



BRAINWARE UNIVERSITY

Term End Examination 2022

Programme – B.Sc.(BT)-Hons-2018/B.Sc.(BT)-Hons-2019/B.Sc.(BT)-Hons-2020/B.Sc.
(BT)-Hons-2021

Course Name – Genetics

Course Code - BBTH010402/BBTC102
(Semester I)

Full Marks : 60

Time : 2:30 Hours

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

Group-A

(Multiple Choice Type Question)

1 x 15=15

1. Choose the correct alternative from the following :

- (i) Bottle neck phenomenon is associated with
- | | |
|------------------|----------------------|
| a) Migration | b) Recombination |
| c) Genetic Drift | d) Natural selection |
- (ii) Which of the following is not an example of model organism?
- | | |
|----------------|---------------------------|
| a) Arabidopsis | b) Coenorabdhitis elegans |
| c) Ficus | d) Mouse |
- (iii) Splicing mechanism is absent in which of the following organism
- | | |
|-----------|----------|
| a) E.coli | b) Cow |
| c) Mango | d) Ficus |
- (iv) Monosomy is an example of
- | | |
|---------------|---------------|
| a) Euploidy | b) Polyploidy |
| c) Aneuploidy | d) None |
- (v) Normally the DNA pairing has A-T and GC pairing, however these bases can exit in alternative states owing to rearrangement called as
- | | |
|-----------------------|------------------------|
| a) point mutation | b) frameshift mutation |
| c) analogous mutation | d) tautomerisation |
- (vi) In a mutational event, the replacement adenine with guanine is known as
- | | |
|-----------------|------------------------|
| a) transition | b) transcription |
| c) transversion | d) frameshift mutation |
- (vii) A base substitution that causes regular codon to change into another codon that codes for different amino acid is said to be
- | | |
|----------------------|--------------------|
| a) nonsense mutation | b) silent mutation |
| c) missense mutation | d) Point mutation |
- (viii) The number of copies in highly repetitive DNA is
- | | |
|---------------|----------------|
| a) 100-1000 | b) 1-10 lakh |
| c) 20-50 lakh | d) 10000-20000 |
- (ix) Which of the following formulas lets you predict the genotypic frequency of the next

OR

Red- green color blindness in humans is due to an X-linked recessive gene. A woman (5) whose father is color blind possesses one eye with normal vision and other eye with color blindness. Propose an explanation for this womans vision pattern and would it be possible for a man to have one eye with normal color vision and one eye with color blindness?
