

## EXERCISE # 1

### A. Multiple Choice Type Questions

- Q.1** Mendel worked on -  
(A) *Pisum* (B) *Solanum*  
(C) *Lathyrus* (D) *Dolichos*
- Q.2** Father of genetics is -  
(A) Morgan (B) Mendel  
(C) Darwin (D) Hutchinson
- Q.3** A gamete contains -  
(A) Two alleles of a gene  
(B) One allele of a gene  
(C) All alleles of a gene  
(D) None of the above
- Q.4** A breeding experiment dealing with a single trait is called -  
(A) Dihybrid (B) Monohybrid  
(C) Monozygous (D) Heterozygous
- Q.5** Mendel noted as many pairs of contrasting traits in pea plants -  
(A) 2 (B) 5 (C) 7 (D) 9
- Q.6** Which one is not a vestigial organ in man ?  
(A) Vermiform appendix  
(B) Epiglottis  
(C) Muscles of ear pinna  
(D) Nictitating membrane
- Q.7** The wings of bat, locust and pigeon are the example of -  
(A) Homologous organs  
(B) Analogous organs  
(C) Vestigial organs  
(D) Exoskeleton
- Q.8** Homologous structures are -  
(A) Dissimilar in origin, similar in function  
(B) Dissimilar in origin and function both  
(C) Similar in origin and similar in function  
(D) Similar in origin and dissimilar in function
- Q.9** Palaeontology is study of -  
(A) Fossils (B) Bones  
(C) Birds (D) Embryo
- Q.10** 'Descent with modification' is the central theme of -  
(A) Recapitulation (B) Genetics  
(C) Evolution (D) Biogenesis
- Q.11** The book "Origin of Species by Natural Selection" was written by -  
(A) Oparin  
(B) Wallace  
(C) Darwin  
(D) Darwin and Wallace
- Q.12** Sudden inheritable change is called -  
(A) Recombination (B) Mutation  
(C) Natural selection (D) Segregation
- Q.13** The ultimate source of variation is -  
(A) Natural selection  
(B) Mutation  
(C) Sexual reproduction  
(D) None of these
- Q.14** Inheritance of acquired characters was proposed by -  
(A) Darwin (B) Lamarck  
(C) Wallace (D) Oparin
- Q.15** Vestigial organs are -  
(A) Primitive organs  
(B) Preimordial organs  
(C) Organs reduced due to disuse  
(D) Organs marked only in embryonic stage

## EXERCISE # 2

### A. Very Short Answer Type Questions

- Q.1** Define inherited traits.
- Q.2** Give two examples of inherited traits.
- Q.3** Who is known as father of genetics ?
- Q.4** Name the plant on which Mendel performed his experiments.
- Q.5** How many characters did Mendel study ?
- Q.6** Which is dominant-Round or wrinkled seed shape ?
- Q.7** Define monohybrid cross.
- Q.8** Define dihybrid cross.
- Q.9** What is the literal meaning of the word 'evolution.'
- Q.10** What is organic evolution?
- Q.11** Mention two main causes of variation during reproduction.
- Q.12** Define genetic drift..
- Q.13** What are acquired characters ?

### B. Short Answer Type Questions

- Q.14** Distinguish between homologous and analogous organs.
- Q.15** Explain the process of fossil formation.
- Q.16** What are inherited traits ? Give three examples.
- Q.17** Mention any three pairs of contrasting characters on which Mendel performed his experiments.
- Q.18** Explain in brief the procedure adopted by Mendel during his experimentation.

- Q.19** How is sex of the child determined in human beings ?

- Q.20** Explain how do the traits get expressed ?

- Q.21** Give two examples to explain that inheritance of acquired characters does not take place.

### C. Long Answer Type Questions

- Q.22** Explain the role of natural selection and genetic drift in speciation.
- Q.23** Write a short note on fossils—an evidence for tracing evolutionary relationships.
- Q.24** Explain the dihybrid cross as performed by Mendel.
- Q.25** Explain the interpretations drawn by Mendel after his experiments on pea plant.
- Q.26** What are sex chromosomes ? Explain the process of sex determination in human beings.