BIOLOGY

BOOKS - ARIHANT NEET BIOLOGY (HINGLISH)

HUMAN GENETICS

Check point 9.1

1. A diagrammatic representation of the chromosomes of an individual illustrating their morphology is referred to as

A. Pedigree

B. Transarrangement

C. Karyotype

D. Idiogram

Answer: C

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2. Human females have

A. 2 pairs of allosomes

B. 46 autosomes

C. 23 pairs of autosomes

D. 44 autosomes

Answer: D

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3. A girl receives her X- chromosomes form :

A. Her father

B. Her mother

C. Both father and mother

D. Extranuclear DNA from her mother's egg

Answer: C

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4. A family has five girls and no sons. Probability of son in the sixth child will be

A. 0.2

B. 0.5

C. 0.75

D. 1

Answer: B

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5. The full form of TDS is

A. Testis Determining Factor

B. Testis Deciding Factor

C. Testis Donater Factor

D. None of these

Answer: A

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6. The number of Barr bodies in normale male and normale female is

A. 1,0

B. 1,1

C. 0,1

D. 0,2

Answer: C

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7. A human showing two barr bodies in the somatic cells would be

A. only a male with one X-chromosome

B. only a female with two X-chromosomes

C. only a male having two y-chromosomes

D. either a male or a female havingthree X-chromosomes

Answer: D

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8. The sex-linked disorders which are caused by recessive geneslocates in the X-chromosome affect...more than....

A. males, females

B. females,males

C. children,adults

D. adults,children

Answer: D

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9. when was the disease colour blindness was detected?

A. 1965

B. 1911

C. 1988

D. 1885

Answer: A

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10. Carriers of colour blindness are :

A. men

B. women

C. Both (a) and (B)

D. None of these

Answer: B

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11. Congenital colour blindness is also know as

A. daltonism

B. dichromatism

C. protanopia

D. Both (A)and (B)

Answer: D

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12. Holandric genes are one situated on

A. X-chromosome

B. Y-chromosome

C. Both (a) and (B)

D. Autosomes

Answer: B

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13. Ram has hairy ears (hypertrichosis), a trait carried by a gene in his y-chromosome what is the chance that his grandson will inherit the trait from him?

A. 0

B. 0.25

C. 0.5

D. 1

Answer: D

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14. If the expression of a trait is limited to one sex, it is sex ..... Trait

A. Linked

B. Influenced

C. Expressed

D. Limited

Answer: D

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15. Beard formation is

A. Sex-limited character

B. Sex-linked character

C. Sexually transmitted character

D. Sexually controlled character

Answer: A

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16. In ABO blood group, how many phenotypes are found?

A. 1

B. 4

C. 6

D. 8

Answer: B

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17. A child of O blood group, hasB-blood group father, the genotype of father would be :-

A. $l^0 l^0$

B. $l^B l^0$

C. $l^A l^B$

D. $l^B l^B$

Answer: B

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18. Agglutinoges are not found in blood group:

A. A

B. O

C. AB

D. B

Answer: B

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19. Which of the following would result in haemolysis of foetus ?

A. RH inoompatibility

B. BO incompatibility

C. AB incompatibility

D. AO incompstibility

Answer: A

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20. Rh factor is present in

A. All vertebretes

B. All mammals

C. All reptiles

D. Man and rhesus monkey only

Answer: D

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Check point 9.2

1. The symbol of empty circles used in pedigree analysis represents

A. Normal females

B. Normal males

C. Affected females

D. Affected males

Answer: A

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2. Nature of identical twins is :

A. Dizygotic

B. Polyzygotic

C. Monozygotic

D. Amphizygotic

Answer: C

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3. Monozygotic twins are born because

A. Two sperms fertilise four ova

B. Two sperms fertilise two ova

C. Two blastomers separate after first cleavage

D. None of the above

Answer: C

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4. Free-martins condition is observed in :

A. Dizygotic twins

B. Monozygotic twins

C. Both (a) and (c)

D. None of the above

Answer: A

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5. Down's syndrome is related to

A. Increase in chromosome number of 21th pair

B. Decrease in chromosome number of 21th pair

C. Increase in chromosome number of 18th pair

D. Decrease in chromosome number o 18th pair

Answer: A

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6. Patau's syndrome is caused due to

A. 13-trisomy

B. 18-trisomy

C. 20-trisomy

D. None of these

Answer: A

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7. The person affected from Cri-du-chat syndrome have symptoms of

A. Widely spaced eyes

B. Receding chin

C. Heart disease

D. All of these

Answer: D

Watch Video Solution

8. whichof the following represents the allosome complement of a super female?

