# SSR DEGREE COLLEGE (A)

# M.SC. BIOTECHNOLGY MOLECULAR BIOLOGY

# SEM – II, I – INTERNAL

# QUESTION BANK QUESTIONS

## 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. Cpl 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. Strain used for staining chromatin is ( )

a) Acid stain

b) Methylene

c) Fuelgen

d) Crystal voilet

*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. Polythene 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. Alloploidy 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. Tandepm duplication indicate _____

*38. Each chromere 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 & heterochromain?

4.Draw the diagram of polythene chromosome?

5. Explain structural chromosomal mutations