



ST. LAWRENCE HIGH SCHOOL

A JESUIT CHRISTIAN MINORITY INSTITUTION

WORK SHEET – 22

Sub: Biological Science Date: 2

Date: 25.06.2020

Topic: Chapter 5 (part 11) Mutation and Mendelian disorders F.M. : 15

Choose the correct option:

Class: XII

(1x15=15)

- Mendelian disorders occur due to the mutation of : a) Entire Chromosome b)Genome c) Single gene d) All of these
- 2. The genetic disorder where coagulation of blood takes longer time than the normal blood clotting time :
 - a) Red green colour blindness b) Haemophilia c) Sickle cell anaemia d) Haemolytic anaemia
- Example of X-linked disease : a)Haemophilia b) Sickle cell anaemia c) Phenylketonuria d) Both (a) and (b)
- Phenylketonuria is an example of :a) X-linked dominant disorder b) X-linked recessive disorder c) Autosomal recessive trait
 d) Autosomal dominant trait
- Phenylketonuria results in an abnormal increase in the levels of : a) Phenylalanine b) Phenol c) Phenyl group d) All of these
- 6. In phenylketonuria the ______ is formed which damages brain.a) Phenylalanine b) Phenylpyruvic acid c) Phenol d) None of these
- Haemophilia occurs in males occur with single gene while in females it has to be present in _____ condition.

a) Homozygous recessive b) Heterozygous c) Hemizygous d) None of these

- Heterozygous condition of haemophilic gene in females make them : a) Affected individual b) Inaffected individual c) Carrier d) Inaffected and carrier
- 9. If a cross is made between a carrier female for haemophilia and a normal male. How much percent of male children would be haemophilic?
 a) 100% b) 50% c) 0% d) None of these
- 10. If a cross is made is between a a haemophilic female and a normal. What percentage of male children would be haemophilic?
 - a) 100% b) 50% c) 0% d) 75%
- 11. In sickle cell anaemia amino acid glutamic acid is substituted with the following amino acid :-a) Alanine b) Methionine c) Valine d) Phenylalanine

- 12. Sickle cell anaemia disease is manifested in _____ condition.
 a) Homozygous for Hb^s b) Homozygous for Hb c) Heterozygous d) None of these
- 13. Sickle cell anaemia trait is manifested in _____ condition.a) Homozygous b) Heterozygous c) Hemizygous d)All of these
- 14. Sickle cell anaemia is common in the parts of worlds where the following disease is prevalent :a) Malaria b) Dengue c) Sleeping d) Filaria
- 15. The sickle cell anaemia gene (Hb^s) is said to be a ______ gene as it is sufficient enough to kill the bearer :-

a) Dominant b)Lethal c) Recessive d) Co-dominant

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