

WORKSHEET – 29

Class: XII Sub: Biological Science Date: 08.07.2020

Topic: Chapter 7 (Part 7) Mechanism of Evolution – Hardy Weinberg's principle of Equilibrium

Choose the correct option:

- According to the modern synthetic theory of Evolution, what is the unit of Evolution?
 a) Single individual b)Population c) Community d) Biome
- 2. A Mendelian population has the following characteristic :-a) Similar genetic constitution b) Random Mating c) No preferential mating d) All of these
- 3. In population genetics gene pool represents the sum total of all the genes present in a /an :-a) Individual b) Two mating individual c) Mendelian population d) All of these
- 4. Random mating in a Mendelian population results in :-a)Genetic drift b) Free gene flow c) More variations d) Both (b) and (c)
- 5. Hardy and Weinberg proposed the principle of Equilibrium in the year :
 - a) 1908 b) 1901 c) 1933 d) 1809
- 6. The proportion of an allele in relation to the total number of alleles of a gene present in a panmictic population is called :
 - a) Gene frequency b) Allele frequency c) Genotype frequency d) Both (a) and (b)
- 7. According to Hardy Weinberg's principle if no evolutionary forces operate on a population then the following remains constant :
 - a) Gene frequency b) Genome c) Genotype frequency d) Both gene frequency and genotype frequency
- 8. The equation for Hardy Weinberg can be mathematically written as (p and q are alleles of one another):
 - a) p-q=1 b) $p^2+2pq+q^2 = 1$ c) pxq=1 d) p/q=1
- 9. The proportion of one type of genotype of a particular locus with respect to the total number of individual is :
 - a) Genotype frequency b) Genotype occurrence c) Genotype count d) All of these
- 10. Variation in a panmictic population can be due to :
 - a) Point mutation b) Chromosomal aberrations c) Genomic mutation d) All of these
- 11. The process of immigration in a population under study results in :
 - a) Inflow of genes b) Exit of gene flow c) Genetic drift d) None of these



(1x15=15)

F.M.: 15

- 12. The moving out of individuals from one population is called :-a) Immigration b) Emigration c) Divergence d) Convergence
- 13. The mechanisms which reduce the chances of interbreeding in a population of species:
 - a) Isolation b) Adaptation c) Immigration d) All of these
- 14. Isolation can be in the form of :
 - a) Reproductive b) Geographical c) Ethological d) All of these
- 15. Hardy-Weinberg's principle operates only on _____ type of population.
 - a) Small b) Large and randomly mating c) Large with preferential mating d) Small and randomly mating

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