A. XYY

B. XXXX

C. XXY

D. YYY

Answer: B

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9. Super males have chromosome numbers

A. 43 + XY (45)

B. 44 + XYY (47)

C. 44 + XO (45)

D. 44 + YO (45)

Answer: B

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10. The characters of supermales are

A. Abnormal height

B. Mental retardation

C. Criminal bent of mind

D. All of these

Answer: D

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11. A person with Klinefelter's syndrome has chromosomes

A. XX

B. XY

C. XXY

D. XYY

Answer: C

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12. Gynecomastia is symptom of

A. Down's syndrome

B. Trisomy

C. Turner's syndrome

D. Klinefelter's syndrome

Answer: D

Watch Video Solution

13. Phenylketonuria is

A. Sex-linked dominant trait

B. Sex-linked recessive trait

C. Autosomal dominant trait

D. Autosomal recessive trait

Answer: D

Watch Video Solution

14. The absense of pigment in the eyes, hair and skin is reffered to as

A. Albinism

B. Colour blindness

C. Night blindness

D. Phenylketonuria

Answer: A

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15. The dorminant autosomal disorder due to an allele on short arm of chromosome 4 is

A. Huntington's disease

B. Thalassemia

C. Albinism

D. Phenylketonuria

Answer: A

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16. The genetic disorder which occurs due to defect in the synthesis o subunits of haemoglobin is

A. Alkaptonuria

B. Albinism

C. Thalassemia

D. None of these

Answer: C

Watch Video Solution

17. Gene for cystic fibrosis is located on chromosome

A. 21

B. 6

C. 8

D. 7

Answer: D

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18. How many genes are present in human genome?

A. 200

B. 30000-40000

C. 2000-4000

D. 50000

Answer: B

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19. Genetically improvement of human race is called

A. Epigenetics

B. Euthenics

C. Ethnology

D. Eugenics

Answer: D

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20. A child with IQ of 140 belongs to the category

A. Genius

B. Superior

C. Average

D. Most superior

Answer: A

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Chapter Exercises A Taking it together (Assorted Questions of the Chapter for Advanced level Practice)

1. Who coined the term 'Genomics'?

A. Thomas Roderick

B. Jeffrey et. Al.

C. Griffth

D. All of these

Answer: A

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2. How many cells are there in human body ?

A. 1000 trillion

B. 1 trillion

C. 100 trillion

D. 10 trillion

Answer: C

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3. The full form of HGP is

A. Human Genome Project

B. Human Gene Profile

C. Horse Genome Project

D. None of the above

Answer: A

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4. Human genome project was completed in the year

A. 2000

B. 1980

C. 1995

D. 1997

Answer: A

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5. How many genes are present in human genome?

A. 4.6 million

B. 3.2 million

C. 4.2 million

D. 4.0 million

Answer: A

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6. The number of base pairs in fruitfly Drosophila melanogaster is

A. 132 million

B. 110 million

C. 100 million

D. None of these

Answer: A

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7. The smallest gene (TDF) is present on chromosome

A. X-chromosome

B. Y-chromosome

C. Somatic chromosomes

D. All of the above

Answer: B

Watch Video Solution

8. Who was the first person to study human genetics?

A. Mendel

B. sir Archibald Garrod

C. Darwin

D. Lamarck

Answer: B

Watch Video Solution

9. The smallest gene present in human beings is

A. Duchenne muscular dystrophy

B. Testis determining factor

C. Junked gene

D. Repeated genes

Answer: B

Watch Video Solution

10. The number of base pairs in dystrophin gene of human body are

A. 20000 kilo base pairs

B. 24000 kilo base pairs

C. 30000 kilo base pairs

D. 35000 kilo base pairs

Answer: B

View Text Solution

11. The longest gene of human body is present on chromosome

A. X-chromosome

B. Y-chromosome

C. Autosomes

D. None of these

Answer: A

Watch Video Solution

12. The longest gene present in human body is known as

A. Duchenne muscular dystrophy

B. Testis determining factor

C. Holandric gene

D. None of the above

Answer: A

View Text Solution

13. Which of the following mechanism is involved in causing Down's syndrome?

A. Crossing over

B. Linkage

C. Sex-linked inheritance

D. Non-disjunction of chromosomes

Answer: D

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14. Mongolism, Patau's syndrome and Edward's syndrome are due to

