The Bodwad Sarvajanok Co-op. Education Society Ltd. Bodwad

Arts, Commerce and Science College, Bodwad

Question Bank

Class:- S.Y.B.Sc. Sem.:- IV

Subject:- Zoology-I Paper Name:- ZOO-401 Genetics

1. .....is the branch of biology with deals with heredity and variation

A. Zoology

B. Evolution

C. Genetics

D. Physiology

2. The unit of inheritance is called.....

A. Gene

B. Chromosome

C. Genotype

D. Phenotype

3. The term gene was first used by.....

A. Morgan

B. Mendel

C. Johannsen

D. None of these

4. Law of dominance was given by.....

A. G Mendel

B. Weisman

C. de Vries

D. Darwin

5. The contribution of mendel to genetics is called…….

A. Mendology

B. Mendocrinology

C. Mendelism

D. Mendogenic

6. Law of segregation was given by.....

A. Weisman

B. G Mendel

C. de Vries

D. Darwin

7. Law of Independent assortment was given by.....

A. Darwin

B. Weisman

C. de Vries

D. G Mendel

8. The term genetics was first coined by.....

A. W. Bateson

B TH Morgan

C. Fleming

D. G Mendel

9. Hereditary information is carried in.....

A. Carbohydrates

B. Enzymes

C. Lipids

D. DNA

10. .....is known as the Father of Genetics

A. W. Bateson

B. TH Morgan

C. Fleming

D. G Mendel

11. Genetics is a branch of biology, which deals with.....

A. Cell division and gametogenesis

B. Natural selection

C. Heredity and variations

D. None of these

12. A cross between F1 hybrids with either of the parent is called.....

A. Back-cross

B. Test-cross

C. Reverse-cross

D. None of these

13. The characters expressed in F1 generation are called as.....by Mendel

A. Recessive characters

B. Dominant characters

C. Both a & b

D. None

14. Gregor Mendel had cross .....for his experiment.

A. Onion plant

B. Lily plant

C. Carrot Plant

D. Pea Plant

15. .....is the cross between parents with single pair of contrasting characters

A. Monohybrid

B. Dihybrid

C. Trihybrid

D. None

16. .....is the cross between parents with two pairs of contrasting characters

A. Monohybrid

B. Dihybrid

C. Trihybrid

D. None

17. ..... trait/s was selected by Mendel for his studies.

A. Stem length (tall or dwarf)

B. Flower colour (purple or white)

C. Seed shape (round or wrinkle)

D. All of these

18. The organisms with two different alleles of a given gene are called.....

A. Homozygous

B. Heterozygous

C. Haploid

D. Diploid

19. Diploid organisms with two identical alleles of a given gene are called.....

A. Homozygous

B. Heterozygous

C. Haploid

D. Diploid

20. The set of alleles for a given organism is called its.....

A. Genotype

B. Phenotype

C. Allelotype

D. All of these

21. The observable traits of the organism are called its.....

A. Genotype

B. Phenotype

C. Allelotype

D. All of these

22. A test cross is used in…….

A. Genetic mapping

B. Physical mapping

C. Both A & B

D. None

23. Test cross is a cross between……

A. Hybrid x Dominant parent

B. Hybrid x Recessive parent

C. Hybrid x Hybrid

D. Dominant parent x Recessive parent

24. The crossing of F1 to homozygous recessive parents is.....

A. Back-cross

B. Test-cross

C. Reverse-cross

D. None of these

25. When the genotype consists of a dominant and a recessive allele, the phenotype will be like……. allele

A. Dominant

B. Codominant

C. Recessive

D. None

26. The hybrid progeny in the first generation is called.....

A. F0

B. F1

C. F2

D. F3

27. Each gamete carries.....

A. Only recessive allele

B. Only dominant allele

C. Only one of the allele

D. All

28. The phenotypic ratio of monohybrid cross in F2 generation is.....

A. 1:2:1

B. 1:3:1

C. 2:1

D. 3:1

29. The genotypic ratio of monohybrid cross in F2 generation is.....

A. 1:2:1

B. 1:3:1

C. 2:1

D. 3:1

30. The phenotypic ratio of dihybrid cross in F2 generation is.....

A. 1:2:1:2

B. 9:3:3:1

C. 1:3:1:1

D. 9:3:3:3

31. The law of segregation by Mendel, is also called as.....

A. Law of dominance

B. Law of purity of gametes

C. Law of independent assortment

D. None

32. The fur colour in rabbits is a well-known example of .....

A. Epistasis

B. Pleiotropy

C. Multiple allele

D. Dominance

33. Gene that exhibits multiple phenotypic expression is called…….

A. Pleiotropic gene

B. Dominant gene

C. Recessive gene

D. Multiple allele

34. Epistasis means……

A. Type of linkage

B. Masking or modifying gene effect

C. Upper portion of a chromosome

D. Group of genes

35. When both alleles of a gene in a heterozygote is capable of some degree of phenotypic expression, the condition is called.....

