



ST. LAWRENCE HIGH SCHOOL



A JESUIT CHRISTIAN MINORITY INSTITUTION

WORK SHEET – 18

Class: XII

Sub: Biological Science

Date: 20.06.2020

Topic: Chapter 5 (part 7) Sex linked Inheritance in *Drosophila*

F.M. : 15

Choose the correct option:

(1x15=15)

1. The scientist who discovered the phenomenon of sex linkage :-
a) C B Bridges b) Thomas H Morgan c) H Sturtevant d) None of these
2. T.H. Morgan conducted experiments on :-
a) *Drosophila* b) Honey bee c) Pea plant d) All of these
3. Morgan had selected fruit flies for cytogenetics studies because :-
a) They bred within two weeks b) Economical to grow as they could breed on fruits c) Female easily distinguishable from male d) All of these
4. The fruit flies have _____ pairs of chromosomes.
a) 8 b) 6 c) 4 d) 2
5. The mutant variety which was obtained by Morgan had :-
a) White eyes b) Red eyes c) Black eyes d) No eyes
6. The first cross made between white eyed male and red eyed female resulted in _____ in F_1 generation.
a) White eyed offsprings b) All red eyed offsprings c) 50 % red eyed and 50% white offsprings d) All of these
7. For F_2 generation he had crossed heterozygous red eyed female of (F_1 generation) and a white eyed Male. He obtained the following eyed Male. He obtained the following progeny in F_2 :-
a) All red eyed female and 25% red eyed male and 25 % white eyed male b) All white eyed female and red eyed males c) All white males and no females d) All of these
8. In the reciprocal cross the parents were :-
a) Red eyed female and white eyed male b) White eyed female and red eyed male c) Both male and female were red eyed d) None of these
9. In F_1 generation of reciprocal cross the following progeny was obtained :-
a) Females were red eyed and males were white eyed b) All were white eyed c) Both sexes were red eyed d) Males were red eyed and females were white

10. In the reciprocal cross of Morgan the following progeny was obtained in F_2 generation.
- a) All red eyed b) All white eyed c) 50% were red eyed and 50% progeny was white eyed
 - d) Females had red eyes and male had white
11. Sex linked genes in *Drosophila* was found on :-
- a) Autosomes b) X-Chromosomes c) Y-chromosomes d) Both X and Y Chromosome
12. X-linked genes in *Drosophila* were transferred from :-
- a) Mother to son b) Father to son c) Mother to both son and daughter d) All of these
13. The phenomenon where a male transmits its genes to grandsons (F_2 males) through F_1 females is called :-
- a) Criss-cross inheritance b) Sex linkage c) Epistasis d) Polygenic Inheritance
14. The gene for eye colour in *Drosophila* was located on :-
- a) Y-Chromosome b) X-chromosome c) Chromosome 4 d) Chromosome 3
15. A male offsprings receives _____ from mother and _____ from father respectively.
- a) X-chromosome and Y-Chromosome b) Y-Chromosome and X-chromosome c) 2 X chromosome and no chromosome d) No chromosome and both X and Y

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