A. Allosomal abnormalities

B. Autosomal abnormalities

C. Both (a) and (b)

D. None of these

Answer: B

Watch Video Solution

15. In Down's syndrome or Mongolisim the affected person possesses

A. A missing chromosome

B. An extrachromosome

C. A dominant gene

D. A recessive gene

Answer: B

Watch Video Solution

16. In sickle cell anaemia glutamic acid is replaced by valine Which one of the following triplets codes for valine ?

A. GGG

B. AAG

C. GAA

D. GUG

Answer: D

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17. A late acting dominat disorder is

A. Tay-Sach's syndrome

B. Polydactyly

C. Huntington's chorea

D. Phenylketonuria

Answer: C

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18. Huntington's chorea appears at the age of

A. 25-55 yrs

B. 15-40 yrs

C. 50-60 yrs

D. 10-15 yrs

Answer: B

Watch Video Solution

19. Human Y-chromosome is :

A. telocentric

B. Acrocentric

C. Metacentric

D. Submetacentric

Answer: B

Watch Video Solution

20. In alzheimer's disease brain cells do not metabolise

A. Glucose

B. Armyloid-B peptidase

C. GABA

D. Acetycholine

Answer: D

Watch Video Solution

21. In Huntington's chorea limb movements are

A. Rhythmic

B. Arrhythmic

C. Slow and hardly noticeable

D. Absent

Answer: B

Watch Video Solution

22. Genetic identity of human male is known by

A. Nucleolus

B. Cell organelles

C. Autosomes

D. Sex chromosomes

Answer: D

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23. Extra 18th autosomal chromosomes results in

A. Edward's syndrome

B. Patau's syndrome

C. Down's syndrome

D. None of these

Answer: A

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24. Christmas disease is another name of

A. Sleeping sickness

B. Down's syndrome

C. Hepatitis

D. Haemophilia-B

Answer: D

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25. The 'christmas disease patient lacks antihaemophilic:

A. Homogentisic acid oxidase

B. Factor Vlll

C. Factor XI

D. Factor IX

Answer: D

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26. An example for sex influenced inheritance :

A. Haemophilia

B. Baldness

C. Colour blindness

D. Down's syndrome

Answer: B

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27. A manasomic abnormality in humans is

A. Klinefelter's syndrome

B. Turner's syndrome

C. Edward's syndrome

D. Down's syndrome

Answer: B

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28. Klinefelter's syndrome has number of chromosomes

A. 47

B. 46

C. 45

D. 44

Answer: A

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29. An abnormality not due to recessive gene is

A. Phenylketonuria

B. Alkaptonuria

C. Polydactyly

D. Tay-Sach's syndrome

Answer: C

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30. An inborn error of metabolism which eventually affects mental development is

A. Albinism

B. Phenylketonuria

C. Anaemia

D. Bleeder's disease

Answer: B

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31. Who discovered Patau's syndrome?

A. Edward

B. Patau

C. Leeuwenhoek

D. None of these

Answer: B

Watch Video Solution

32. The Edward's syndrome was discovered in the year

A. 1960

B. 1965

C. 1985

D. 1944

Answer: A

Watch Video Solution

33. Cat-cry syndrome was discovered by

A. Edward

B. Patau

C. Lejeune

D. Langdon down

Answer: C

View Text Solution

34. Down's syndrome was discovered in the year

A. 1866

B. 1960

C. 1966

D. 1975

Answer: A

View Text Solution

35. Cat-cry syndrome is due to the deletion in short arm of chromosome

A. 5th

B. 10th

C. 8th

D. 12th

Answer: A

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36. The number of chromosomes in supermales is

A. 47

B. 42

C. 43

D. 44

Answer: A

Watch Video Solution

37. The characters of supermales are

A. Abnormal height

B. Mental retardation

C. Criminal bent of mind

D. All of these

Answer: D

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38. The person suffering from albinism lacks the enzyme