A. Incomplete dominance

B. Co-dominance

C. complete dominance

D. Polygenic inheritance

36. The coat colour of the Shorthorn breed of cattle represent a classical example of.....

A. Incomplete dominance

B. Co-dominance

C. complete dominance

D. Polygenic inheritance

37. Y linked inheritance is……

A. Criss cross

B. Jumping

C. Loop

D. Straight

38. .....is an example of Y-linked inheritance.

A. Colour blindness

B. Hypertrichosis

C. Both a & b

D. None

39. .....is an example of X-linked inheritance.

A. Colour blindness

B. Hypertrichosis

C. Both a & b

D. None

40. ..... are mutant genes and result in the death of the individual which carries them.

A. Dominant genes

B. Recessive genes

C. Lethal genes

D. Holandric genes

41. Haemophilia is an example of .....

A. X-linked inheritance

B. Y-linked inheritance

C. Both a & b

D. None

42. An Allele is.....

A. Another word for a gene

B. A homozygous genotype

C. A heterozygous genotype

D. One of several possible forms of a gene

43. The different pairs of alleles are passed to offspring independently is the Mendel' principle of.....

A. Dominance

B. Purity of gametes

C. Independent assortment

D. None

44. For a particular trait, the pair of alleles of each parent separate and only one allele from each parent passes to an offspring is Mendel's principle of.....

A. Law of dominance

B. Law of purity of gametes

C. Law of independent assortment

D. Law of segregation

45. …….....is the crossing of parents having same characters but reversed sexes.

A. Back-cross

B. Test-cross

C. Reciprocal-cross

D. None of these

46. Skin colour in man is an example of ……

A. Epistasis

B. Lethal genes

C. Dominance

D. Polygenic inheritance

47. ABO blood group in man is an example of .....

A. Epistasis

B. Pleiotropy

C. Multiple allele

D. Polygenic inheritance

48. When many traits are controlled by a number of different genes, it is called.....

A. Epistasis

B. Pleiotropy

C. Multiple allele

D. Polygenic inheritance

49. In….....one gene affects more than one characteristic.

A. Epistasis

B. Pleiotropy

C. Multiple allele

D. Dominance

50. The Phenomenon of two or more than two genes affecting the expression of each other is called…….

A. Crossing over

B. Pairing

C. Gene interaction

D. Linkage

51. In cases of....., the inheritance of a dominant and a recessive allele results in production of intermediate characteristics.

A. Incomplete dominance

B. Co-dominance

C. complete dominance

D. Polygenic inheritance

52. Damage and errors in DNA cause……

A. Mutation

B. DNA repair

C. Translation

D. Transcription

53. Addition or deletion of bases causes…….

A. Transversion

B. Frameshift mutation

C. Transition

D. Transcription

54. Loss or gain of whole chromosome set is called…….

A. Polyploidy

B. Euploidy

C. Aneuploid

D. Triploidy

55. Change in the nucleotide type and sequence of DNA segment representing gene is called…….

A. Gene Mutation

B. Chromosomal Mutation

C. Translocation

D. Transcription

56. Loss or gain of the part of chromosome set is called…….

A. Polyploidy

B. Euploid

C. Aneuploid

D. Triploidy

57. Gene mutation occur at the time of…….

A. DNA repair

B. DNA replication

C. Cell division

D. RNA transcription

58. The interchange of parts between non-homologous chromosomes is called……

A. Duplication

B. Translocation

C. Inversion

D. Deletion

59. A condition in which the organisms have more than two complete sets of chromosomes is called…….

A. Polyploidy

B. Euploidy

C. Aneuploidy

D. None

60. Gene mutation occur at the time of…….

A. DNA repair

B. DNA replication

C. Cell division

D. RNA transcription

61. Loss of portion of chromosome occur in……..

A. Duplication

B. Translocation

C. Inversion

D. Deletion

62. The transmission of genes that occur outside the nucleus is called…….

A. Extra chromosomal inheritance

B. Cytoplasmic inheritance

C. Both A & B

D. None

63. ……is the example of extra chromosomal inheritance.

A. Eye colour in drosophila

B. Barr body

C. Shell coiling in snail

D. Breeder's disease

64. Transmission of genes from father to grandson through daughter is called.....inheritance.

A. Criss-cross

B. Criss-zag

C. Cross-cross

D. Cross-criss

65. The genes located on the same Chromosome that are inherited together are known as.....

A. Complementary genes

B. Supplementary genes

C. Mutant genes

D. Linked genes

66. ……can break the occurrence of linkage.

