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CLASS-12 : Biology

- 1) A distinct mechanism that usually involves a short segment of DNA with a remarkable capacity to move from one location in a chromosome to another. What is this distinct mechanism known as?
- 2) If both the parents are carriers for thalassemia which is an autosomal recessive disorder. What are the chances of pregnancy resulting in an affected child?
- 3) Who put forward the idea of mutation?
- 4) What is a genetic map write with an example?
- 5) One of the genes exclusively present on X-chromosome in human is concerned with
 - a) baldness b) red green colorblindness c) facial hair/moustache in males d) night blindness.
- 6) Barr body is found in the cytoplasm during
 - a) interphase in cell of female mammal b) interphase in cell of male mammal c) prophase in cell of female mammal d) prophase in cell of male mammal.
- 7) Diploid cells have
 - a) Two chromosomes b) one set of chromosomes c) two pairs of homologous chromosomes d) two sets of chromosomes
- 8) What are extra nuclear genes?
- 9) What is a point mutation comprising the substitution of purine by pyrimidine called?
- 10) What is frame shift mutation?
- 11) Explain linkage group with example.
- 12) Differentiate between pleiotropy and polygenic inheritance?
- 13) What is holandric condition?
- 14) Polyploidy can be induced by the application of
 - a) auxin b) kinetin c) colchicines d) ethylene
- 15) A human male produces sperms with genotypes AB, Ab, aB and ab pertaining to diallelic characters in equal proportions. What is the corresponding genotype of this person?
- 16) The recessive genes located on the X-chromosome in humans are always
 - a) Lethal b) sub-lethal c) expressed in males d) expressed in females
- 17) A normal woman whose father was colorblind is married to a normal man, the sons will be
 - a) 75% colorblind b) 50% colorblind c) all colorblind d) all normal

18) Primary source of allelic variation is

a)Independent assortment b)recombination c)mutation d)polyploidy

19) Which of the following pairs of features are good examples of polygenic inheritance?

a) Human height and skin color b) ABO Blood group in man c) hair pigment of mouse and tongue rolling in humans d) human eye color and sickle cell anemia

20) Chromosomal theory of inheritance was based on

a)Segregation of factors b)sex linkage c)presence of sex chromosomes d)diploidy and haploidy.

Text for Assertion Reason.(FROM QUESTIONS 21-30)

21) Person suffering from hemophilia fails to produce blood clotting VIII

22) The banding pattern in autosomes 3 and 6 of man and chimpanzee is remarkably similar.

23) The mutation rate of mitochondrial DNA is relatively high

24) A father may be hemophilic only if his mother is carrier

25) The non allelic gene for red hair and freckles are usually inherited together

26) Chromosomal aberrations are caused by a break in the chromosome or its chromatid.

27) The absence of testosterone receptors produces babies that look like girls who should have been boys.

28) All X-linked traits are expressed in males.

29) Extra X chromosome causes far fewer developmental abnormalities than extra autosomal chromosome.

30) Morgan's experiment is one of the most important in the history of genetics.