A. Tyrosinase

B. Phenylalaninc oxidase

C. Peptidase

D. Ribozyme

Answer: A

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39. Individuals with albinism lacks the dark pigment melanin in

A. Skin

B. Hair

C. Iris

D. All of these

Answer: D

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40. Gaucher's disease is caused by a

A. A dominant gene

B. A recessive gene

C. Two dominant genes

D. All of these

Answer: B

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41. The affected organs in Gaucher's disease are

A. Spleen

B. Liver

C. Limb bones

D. All of these

Answer: D

Watch Video Solution

42. Thalassemia was discovered by

A. Edward

B. Patau

C. Cooley chains

D. None of these

Answer: C

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43. The body parts affected by alkaptonuria are

A. Cartilages

B. Capsules of joints

C. Ligaments and tendons

D. All of these

Answer: D

Watch Video Solution

44. The alkaptonuria is due to deficiency of enzyme

A. Tyrosinase

B. Oxidase

C. Phenyloxidase

D. Hydroxylase

Answer: A

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45. Who discovered Rh factor

A. Huxley

B. Landsteiner

C. Wiener

D. Landsteiner and Wiener

Answer: D

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46. The inborn error of metabolism which lightens the skin colour is

A. Albinism

B. Alkaptonuria

C. Gaucher's disease

D. Phenylketonuria

Answer: D

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47. Which disease is commonly known as 21-trisomy?

A. Down's syndrome

B. Edward's syndrome

C. Cri-du-chat syndrome

D. Turner's syndrome

Answer: A

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48. The person suffering from tuener's syndrome has number os chromosomes

A. 45

B. 46

C. 48

D. 43

Answer: A

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49. The sterile females are produced due to disease

A. Turner's syndrome

B. Kilinefelter's syndrome

C. Down's syndrome

D. Patau's syndrome

Answer: A

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50. What is the shape of chromosome 4-5 in human karyotype?

A. Metacentric

B. Submetacentric

C. Aacrocentric

D. Telocentric

Answer: B

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51. The person affected from Patau's syndrome exhibit symptoms such as

A. Cleft lip and palate

B. Low set deformed eyes

C. Small chin

D. All of these

Answer: D

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52. Fraternal twins are also known as

A. Non-identical twins

B. Identical twins

C. Maternal twins

D. None of these

Answer: A

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53. Testes develop from

A. Medulla of embryonic gonads

B. Cortex of embryonic gonads

C. None of the above

D.

Answer: A

View Text Solution

54. Edward's syndrome mainly occurs in

A. Females

B. Children

C. Young people

D. Males

Answer: A

View Text Solution

55. Barr body is associated with:

A. Autosome

B. X-chromosome

C. Y-chromosome

D. Male sex only

Answer: B

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56. Blood does not stop coming out of a wound in

A. Tetanus

B. Malaria

C. Haemophilia

D. AIDS

Answer: C

Watch Video Solution

57. Hamophilia is due to mutation in

A. X and y-chromosomes

B. Y-chromosome

C. X-chromosome

D. Autosomal chromosome

Answer: C

Watch Video Solution

58. Queen victoria of England was

A. Haemophilic carrier

B. Colourblind

C. AIDS patient

D. Deaf

Answer: A

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59. Free martins are found in

A. Peacock

B. Snake

C. Monkey

D. Sheep

Answer: D

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60. Mental competence in relation to chronological age in man is called :

A. Idiocy

B. Intelligence

C. Diligence

D. Intelligence quotient

Answer: D

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61. The term eugenics was coined by :

A. Hc urey

B. Francis galton

C. Thomas hunt morgan

D. Joshua Lederberg

Answer: B

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62. Gaucher's disease is associated with abnormal metabolism of

A. Fat

B. Nucleic acid

C. Protein

D. Carbohydrate

Answer: A

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63. Who has discovered the taste blindness of phenyl thicarbamide?

A. Fox

B. Franking

C. Folling

D. Flemming

Answer: A

View Text Solution

64. Which one of the following is a genetic trait ?

A. Thalassemia

B. Grave's disease

C. Cushing's disease

D. Parkinson's disease

Answer: A

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65. Which of the following is an inherited disorder ?

A. Leporsy

B. Goiter

C. AIDS

D. Albinism

Answer: D

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66. Wilson detected the colour blindness disease in

A. 1921

B. 1911

C. 1912

D. 1914

Answer: B

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67. Haemophilia is a

A. Deficiency of vitamin-K

B. Infectious disease

C. Chronic disorder

D. Genetic disorder

Answer: D

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68. Which of the following terms are related to barr body?

