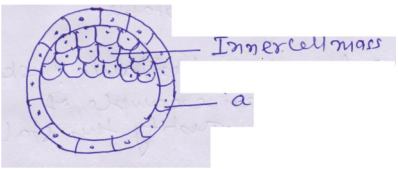
GURU GOBIND SINGH PUBLIC SCHOOL

Sector-5B, B. S. City

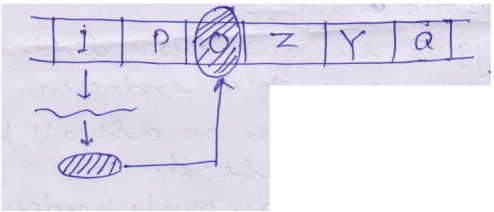
HALF YEARLY REVISION ASSIGNMENT 2018

Sub : BIOLOGY **CLASS – XII** **LEVEL – II**

1. Explain giving two reasons why pollengrains can be best preserved as fossils.
2. Study the figure given below and answer the following question that follows :



   i) Name the stage of human embryo the figure represents
   ii) Identify 'a' in the figure and mention its function.
   iii) Mention the fate of inner cell mass after implantation in uterus.
   iv) Where are the stem cells located in this history?
3. Give reasons why :-
   i) Most zygote in angiosperms divide only after certain amount of endosperm in formed.
   ii) Micropyle remains as a small pore in the seed coat of a seed.
   iii) Integuiments of an ovule harden and the water content is highly reduced, as the seed matures.
4. Why is pedigree analysis done in the study of human genetics? State the conclusions that can be drawn from it.
5. a) A pea plant bearing axial flower is crossed with a pea bearing terminal flowers. The cross is carried out to find the genotype of the pea plant bearing axial flowers. Workout the cross to show the conclusions you arrive at.
   b) State the Mendel's law of inheritance that is universally acceptable.
6. What is polygenic inheritance? Skin colour in human is an example of polygenic inheritance. Justify this statement.
7. How has the use of Agrobacterium as vectors helped in controlling Meloidegyneincognitia infestation in tobacco plants? Explain in correct sequences.
8. i) Name the molecule 'M' that binds with the operators.



   ii) Mention the consequences of such binding.
   iii) What will prevent the binding of the molecule 'M' with the operator gene? Mention even that follows.
9. Forensic department was given three blood samples. Write the steps of the procedure carried to get the DNA finger printing done for the above sample.
10. Describe the Miller experiment, along with the product obtained. What is the significance of this experiment.

11. a) Why is an antibody represented as L2H2?
    b) Name the types of cell the AIDS virus first enters into after getting inside human body. Explain the sequence of events that virus undergoes within these cells to increase their progeny.
12. Trace the life cycle of material parasite in the human body.
13. i) Mention the property that enables the explant to regenerate into a new plant.
    ii) Large scale cultivation of spirulina is highly advantageous for human population, Explain giving two reasons.
14. Mention the product produced and its use by each of the microbes listed below : a) Streeptococus b) Lactobicillus, c) Monascuspurpureus
15. i) Describe the different steps in one complete cycle of PCR.
    ii) State the purpose of such an amplified DNA sequence.
16. How is Bt cotton plant created as a GM Plant? How is it protected against bollworm infestation?
17. Explain the role of ovarian hormones in inducing changes in the uterus during menstrual cycle. What triggers release of oxytocin at the time of parturition?
18. a) Draw a diagram of a fertilized embryosac of a dicot flower. Label all its cellular components.
    b) Explain the development of mature embryo from this embryosac.
19. Let 'Y' be the genotypic symbol for dominant yellow seed colour, symbol 'y' for recessive green seed colour, symbol 'R' for dominant round shape of seed and symbol 'r' for reassine wrinkled seed shape in garden pea. Using these symbols explain the Mendel's law of independent assortment.
20. A. Who performed 'Blender' experiment with respect to DNA? What was the objective of this experiment? Explain the procedure in detail.
    B. i) Who explained the 'transforming principle' in an organism? How did the scientist perform the experiment to explain this principle?
       ii) How was the biochemical nature of the transforming material determined? Explain.
    C. Morgan carried out several crosses in Drosophila and found F_2 ratio deviated very significantly from the expected Mendelian ratio. Explain his finding with the help of an example.