Indian Association for the Cultivation of Science

(Deemed to be University under *de novo* Category)

Integrated Bachelor's-Master's Program

Mid-Semester (Sem-II) Examination-Spring 2021

Subject: Biochemistry Genetics and evolution ***Subject Code(s): BIS1201***

Full Marks: 25 ***Time Allotted: 2 h***

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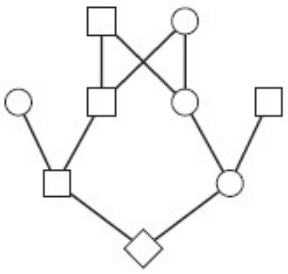
1. Convert 3X2=6
   a. Tetrose to hexose
   b. Hexose to pentose
   c. Aldose to ketose
2. Explain how carbohydrates transport through enterocytes 3
3. Mention the regulatory steps of glycolysis 3
4. It has been found that in spite of normal synthesis of insulin a person is hypoglycemic in nature what could be the reason 2
5. What is the differences between lactocamia and galactocamia 2
6. Give an experimental evidence which supports the presence of both cyclic and acyclic form of glucose. 2
7. A population has eight times as many heterozygotes as homozygous recessives. What is the frequency of the recessive allele? 2
8. Find the in breeding co-efficient of the following 2



9. Color blindness in humans is an sex linked trait. Approximately 10% of the **men** in a particular population are color blind. If mating is random for the color-blind locus, what is the frequency of the **color-blind allele** in this population? What percentage of the women in this population is expected to be color blind? 3