A. Sex chromatin

B. Murray barr

C. Both (a) and (b)

D. Criss-cross inheritance

Answer: C

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69. The inability to Visualise red colouration is called

A. Deuteranopia

B. Tritanopia

C. Dichromatism

D. Protanopia

Answer: D

Watch Video Solution

70. Which of the following is the example of sex-linked disease?

A. Colour blindness

B. Gonorrhoea

C. Syphilis

D. AIDS

Answer: A

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71. Rh factor is concerned with:

A. Blood clotting

B. Eugenics

C. Blood grouping

D. Protein synthesis

Answer: C

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72. Which of the following is genetically dominant in human being ?

A. Albinism

B. Colour blindness

C. Blood group-O

D. Rh+ blood group

Answer: D

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73. Improvement of the human race by improving the environmental condition is :

A. Eugenics

B. Euthenics

C. Euphenics

D. None of these

Answer: B

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74. Webbed neck' is a characteristic of :

A. XO

B. XXX

C. XY

D. XXY

Answer: A

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75. In 1956, an XXXY type of abnormality was seen in three patients which is :

A. Male phenotype

B. Female genotype

C. Female phenotype

D. Gynandromorph

Answer: A

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76. A man has enlarged breasts,spares hairs on the body and sex charomosomal formula XXY.He then suffers from:

A. Down's syndrome

B. Edward's syndrome

C. Turner's syndrome

D. Klinefelter's syndrome

Answer: D

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77. In which disease,man has an extra X-chromosome ?

A. Intersex

B. Down's syndrome

C. Klinefelter's syndrome

D. Bleeder's disease

Answer: C

Watch Video Solution

78. Which of the following is not a hereditary disease

A. Cretinism

B. Haemophilia

C. Thalassemia

D. Cystic fibrosis

Answer: A

Watch Video Solution

79. Genetic engineering is related with

A. Eugenics

B. Euphenics

C. Euthenics

D. All of these

Answer: A

View Text Solution

80. Syndrome in human in which an individual somatic cell contain only one sex chromosome XO is called :

A. Patau's syndrome

B. Down's syndrome

C. Turner's syndrome

D. Klinefelter's syndrome

Answer: C

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81. Which one of the following techniques is employed in human genetic counselling ?

A. Polyploidy

B. Amniocentesis

C. Pedigree analysis

D. Genetic engineering

Answer: C

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82. Philadelphia chromosome ocurs in patients suffering from

A. Rickets

B. Hepatitis

C. Albinism

D. Leukemia

Answer: D

Watch Video Solution

83. Turner's syndrome is an example of

A. Bisomy

B. Trisomy

C. Monosomy

D. Polyploidy

Answer: C

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84. Criss-cross inheritance is observed for the genes present on :

A. Autosomes

B. Y-chromosome

C. X-chromosome

D. X and y-chromosome

Answer: C

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85. In man sex-linked characters are only transmitted through :

A. Autosomes

B. X-chromosome

C. Y-chromosome

D. X-chromosome, Y-chromosome and autosome

Answer: B

Watch Video Solution

86. If a child's blood group is AB and its father's blood group is O, the blood group of its mother would be

A. A

B. B

C. O

D. None of these

Answer: D

Watch Video Solution

87. Which one of the following is a genetically transmitted character

A. Colour blindness

B. Hydrocephalus

C. Haemophilia

D. All of these

Answer: D

Watch Video Solution

88. Phenylketonuria is a gentic disorder due to a defect in metabolism of following :

A. Vitamins

B. Hormones

C. Fatty acids

D. Amino acids

Answer: D

Watch Video Solution

89. Congenital colour blindness is also know as

A. daltonism

B. dichromatism

C. Both (a) and (b)

D. None of these

Answer: C

Watch Video Solution

90. Which of the following is genetically determined disease due to formation of abnormal haemoglobin ?

A. Ebola

B. Mumps

C. Haemophilia

D. Thalassemia

Answer: D

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91. The condition known as sickle-cell anaemia is due to