A. Crossing over

B. Linkage

C. Reconstruction

D. Breakage

67. Linkage results in……

A. Formation of more Dominant phenotype

B. Formation of more wild phenotype

C. Formation of more parental phenotype

D. Formation of more recombinant phenotype

68. Linkage in Drosophila was first discovered by.....

A. Morgan

B. Bateson and Punnet

C. Sturtevan

D. Bridges

69. Extra chromosomal inheritance is also called as.....

A. Extra nuclear

B. Maternal

C. Cytoplasmic

D. All of these

70. The site or position of a particular gene on chromosome is called.....

A. Locus

B. Focus

C. Location

D. Translocation

71. The phenomenon in which genes are present on the same chromosomes and transmit together is.....

A. Cross over

B. Segregation

C. Linkage

D. assortment

72. The chromosomes responsible for the determination of sex are called……

A. Autosomes

B. Allosomes

C. Chromosomes

D. Allozymes

73. Sex chromosomes are also called……..

A. Autosomes

B. Allosomes

C. Chromosomes

D. Allozymes

74. Man and drosophila have……. type of sex determination.

A. XX / XY

B. XX / XO

C. ZZ / ZY

D. ZZ / ZO

75. Mutations can be induced by…….

A. X-rays

B. UV rays

C. Both A & B

D. None

76. Examples of ……. include X-rays, UV rays, acridine dyes etc.

A. Mutation

B. Mutagen

C. Ribosome

D. None

77. When the organism has three sets of chromosomes, the condition is called……

A. Haploidy

B. Diploidy

C. Triploidy

D. Tetraploidy

78. The physical or chemical agent responsible to induce mutation is called……

A. Antigen

B. Chemogen

C. Mitogen

D. Mutagen

79. The change in single gene which affect particular locus or point is called…….

A. Genetic mutation

B. Chromosomal mutation

C. Point mutation

D. None

80. Spontaneous mutations are…….

A. Natural mutations

B. Induced mutations

C. Chemical mutations

D. Physical mutations

81. Radiations are important mutagens responsible for……

A. Natural mutation

B. Induced mutation

C. Chemical mutation

D. Physical mutation

82. The unit of linkage is…….

A. Morgan

B. Centi-morgan

C. Centimeter

D. Angstrom

83. The scientists who have given the theory of linkage are .....

A. Morgan and Castle

B. Beadle and Tatum

C. Watson and Crick

D. Bateson and Punnet

84. The exchange of segments between non-sister chromatids of homologous chromosomes during meiosis is called.....

A. Linkage

B. Crossing over

C. Variation

D. Recombination

85. Crossing over produces genetic..... among offspring.

A. Linkage

B. Crossing over

C. Variation

D. Recombination

86. Crossing Over occurs when the homologous chromosomes contain.....

A. One chromatid

B. Two chromatid

C. Four chromatid

D. Eight chromatid

87. Pairing of homologous chromosomes is called.....

A. Terminalisation

B. Linkage

C. Crossing over

D. Synapsis

88. Crossing-over takes place in the…….

A. Diakinesis stage

B. Anaphase stage

C. Pachytene stage

D. Leptotene stage

89. During crossing over, exchange of chromosomal or genetic material takes place between.....

A. Two chromatids

B. Two chromosomes

C. Two non-sister chromatids of each tetrad

D. Two sister chromatids of each homologue

90. A crossing over……

A. Occur early in meiosis

B. Results in exchange of DNA segments

C. Occur late in meiosis

D. Both A & B

91. The term mutation was first coined by……

A. G Mendel

B. T,H, Morgan

C. T. Sutton

D. Hugo de Vries

92. The……chromosome is genetically active.

A. X

B. Y

C. Z

D. O

93. The……chromosome is genetically inactive or inert.

A. X

B. Y

C. Z

D. O

94. ……. means with similar gametes

A. Heterogametic

B. Homogametic

C. Mesogametic

D. Autogametic

95. The X chromosomes have large amount of…….

A. Euchromatin

B. Heterochromatin

C. Both A & B

D. None

96. XX / XO type of sex determination is found in……

A. Man

B. Grasshopper

C. Both A & B

D. None

97. Butterflies and moths have……type of sex determination

A. XX / XY

B. XX / XO

C. ZZ / ZY

D. ZO / ZZ

98. ZZ / ZW method of sex determination is found in…….

A. Man

B. Insects

C. Birds

D. Moths

99. In honey bee fully functional females are developed from…….

A. Fertilized egg

B. Unfertilised egg

C. Haploid egg

D. Diploid egg

100. Individuals with half part of body express female and half part express as male characters is called…….

A. Gynomorph

B. Andrmorph

C. Gynandromorph

D. Gynogenic