes.



14. Name three incurable sexually transmitted diseases and their causative organisms. (4x3=12)

SECTION D

15. Ratan lives in a remote village. Suddenly he comes to know that his father has arranged the marriage of his younger sister, who is only 14 years old, to a well-to-do middle-aged man living in a nearby village. Ratan objected to his father's act. Ratan was not convinced by his father's idea that a better groom might not be available later. Ratan

complained to the village head and got the problem solved.

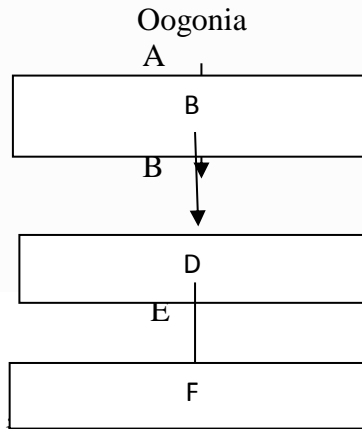
a) Did Ratan act properly by approaching the village head? Why/ Why not?

b) What biological considerations made Ratan object to his father's decision?

(1x 4=4)

SECTION E

16. (a) Write the different steps in the process of oogenesis



(b) Mention the number of cells in the following stages

Sl.No	Embryonic stages	No. of cells
1	zygote
2	morula
3	blastocyst
4	blastomere

(1x5=5)

REVISION TEST SERIES-1

BIOLOGY

Maximum Marks: 35

SET B

Time: 1 ½ hours

General Instructions:

- (i) All questions are compulsory.
- (ii) The question paper has five sections and 16 questions. All questions are compulsory.
- (iii) Section–A has 6 questions of 1 mark each; Section–B has 4 questions of 2 marks each; Section– C has 4 questions of 3 marks each; Section– D has 1 case-based questions of 4 marks each; and Section–E has 1 question of 5 marks each.
- (iv) There is no overall choice. However, internal choices have been provided in some questions. A student has to attempt only one of the alternatives in such questions.
- (v) Wherever necessary, neat and properly labelled diagrams should be drawn.

SECTION A

1. Name the assisted reproductive techniques from the following
 - a. amniocentesis
 - b. IVF
 - c. IUD
 - d. Embryo transfer
2. Which of the following are wrongly matched?

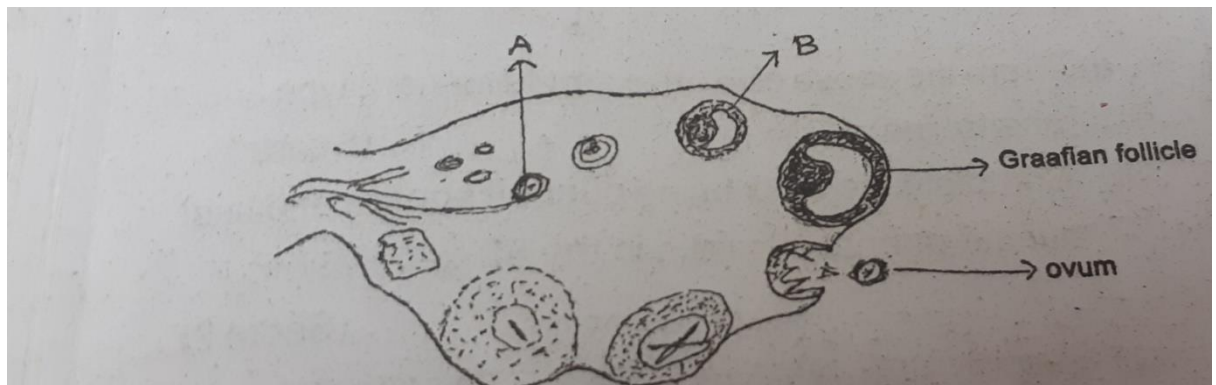
A	B
(i) Carpel	(a) megasporophyll
(ii) Ovule	(b) megasporangium
(iii) Stamen	(c) microsporophyll
(iv) pollen grain	(d) microspore
3. How many microspore mother cells would be required to produce one hundred pollen grains in a pollen sac?
 - a. 50
 - b. 100
 - c.75
 - d.25
4. Which type of cell division forms spermatids from the secondary spermatocytes?
 - a. Mitosis
 - b. Meiosis 1
 - c. Karyokinesis
 - d. Meiosis 2
5. Give the hormone involved in parturition
 - a. Relaxin
 - b. estrogen
 - c. FSH
 - d. leutising hormone
6. Assertion: Pollen grains can withstand high temperature and strong acids and alkali
Reason: The exine is a thin and continuous layer made up of cellulose and pectin
 - a) Both assertion and reason are correct
 - b) Assertion and reason both are incorrect
 - c) Assertion is incorrect but reason is correct
 - d) 4. Assertion is correct but reason is incorrect

(6x1=6)

SECTION B

7. Suggest the ART which may be successful in the following conditions
 - a) A female cannot produce ovum, but can provide suitable environment for fertilization and further development
 - b) Male partner is unable to inseminate the female or has very low sperm count

8. Observe the diagram provided



- a) Label A and B
 - b) which day of menstrual cycle graffian follicle rupture
 - c) Name the process that induces the rupture of graffian follicle
9. Draw and label the structure of pollen grain
10. A mother of one year old daughter wanted to space between her children. What is the best contraceptive method she should use? (4x2=8)

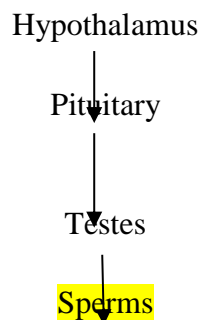
SECTION C

11. Class xii students of a school at Kottayam district on their study tour collected flowers showing the following characters.
- a)Flowers are with light pollen grains
 - b)Colourful flower
 - c)Nectar producing flowers
 - d)Flowers with feathery stigma

Arrange the characters under different pollination groups in the given table; Write the names of two flowers pollinating through water

Entomophilous flowers	Anemophilous flowers
.....
.....

12. Explain the functions of the following structures in the human male reproductive system. (a) Scrotum (b) Leydig cells (c) Male accessory glands
13. Study the following flow chart. Name the hormones involved at each stage. Explain their functions



14. How are assisted reproductive technologies helpful to humans? How are ZIFT and GIFT different from intra uterine transfers? Explain

4 x3 =12

SECTION D

15 . There are two different types of sexes, that participate in sexual reproduction. So it is natural to find it confounding as from which sex the baby inherits, that results in the sex of the child. There are several other procedures followed to determine the sex of a newborn baby. Based on the environmental signals the sex of a baby can be determined. A couple is eager to know the sex of their unborn child.

(a)What diagnostic technique will you suggest? How is it done?

(b) What social abuse is associated with the application of this technique?

OR

(b) Why there is a statutory ban on this?

(1x4=4)

SECTION E

16. Sterilization and IUDs are effective birth control measures, but lactational amenorrhea may not be so effective

a) How the sterilization procedure of males differs form that of females in preventing pregnancy?

b) Which part of the female reproductive organ is utilized for the IUD procedure? How this procedure prevents pregnancy?

c) Why the lactational amenorrhea is not so effective?

1 x 5 =5