A. Point mutation

B. Silent mutation

C. Frameshift mutation

D. Chromosomal mutation

Answer: A

Watch Video Solution

92. In anaemic person, the beta chain of haemoglobin is replaced by which of the following amino acid?

A. Glycine by valine

B. Glycine by lysine

C. Glutamic acid by valine

D. Valine by glutamic acid

Answer: C

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93. A colour blind child have both normla parents .Child is

A. Male

B. Female

C. Either (a) or (b)

D. Cannot be predicted

Answer: A

Watch Video Solution

94. Which among the following enzymes protect erythrocyte membrane during oxidant stress?

A. Glucose-6-phosphate dehydrogenase

B. Cycloxygenase

C. Ketoglutarate

D. Oxidase

Answer: A

View Text Solution

95. Sex chromosomes of male are :

A. Autosomes

B. Hemizygous

C. Homozygous

D. Heterozygous

Answer: B

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96. In sex linkage ,the speciality is :

A. Atavism

B. Reversion

C. Gene flow

D. Criss-cross inheritance

Answer: D

Watch Video Solution

97. Human female possess 44 + XX chromosomes.The secondary oocyte shall have:

A. 22

B. 44

C. 22+ X

D. 22+ XX

Answer: C

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98. A cross between parents with 'A' and that its mother's is 'AB' blood groups result in the offspring with which of the following blood groups ?

A. Only A

B. Only B

C. Only O

D. A,B and AB

Answer: D

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99. In a skip generation in heritance of colour blidness ,the trait from a colour blind man is passed on to :

A. Son

B. Daughter

C. Grandson

D. Granddaughter

Answer: C

Watch Video Solution

100. G-6-P dehydrogenase deficiency is associated with heamolysis of :

A. RBCs

B. Platelets

C. Leucocytes

D. Lymphocytes

Answer: C

Watch Video Solution

101. Autosomal mutant allele HbS causes

A. Albinism

B. Thalassemia

C. Sickle-cell anaemia

D. Agammaglobulinemi

Answer: C

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102. An Rh^- individual receives Rh^+ blood.The recipient becomes :

A. Sterile

B. Dead

C. No reaction

D. Isoimmunised

Answer: D

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103. In humans,sex determinating key factor is :

A. Y-chromosome

B. X-chromosome

C. Both (a) and (b)

D. None of these

Answer: A

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104. A women has a child with Klinefelter syndrome.How many Barr bodies the child possesses?

A. One

B. Two

C. Three

D. None of these

Answer: A

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105. When an animal has both the characters of male and female,it is called:

A. Super male

B. Intersex

C. Super female

D. Gynandromorph

Answer: D

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106. Which autosome in human beings gives rise to 'Philadephia chromosome'?

A. 22

B. 18

C. 20

D. 21

Answer: D

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107. In humans , Philadelhia chromosomee is formed by reciprocal translocation between chromosomes

A. 10 and 20

B. 3 and 11

C. 9 and 21

D. 9 and 22

Answer: C

Watch Video Solution

108. Burkitt's lymphoma, a white blood cell cancer ,is associated with reciprocal translocations between chromosome :

A. 8 and 14

B. 9 and 22

C. 9 and 11

D. 3 and 11

Answer: A

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109. Male produces two different types of gametes, it is called

A. sex-determination

B. Female homogamy

C. Male heterogamy

D. All of these

Answer: C

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110. Females seldom become bald as they lack

A. The gene for baldness

B. Y-chromosome

C. Male sex hormone

D. All of these

Answer: C

Watch Video Solution

111. Human Y- chromosomeo contains..... genes (approximately)

A. 5000

B. 200

C. 17

D. Indefinite number

Answer: C

Watch Video Solution

112. Alkaptonuria in man is caused due to

A. Absence of malanin pigment

B. Accumulation of phenyl pyruvic acid

C. Accumulation of homogentisic acid

D. All of the above

Answer: C

Watch Video Solution

113. Albinism in man is

A. Sex-linked disease

B. Caused due to biochemical reactions

C. Caused due to physical mutations by radiations

D. None of the above

Answer: B

Watch Video Solution

114. A child gets sex linked traits from

A. Father

B. Mother

C. Both (a) and (b)

D. None of these

Answer: C

Watch Video Solution

115. If all the sons of a couple are colourblind then

A. Mother is homozygous colourblind

B. Mother homozygous and father normal

C. Mother is homozygous and father colourblind

D. Mother is normal and father colourblind

Answer: A

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116. Down's syndrome has karyotypic make up as

