

## Science Quiz

Kumud Bala

1. What is the plant on which 'Mendel' performed his experiments?  
(A) pisum sativum (B) broccoli (C) wild cabbage (D) none of these
2. A gene is a small portion of the -----  
(A) DNA (B) RNA (C) PROTEIN (D) HIV
3. What is the expanded form of DNA?  
(A) deoxyribonucleic acid (B) ribonucleic acid
4. The study of the pattern of chromosomes from parents to the offspring is called -----  
(A) evolution (B) heredity (C) speciation (D) none of these
5. The process by which new species develop from the existing species is known as -----  
(A) heredity (B) speciation (C) evolution (D) genetic roots
6. Name the place where human species have genetic roots  
(A) Africa (B) South America (C) Asia (D) Europe
7. The wings of a bird and mosquito are ----- organs.  
(A) homologous (B) analogous (C) common ancestor (D) evolution
8. How can you determine evolutionary relationship?  
(A) evolution of reproductive isolation among once interbreeding population.  
(B) by comparing DNA of different species.  
(C) formation of new species due to gradual change over a long period of time  
(D) it refers to the transmission of characters or traits from the parent to their offspring.
9. In which animal sex determination is regulated by environmental factor?  
(A) snail (B) bird (C) reptile (D) rat
10. What do you call the organs having same design but different function?  
(A) analogous (B) homologous (C) fossil (D) extinct
11. Process of selecting individuals with desired characters by man is called-----  
(A) hybridization (B) reproduction (C) artificial selection (D) natural selection
12. The theory of evolution of species by natural selection was given by ----  
(A) Mendel (B) Darwin (C) Lamarck (D) Weismann
13. A man with blood group A marries a woman having blood group O. What will be the blood group of the child?  
(A) O only (B) A only (C) AB (D) equal chance of acquiring blood group A or blood group O
14. If a round, green seeded pea plant (RRYY) is crossed with a wrinkled yellow seeded pea plant (rryy), the seeds produced in F1 generation are -----

(A) round and green      (B) round and yellow      (C) wrinkled and green      (D) wrinkled and yellow

15. The process of evolution of a species whereby characteristics which help individual organisms to survive and reproduce are passed on to their offspring and those characteristics which do not help are not passed on is called-----

(A) artificial selection      (B) speciation      (C) hybridization      (D) natural selection

16. Identify the two organisms which are now extinct and are studied from their fossils.

(A) white tiger and sparrow      (B) dinosaur and fish (Knightia)  
(C) ammonite and white tiger      (D) trilobite and white tiger.

17. Pure-bred plant A is crossed with pure-bred pea plant B. It is found that the plants which look like A do not appear in F1 generation but re-emerge in F2 generation. Which of the plants A and B are tall and dwarf?

(A) A are tall B are dwarf      (B) A are tall and B are also tall  
(C) A are dwarf and B are also dwarf      (D) A are dwarf and B are tall

18. A cross between two individuals results in a ratio of 9 : 3 : 3 : 1 for four possible phenotype of progeny. This is an example of a -----

(A) monohybrid cross      (B) dihybrid cross      (C) test cross      (D) F1 generation

19. Which of the following characters can be acquired but not inherited?

(A) colour of skin (B) size of body (C) colour of eyes (D) texture of hair

20. The remains (or impressions) of dead animals or plants that lived in the remote past are known as -----

(A) extinct species      (B) fossils      (C) naturally selected species      (D) none of these

21. Which of the following is an example of genetic variation?

(A) one person has a scar, but his friend does not  
(B) one person is older than another  
(C) Rita eats meat, but her sister Geeta is a vegetarian  
(D) two children have different eye colors

22. To study the natural phenomena of inheritance, Mendel selected the pea plant. Which of the following properties were suitable for their studies?

(i) plants would easily self-pollinate or cross pollinate in nature  
(ii) plants were easily grown in garden soil with a considerably shorter generation time  
(iii) pea plants do not require the true breeding for hybridization experiments  
(iv) many parts of the plant such as pod seed flour shows distinct phenotypes  
(A) (i), (ii) and (iii)      (B) (ii) and (iv)      (C) (i) and (ii)      (D) (ii), (iii) and (iv)

23. What is the difference between genetic drift and change due to natural selection?

(A) genetic drift does not require the presence of variation  
(B) genetic drift never occurs in nature, natural selection does  
(C) genetic drift does not involve competition between members of a species  
(D) there is no difference

24. The fossil remains of archaeopteryx is a connecting link between-----  
 (A) reptiles and mammals (B) reptiles and bird  
 (C) fish and amphibian (D) amphibian and reptile
25. Chromosomes are thread like in the nucleus of a cell formed of DNA which carries the-----  
 (A) genes (B) recessive (C) genotype (D) phenotype
26. What is genetic drift?  
 (A) genes are located on DNA present in chromosomes  
 (B) the change in the frequency of certain genes in a population over generations  
 (C) it is the part of a chromosome which controls the appearance of set of heredity character  
 (D) none of these

### ANSWERS

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|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1. (A) | 2. (A) | 3. (A) | 4. (B) | 5. (B) | 6. (A) | 7. (B) | 8. (B) | 9. (A) | 10. (B) | 11. (C) | 12. (B) | 13. (D) | 14. (B) | 15. (D) | 16. (B) | 17. (D) | 18. (B) | 19. (B) | 20. (B) | 21. (D) | 22. (B) | 23. (C) | 24. (B) | 25. (A) | 26. (B) |
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