

Multiple Choice Questions

*1. The constricted region of a chromosome where spindle fibers attach is called as ()

- A. Telomere
- B. Centromere
- C. Chromomere
- D. NOR

*2. A chromosome with centromere at the very end is. ()

- A. Metacentric
- B. Submetacentric
- C. Acrocentric
- D. Telocentric

*3. Telomeres are rich in which sequence in humans ()

- A. TTAGGG repeats
- B. ATAT repeats
- C. CpI islands
- D. Histone H1

*4. Satellite chromosomes have ()

- A. Secondary constriction + satellite body
- B. Two centromeres
- C. No centromere
- D. Only telomeres

*5. Lampbrush chromosomes are seen in ()

- A. Human spermatocytes
- B. Drosophila salivary glands

C. Amphibian oocytes

D. Bacterial cells

*6. Polytene chromosomes result from ()

A. Reduction division

B. Endomitosis without cell division

C. Crossing over

D. Chromosome deletion

*7. The short arm of a chromosome is denoted by ()

A. q

B. p

C. s

D. t

*8. Nucleolar Organizer Regions NORs are located on. ()

A. Telomeres

B. Secondary constrictions of acrocentric chromosomes

C. Centromeres

D. Chromosome 1 only

*9. B-chromosomes are. ()

A. Essential chromosomes

B. Supernumerary chromosomes not essential for life

C. Sex chromosomes

D. Giant chromosomes

*10. The Barr body is an example of ()

A. Y chromosome

B. Inactivated X chromosome

C. Autosome

D. Isochromosome

*11. In humans, the Y chromosome is. ()

A. Metacentric and largest

B. Acrocentric and small

C. Telocentric

D. Isochromosome

*12. Holocentric chromosomes have. ()

A. One centromere

B. Diffuse centromere along length

C. No centromere

D. Two centromeres

*13. Chromosome 1 in humans is. (. .)

A. Acrocentric

B. Metacentric

C. Submetacentric

D. Telocentric

*14. Sex chromosomes of birds use which system. (.)

A. XX-XY

B. ZZ-ZW

C. XX-XO

D. Haplodiploid

*15. Dicentric chromosomes contain. ()

A. One centromere

B. Form anaphase bridges and are unstable

C. Lack centromeres

D. Two centromere

*16. Klinefelter syndrome karyotype is. ()

A. 45,X

B. 47,XXY

C. 47,XYY

D. 47,XXX

*17. Turner syndrome results from ()

A. Trisomy 21

B. Monosomy X

C. Trisomy 18

D. 5p deletion

*18. Stain used for staining chromatin is ()

a) Acid stain

b) Methylene

c) Feulgen

d) Crystal violet

*19. Mitochondrial DNA inheritance is ()

A. Paternal

B. Maternal

C. Autosomal dominant

D. X-linked

*20. Euchromatin contain ()

A. Both alleles expressed equally

B. Only RNA

C. More DNA and less RNA

D. Only DNA

Fill in the blanks

- *21. Patau syndrome is _____
- *22. Balbiani rings contain more _____
- *23. Euploidy refers to _____
- *24. Polytene chromosome contain _____

- *25. Deletion of 5p results in _____
- *26. "del(5)(p15)" means _____
- *27. Protein layer present around centromere is _____
- *28. 46,XX,t(9;22)(q34;q11.2) denotes _____
- *29. 2n condition indicates _____
- *30. Inversion that includes centromere is _____
- *31. 69,XXX is an example of _____
- *32. Allopolyploidy indicates addition of _____
- *33. A karyotype is _____
- *34. An idiogram is _____
- *35. In human karyotyping, chromosomes are arranged by _____
- *36. G-banding stains which regions dark _____
- *37. Tandem duplication indicate _____
- *38. Each chromatid give rise to _____
- *39. Normal human male karyotype is written as _____
- *40. Increase in no. of B- chromosomes result in _____

Short answer questions

1. Explain the structure of chromosome ?
2. write about lamp brush chromosome?
3. Write difference between euchromatin & heterochromatin?
4. Draw the diagram of polytene chromosome?
5. Explain structural chromosomal mutations