

INTERNATIONAL INDIAN SCHOOL BURAI DAH

TERM EXAM (2019-2020)

BIOLOGY

Class XII-SET B

Max Marks 70

Time 3hrs

General Instructions:

(i) All questions are compulsory.

(ii) This question paper consists of four Sections A, B, C and D. Section A contains 5 questions of one mark each, Section B is of 7 questions of two marks each, Section C is of 12 questions of three marks each and Section D is of 3 question of five marks. Section.

(iii) There is no overall choice. However, an internal choice has been provided in all the sections. A student has to attempt only one of the alternatives in such questions.

(iv) Wherever necessary, the diagrams drawn should be neat and properly labelled.

SECTION-A

- 1- Which is better mode of reproduction sexual or asexual? Why? [1]
- 2- Name the type of flower which favors cross pollination. [1]
- 3- Name the hormones produced by placenta in a pregnant woman. [1]
- 4- Why **Saheli** is considered as a better contraceptive?

OR

Expand ZIFT and GIFT, compare the difference. [1]

- 5- What is **colostrum**?

OR

What is autoimmune disease? [1]

SECTION-B

- 6- Detection of cancer at early stages can be helpful for its complete treatment. **Explain** any two methods to detect cancer? [2]
- 7- A pollen grain has a hard outer covering called EXINE. Name the organic substance that make EXINE hard and mention its advantages to the pollen grain.

OR

Draw a neat diagram of mature pollen grain and label the following parts (a) Exine (b) Intine (c) Vegetative cell (d) Generative cell [2]

- 8- *In artificial hybridization if the female parent bears bisexual flowers Removal of anthers from the flower bud before the anther dehisces by using forceps is called emasculation. Emasculated flowers have to be covered with a bag, generally made up of butter paper.* Explain why the flowers have to be covered? What if the female parent produces unisexual flowers? [2]
- 9- Explain the role of various hormones in the process of spermatogenesis. [2]
- 10- What do you mean by point mutation? Give an example. [2]
- 11- (1) Hemophilia, (2) Sickle-cell anemia and (3) Phenylketonuria are some of the examples of Mendelian Disorders. In the above mentioned 1 to 3 disorders find out which one is a sex linked recessive disease, which one is autosome linked recessive trait. Explain any one of the above mentioned disorders.

OR

Explain female heterogamety in birds and compare it with male heterogamety.

- 12- Describe and compare the terms **Somaclone** and **Somatic hybrids**. [2]

SECTION-C

- 13- Draw a neat diagram of electrostatic precipitator and label the parts to show how dirty air is cleaned.

OR

Explain how Eutrophication destroys the pond or lake ecosystem. [3]

- 14- Compare out breeding and cross breeding and describe out crossing. [3]
- 15- What are the important points that a bee keeper should know in order to be a successful bee keeping.

OR

Explain MOET and mention how it is helpful to increase herd size. [3]

- 16- Your friend is addicted to alcohol, how will you help your friend to stop drinking alcohol. Suggest your advice to him or her.

OR

What is peer pressure how do you handle peer pressure in your real life situations? Explain with an example [3]

- 17- . Seema has blood group A, she married to Sameer, he has blood group B. They had four children, 1- Shaafi with blood group A 2- Raafi with blood group B 3- Reema with

blood group AB and 4- Ayesha with Blood group O. All four children with different blood groups. Explain with a cross to show the possibilities of different blood groups to all four children and mention the genotype of the parent blood group. [3]

- 18- In an incomplete dominance a red RR is crossed with a white rr gametes R and r in F1 generation all are pink. Show your work to find the ratio of F2 generation for the same and explain incomplete dominance. [3]
- 19- Expand IUDs and explain with two examples how they work to prevent pregnancies.
- 20- Explain Oogenesis in human female. [3]
- 21- Draw a sectional view of seminiferous tubule and label the following parts. (a) spermatogonium (b) sertoli cells (c) primary spermatocytes (c)Secondary spermatocytes (d) Spermatids (e) Spermatozoa. [3]
- 22- Draw a mature embryo sac and show the following parts with label lines - antipodals, polar nuclei, central cell, egg, synergids and filiform apparatus. [3]
- 23- Explain double fertilization and triple fusion with the help of a neat diagram. [3]
- 24- Describe the followings (a) juvenile phase (b) oestrus cycle (c) life span. [3]

SECTION-D

- 25- Compare the differences between a dicot embryo and monocot embryo with the help of diagram **OR**
Explain the role of various hormones that regulate menstrual cycle in human female with the help of a neat graph. [5]
- 26- With the help of a Punnett square, find the percentage of homozygous tall in a F2 population involving a true breeding tall and a true breeding dwarf pea plant. **OR**
With the help of a neat diagram explain the life cycle of plasmodium in human and in mosquito [5]
- 27- What is "biofortification" ? Write its importance. Mention the contribution of Indian Agricultural Research Institute towards it with the help of two examples. **OR**
Explain biological magnification of DDT with the help of a neat flow chart [5]