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END SEMESTER EXAMINATION-2015

BTech VIII Semester, BT/BI

COURSE CODE: 11B1WBT838

MAX. MARKS: 45

COURSE NAME: Genetic Counseling

COURSE CREDITS: 03

MAX. TIME: 3 HRS

Note: All questions are compulsory.

Section A

(1 × 9 = 9 marks)

1. What is founder effect?
2. Name various vectors under study as gene delivery vehicles.
3. Define nullisomic.
4. What are positive symptoms of Schizophrenia? Give examples.
5. How non-disjunction of chromosomes leads to aneuploidy?
6. Define tetrasomic.
7. What is mosaic Patau.
8. Name genes that lead to autosomal recessive dilated cardiomyopathy.
9. Which protein is involved in Huntington's disease and what is its role in HD?

Section B (13.5 marks)

1. Identify a disorder caused due to excess copies of CAG codon. What effects do these repeats have on severity of disease? Discuss its symptoms and diagnosis. (5)
2. Name an autosomal dominant disease where mutation of a gene leads to formation of white glow in the eye. What are causes, symptoms and diagnosis of this disease? (5)
3. How would you apply suicide gene therapy for targeted killing of tumor cells? (3.5)

Section C (22.5 marks)

1. What are various causes of Schizophrenia? How it was shown that genetic factors play role in this disorder? (6)
2. What are various gene therapy strategies that could be utilized for treatment of cancer? (5)
3. Write a note on etiology of cancer. (3.5)
4. Discuss beneficiaries and elements of genetic counseling. (5)
5. Write a note on Quad screen test. (3)