



An Eye on Talent

Olympiad Aptitude Test

Biology

Class XII

1. Who is known as “Father of Genetics”?
(A) Theophrastus
(B) Stephen Hales
(C) Mendel
(D) Aristotle
2. Organisms produced by asexual reproduction are called
(A) clones
(B) offsprings
(C) factors
(D) both (A) and (B)
3. Dominant allele means
(A) an allele whose effect is masked by another allele.
(B) an allele that prevents the expression of the other allele.
(C) an allele without any effect.
(D) an allele which cannot express in presence of other.
4. F₁ generation means
(A) first flowering generation
(B) first fertile generation
(C) first filial generation
(D) first seed generation
5. To eliminate chance factor, Mendel performed
(A) monohybrid cross
(B) dihybrid cross
(C) reciprocal cross
(D) trihybrid cross
6. How many types of gametes will be produced by an individual having genotype AaBbcc?
(A) four (B) three
(C) two (D) one

7. A tall plant was grown in nutrient deficient soil and remained dwarf. When it is crossed with dwarf plant then
- (A) all hybrid plants are dwarf
 - (B) all hybrid plants are tall
 - (C) 50% tall and 50% dwarf
 - (D) 75% tall and 25% dwarf
8. Klinefelter syndrome has the genetic make up
- (a) 44 autosomes + xxy
 - (b) 44 autosomes + xo
 - (c) 45 autosomes + xx
 - (d) 45 autosomes + xy
9. "Cleistogamous flowers are invariably autogamous because"
- (a) These flowers do not open at all.
 - (b) There is no chance of cross – pollen landing on the stigma.
 - (c) These flowers have exposed anthers and stigma.
 - (d) These flowers are wind pollinated.
10. Which of the following statements is correct
- (a) Surgical methods of contraception does not prevent gamete formation
 - (b) In E.T techniques, embryos are always transferred into the uterus
 - (c) Oral pills are very popular contraceptives among the rural women
 - (d) All STDs are not completely curable.
11. Non-coding sequences present within a gene is called:
- (a) Exon
 - (b) Operon
 - (c) Promoter
 - (d) Intron
12. Which of the following DNA sequences would a Restriction enzyme recognize and cut?
- (a) ATGCAC
TACGTG
 - (b) GATATC
CTATAG
 - (c) TAGATA
ATCTAT
 - (d) AATATA
TTATAT
13. The conditions of the earth atmosphere conducive for the origin of life were:
- (a) Presence of high temperature, CH₄, NH₃, and O₃
 - (b) High temperature, CH₄, NH₃, volcanic eruption
 - (c) High temperature, volcanic eruption, O₂, NH₃
 - (d) Volcanic eruption, CH₃, NH₃ and O₂

14. To analyse the genotype of an organism, it is made to
- (a) Self cross
 - (b) Cross with recessive parent
 - (c) Cross with dominant parent
 - (d) Cross with another species
15. An inverted Pyramid of biomass is represented by
- (a) Aquatic ecosystem
 - (b) ecosystem of a big tree
 - (c) grassland ecosystem
 - (d) tropical fresh ecosystem.
16. Gene therapy can be used to correct one of the following
- (a) Defective ADA
 - (b) Lack of B-Lymphocytes
 - (c) Defective Immunoglobuline
 - (d) Lach of T-Lejmphocytes
17. Mycorrliza is an example of
- (a) Commensalisms
 - (b) Mutualism
 - (c) Algal associated with fungi.
 - (d) Fungi associated with Higher Plants
18. Human skin colour is an example of
- (A) Intragenic interaction
 - (B) Interallelic interaction
 - (C) Quantitative inheritance
 - (D) Pleiotropy
19. If two persons with 'AB' blood group marry and have sufficiently large number of children, these children could be classified as 'A' blood group : 'AB' blood group : 'B' blood group in 1 : 2 : 1 ratio. Modern technique of protein electrophoresis reveals presence of both 'A' and 'B' type proteins in 'AB' blood group individuals. This is an example of
- (A) Codominance
 - (B) Incomplete dominance
 - (C) Partial dominance
 - (D) Complete dominance
20. A couple, both carriers for the gene sickle cell anaemia planning to get married, want to know the chances of having anaemic progeny?
- (A) 100% (B) 75%
 - (C) 50% (D) 25%