

D.K.M. COLLEGE FOR WOMEN (AUTONOMOUS), VELLORE-1

DEPARTMENT OF ZOOLOGY

EVOLUTION (15CZO6C)

SECTION - A (UNIT -I)

1. Homologous Organs/Homology.
2. Phylogenetic Homology.
3. Sexual Homology.
4. Serial Homology.
5. Analogy /Analogous Organs.
6. Adaptive radiation/Divergent Evolution.
7. Adaptive convergence/Convergent evolution/Parallel Evolution.
8. Vestigial Organs.
9. Atavism.
10. Family Atavism.
11. Race Atavism.
12. Atavism of Teratology.
13. Recapitulation theory/Biogenetic law.
14. Retrogressive metamorphosis.
15. Neoteny/Paedogenesis.

SECTION- B

1. Give an account on Homologous Organs/ Homology.
2. Write short notes on Analogous Organs/ Analogy.
3. Give an account on Adaptive radiation/Divergent Evolution.
4. Write short notes on Adaptive convergence/Convergent evolution/Parallel Evolution.
5. Give an account on Vestigial Organs.
6. Write short notes on Atavism.
7. Write short notes on Recapitulation theory/Biogenetic law.

SECTION -C

1. Discuss the morphological and anatomical evidences in favour of organic evolution.
2. Describe the Embryological evidences of organic evolution.
3. Write an essay on Physiological and Biochemical evidences in support of theory of evolution.

SECTION- A (UNIT- II)

1. Inheritance of Acquired characters.
2. Use and disuse theory.
3. Origin of Species.
4. Natural Selection.
5. Struggle for Existence.
6. Intraspecific struggle.
7. Interspecific struggle.
8. Environmental struggle.
9. Variation.
10. Heritable Variation.
11. Survival of the fittest.
12. Mutation.
13. Reverse Mutation.
14. Mutagens/Mutagen Agents.
15. Deletion.
16. Duplication.
17. Translocation.
18. Inversion.
19. Hybridization.
20. Genetic Drift.
21. Somatic Mutation.
22. Germinal Mutation.
23. Dominant Mutation.
24. Recessive Mutation.
25. Gene Mutation.
26. Chromosomal Mutation.

27. Beneficial Mutation.
28. Lethal Mutation.
29. Spontaneous Mutation.
30. Induced Mutation.

SECTION -B

1. Give an account on Lamarck's theory of organic evolution.
2. Write an essay on Neo-Lamarckism.
3. Write notes on Genetic Drift.
4. Give an account on Natural Selection.
5. Explain Devries concept of Mutation .
6. Describe Modern Concept of Gene Mutation.

SECTION -C

1. Give a detailed account on Lamarckism and Neo-Lamarckism.
2. Describe in detail about the Darwin's theory of Natural Selection and Origin of Species.
3. Write an essay on Neo-Darwinism.

SECTION -A (UNIT- III)

1. Descent with modification.
2. Stabilizing selection/ normalizing selection.
3. Directional selection/ progressive selection.
4. Disruptive selection/ diversifying selection.
5. Cyclic selection.
6. Variation.
7. Morphological Variation.
8. Physiological Variation.
9. Psychological Variation.
10. Ecological Variation.
11. Meristic Variation.
12. Substantive Variation.
13. Continuous Variation.

14. Discontinuous Variation.
15. Determinate Variation.
16. Indeterminate Variation.
17. Somatic Variation / Somatogenic Variation.
18. Germinal Variation / Blastogenic Variation.
19. Polymorphic Variation.
20. Geographic Variation.
21. Cryptic Variation.

SECTION - B

1. Describe about stabilizing selection/ normalizing selection.
2. Describe about directional selection/ progressive selection.
3. Describe about disruptive selection/ diversifying selection.
4. Write notes on Founder's principle.

SECTION - C

1. Write an essay on types of natural selection.
2. Give a detailed account on different kinds of variation.

SECTION -A (UNIT IV)

1. Mimicry.
2. Protective mimicry.
3. Aggressive mimicry.
4. Conscious mimicry.
5. Warning mimicry.
6. Concealing mimicry.
7. Alluring mimicry.
8. Batesian mimicry.
9. Mullerian mimicry.
10. Mimic/ mimetic.
11. Model.
12. Geographical distribution.
13. Holobiotic distribution.
14. Limnobiatic distribution.

15. Continuous distribution / cosmopolitan distribution.
16. Discontinuous distribution.
17. Geobiotic distribution.
18. Bipolar distribution.
19. Living fossil.

SECTION - B

1. Write notes on Batesian mimicry and evolution of mimicry.
2. Write notes on Mullerian mimicry and evolution of mimicry.
3. Differentiate between Batesian mimicry and Mullerian mimicry.
4. Give an account on factors affecting distribution of animals.
5. Give an account on the living fossil- Peripatus.
6. Give an account on the living fossil- Sphenodon.

SECTION - C

1. Explain in detail about the distribution of Animals.
2. Give a detailed account on the living fossils- Peripatus and Sphenodon.

SECTION- A (UNIT -V)

1. Isolation.
2. Geographic Isolation.
3. Climatic Isolation.
4. Seasonal Isolation/temporal Isolation.
5. Habitat Isolation /Ecological Isolation.
6. Ethological Isolation/psychological Isolation/ behavioral Isolation.
7. Mechanical Isolation.
8. Physiological Isolation.
9. Hybrid inviability.
10. Hybrid sterility.
11. Speciation.
12. Phyletic Speciation.
13. Quantum Speciation.
14. Gradual Speciation.

15. Allopatric Speciation.
16. Sympatric Speciation.
17. Parapatric Speciation.
18. Australopithecus.
19. Homo habilis.
20. Homo erectus.
21. Homo sapiens.
22. Neanderthal man.
23. Solo man.
24. Rhodesian man.
25. Cro-magnon man.
26. Java man.
27. Peeking man.
28. Propliopithecus.
29. Limnopithecus.
30. Proconsul.
31. Dryopithecus.
32. Oreopithecus.
33. Ramapithecus.

SECTION -B

1. Describe the post mating isolating mechanism.
2. Write a note on Allopatric Speciation.
3. Write a note on Sympatric Speciation.
4. Write a note on Parapatric Speciation.
5. Give an account on cultural evolution of man.
6. Write a short notes on homo erectus.
7. Write a short notes on homo sapiens.

SECTION -C

1. Describe in detail about the biological evolution of man.
2. Explain about the premating isolating mechanisms.
3. Describe about the types and pattern of speciation.