MSD CLASSES

TEST BIOLOGY CLASS : 10TH

Test Topic : Heredity & Revolution

Olympiad Test-5

Q.1 Darwin's theory of Natural Selection is objected because

a) It stresses upon slow and small variations.
b) It explains the adaptation of certain inherited characters.
c) It stresses on interspecific competition
d) It explains that natural calamities take a heavy annual toll of lives.
e) None of these

Q.2 Speciation is the formation of one or more new species form an existing species. A new species of organism is fored when _____

a) A series of mutation occur so that an organism becomes different from others in population, but it still shows successful interbreeding.
b) Climate changes drastically lading to structural changes in the given population.
c) A group of organisms isolated from the rest of the species by geographical barrier.
d) None of these

Q.3 When parents P_1 and P_2 were crossed, F_2 progeny was produced with three fourth similar features in phenotype of P_2 and F_1 and one fourth possessed contrasting traits. If the traits 'T' for tall and't' for short. What will be the possible genotype of P_1 and one fourth of F_2?

a) tt and Tt
b) Tt and tt
c) Tt and Tt
d) tt and tt

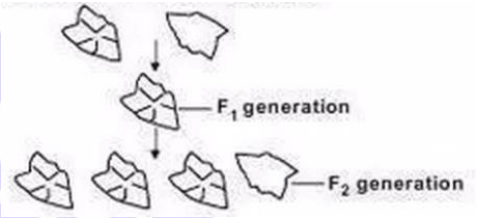
Q.4 Which of the following conclusions can be drawn from the given figure?

a) It is composed of DNA and lipids
b) It is composed of DNA and proteins
c) It is composed of DNA only
d) It is composed of RNA and proteins

Q.5 Which of the following conclusions can be drawn from the given figure?

a) It shows Medlel's monohybrid cross
b) The ratio of violet and white flowers is 3:1
c) Violet flowers are dominant
d) All of these

Q.6 Preserved traces of living organisms are called fossils. What type of fossil is shown in the figure?



a) Fossil of a tree trunk
b) Fossil of Trilobite
c) Fossil of Ammonite
d) Fossil of knightia

Q.7 Which of Mendel's laws states that when tow homozygous individuals with one or more sets of contrasting characteristics are crossed, the characteristics which appear in F_2 hybrids are dominant and those which do not are recessive?

a) Law of segregation
b) Law of dominance
c) Law of independent assortment
d) None of these

Q.8 Given below are four statements (a-d) each with one or two blanks. Select the option which correctly fills up the blanks in any two of these statements.

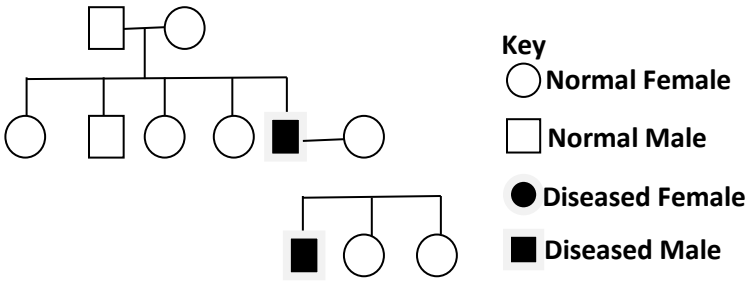
a) Wings of butterfly and birds look alike and are the results of (i) evolution.
b) Vermiform appendix is a (i) organ and an (ii) evidence of evolution.
c) Archaeopteryx shows (i) link between two different groups of organisation.
d) According to Darwin evolution took place due to (i) and (ii) of the fittest.

(A) (d) – (i) mutations, (ii) survival
(a) – (i) convergent
(B) (a) – (i) divergent
(b) – (i) sedimentary, (ii) anatomical

(C) (d) – (i) vestigial, (ii) anatomical
(a) – (i) missing

(D) (d) – (i) connecting
(a) – (i) small variations (ii) multiplication

Q.9 Study the given pedigree chart. The disease is caused by a recessive allete t and T is the dominant allele for normal condition.



Work out the genotypes of individual from the given pedigree chart and select the correct option.

	I-2	II-1	III-2
(A)	Tt	tt	Tt
(B)	TT	tt	Tt
(C)	Tt	tt	TT
(D)	tt	Tt	Tt

Q.10 The given figures depict the internal arrangement of bone structures in the limbs of different organisms. Which of the following statements is the most valid inference that can be drawn from a careful analysis of the figures?

a) Bones of limbs of all the organisms have similar basis plan, therefore they may have common ancestor.

b) Bones of limbs of all the organisms have the same basic structure but different shapes, therefore it is controlled only by the environmental factors.

c) Bones of limbs of all the organisms do not have similar bone structure, therefore they may have evolved differently.

The evolutionary increases in the number of digits (fingers) exemplify the use & disuse of organs.