

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -1 EXAMINATION- FEB-2023

COURSE CODE: 18B1WBT831 (03 credits)

MAX. MARKS: 15

COURSE NAME: Genetic Counselling

COURSE INSTRUCTOR: Prof. Sudhir Kumar

MAX. TIME: 1 Hour

*Note: All questions are compulsory. Marks are indicated against each question in square brackets.*

Q1: a) How does a genetic counsellor identify the autosomal dominant pattern of inheritance? Explain with the help of an example.

b) Why do genetic counsellors prefer Non-Directive approach of counselling? CO-I [2+1]

Q2: a) Testing before the onset of symptoms of incurable genetic disorder is a life-changing event. Comment upon the statement with the help of an example.

b) How do you compare "Genetic Counselling" to "Eugenics". CO-I [2+1]

Q3: a) A person of 23 years of age visited you. You are a genetic counsellor. His parental grandfather was suffering from Huntington disease (HD). His parents are normal. What are his chances to have HD? Support your answer with logical reasoning.

b) Why do ageing mothers have more chances to give birth to children suffering with Down's Syndrome? CO-I [2+1]

Q4: a) What is the probability in a family of 04 children that 02 will be transgender? Support your answer with suitable reasons.

b) A couple (both heterozygous) is suffering from autosomal dominant disorder have 03 children, what is the probability that 01 will be normal? CO-II [2+1]

Q5: a) What is the meaning of 47, XXY? Explain.

b) What are the number of Barr bodies in 47, XXX and 45, X? If the number varies among these, give the reason for the same. CO-II [2+1]