

**B.B.S SMRITI VIDYAPEETH, AURAIYA**

(An English Medium Co-Educational Sr. Sec.(10+2) affiliated to CBSE New Delhi)

**WEEKLY ASSIGNMENT SERIES**

Sub-Biology

Class- XII

Ques.1- Superior recombinant are self pollinated for several generations. State one reason why is it done.

Ques.2- Manya died due to complication in pregnancy in a hospital where MTP was not legalized. Do you think the hospital's decision was correct?

Ques.3- Justify the term ' test tube bay' Why is it sometimes considered a misnomer?

Ques.4- A homozygous tall plant when crossed with homozygous dwarf plant produces F<sub>1</sub>- generation which are heterozygous tall plant. On self- Fertilisation of F<sub>1</sub>- Generation, the recessive dwarf trait reappears. which law of inheritance is verified by the given monohybrid cross?

Ques.5- The presence of more than one embryo in a seed is termed polyembryony. in plants (any three points )

Ques.6- In human beings blue eye colour is recessive to brown eye colour. A brown eyed man has a blue eyed mother.

1. What is the genotype of man and his mother?
2. What are possible genotypes of his father?
3. If this man marries a blue eyed woman, what are the possible genotypes of his offspring?

Ques.6- Haemoglobin molecule consist of four polypeptide chains, i.e. two  $\alpha$ - globins and two  $\beta$ globins.

Research shows that sickle- cell anaemia results from a fault in just one base in the  $\beta$ - globin chain. The base sequence of first seven codons of this gene are.

Ques.7- (a) The Hershey and chase conducted experiment on bacteriophage gives the proof of which genetic principle?

(b) With the help of diagram explain the procedure of their experiment.

Ques.8- What do you understand by the term monosomic condition?

Ques.9- Geeta's husband wanted to know the sex of his unborn child, but the doctor refused to his request. Justify the doctor's decision.

Ques.10- How do hormonal pills work as contraceptives

Ques.11- A couple is failing to achieve pregnancy, as the man has blockage in the ducts between his testes and penis and therefore no sperm is present in his ejaculate. can you suggest an assisted reproductive technology to the couple?

Ques.12- A male individual has long legs, azospermia, sparse body hair, enlarged breasts and increased urinary excretion of gonadotropin identify the disease/ condition.

Ques.13- A certain composition of nutrient medium is required for successful plant tissue culture technique. state the composition of the nutrient media used.

Ques.14- Draw a well- labeled diagram of transverse section of a younger anther.

Ques.15- Differentiate between endosperm and perisperm, give one example of each.

Ques.16- State Hardy- Weinberg principle of genetic equilibrium. knowing that genetic drift disturbs this equilibrium mention what does this disturbance in genetic equilibrium lead to?

Ques.17- When a cattle with red coat is crossed with a cattle having coat, F1 Produces roan appearance. on selfing of F1- generation all types of progenies are produced, i.e red, white and roan.

- (i) State and explain the phenomenon.
- (ii) How is it different from incomplete dominance?

Ques.18- Spermatogenesis in human males is a hormone regulated process. Justify.

Ques.19- (i) Draw a labeled diagram of a human male sperm.

- (ii) State the function of acrosome.
- (iii) How many sperms are formed from one spermiation?

Ques.20- What is microsporogenesis? where does it occur in angiosperms? what is its significance?