A. 44 + XXX

B. 44+XXY

C. 45+XY or 45+XX

D. 44+XY or 44+XX

Answer: C

Watch Video Solution

117. Which of the following is a congenital genetic defect?

A. Beri beri

B. Marasmus

C. Galactosemia

D. Colour blindness

Answer: D

Watch Video Solution

118. Which of the following is an example of sex-linked inheritance?

A. Eye colour in Drosophila

B. Colour blindness in man

C. Haemophilia in man

D. All of the above

Answer: D

Watch Video Solution

119. Human beings share banding pattern of chromosome with

A. Milch animals

B. Domesticated mammals

C. Primates

D. Carnivorous mammals

Answer: C

Watch Video Solution

120. Hypertrichosis' or hair ears is a sex-linked inheritance associated with the

A. XX chromosome

B. XY chromosome

C. Y-chromosome

D. X-chromosome

Answer: C

Watch Video Solution

121. A gene located on Y-chromosome and hence transmitted from fathero to son is

A. Sex-linked gene

B. Sex-limited gene

C. Holandric gene

D. Duplicate gene

Answer: C

Watch Video Solution

122. Colour blindness in which colours are perceived aso grey, is termed as

A. Chromasia

B. Dichromasia

C. Monochromasia

D. All of these

Answer: C

Watch Video Solution

123. Which amino acid of B-chain of haemoglobin is became changed when normal RBC become sickle-cell anaemia?

A. Leucine

B. Methionine

C. Valine

D. Glutamic acid

Answer: D

Watch Video Solution

124. Mother of a sickle-cell anaemic child is always

A. Diseased

B. Not diseased

C. Carrier

D. None of these

Answer: C

Watch Video Solution

125. Condition of sex chromosomes in male child with Patau's syndrome is

A. XX

B. XY

C. XO

D. XXY

Answer: B

Watch Video Solution

126. The example of sex-linked trait in human being is

A. Sickle-cell anaemia

B. Curly hair

C. Bleeder's disease

D. All of these

Answer: C

Watch Video Solution

127. The disorder such as alkaptonuria and phenylketonuria are referred to as

A. Acquired disease

B. Congenital disease

C. Infectious disease

D. All of these

Answer: B

Watch Video Solution

128. If the genetic complement of a person is XXXX How many barr bodies can you locate?

A. One

B. Two

C. Three

D. Four

Answer: C

Watch Video Solution

129. Extrachromosome 'X' is present in one of the following disease

A. Down's

B. Kilinefelter's

C. Turner's

D. Bleeder's

Answer: B

Watch Video Solution

130. The number of barr bodies in human suffering from Turner's syndrome is

A. 1

B. 2

C. 3

D. 0

Answer: D

Watch Video Solution

131. A male child suffering from Down's syndrome will have genetic constitution

A. XX

B. XXY

C. XY

D. XO

Answer: C

Watch Video Solution

132. Probability of male child of hamemophlicac father and normal mother becoming haemophiliac ius

A. 1

B. 0.5

C. 0

D. 0.25

Answer: C

Watch Video Solution

133. Brilliant plumage in peacock is a

A. Sex-influenced trait

B. Holandric trait

C. Sex-limited trait

D. Criss-cross trait

Answer: C

Watch Video Solution

134. Which among the following genotype of female is bald?

A. BB

B. Bb

C. bb

D. None of these

Answer: A

View Text Solution

135. In humans chromosomal condition of male is

A. 44 AA + XO

B. 44 AA + XXY

C. 44 AA + XX

D. 44 AA + XY

Answer: D

Watch Video Solution

136. Which of the following is the example of pleiotropic gene , -

A. Thalassemia

B. Sickle-cell anaemia

C. Haemophilia

D. Colour blindness

Answer: B

Watch Video Solution

137. On which chromosome set of 3 multiple alleles for four blood types are present?

A. 9

B. 13

C. 18

D. 20

Answer: A

Watch Video Solution

138. What should be the blood types of parents types of parents if their childern can have only A and B types of blood ?

A. AB and O

B. A and B

C. A and O

D. AB and A

Answer: A

Watch Video Solution

139. Turner's syndrome is represented by

A. Trisomy of 21st chromosome

B. The absence of one chromosome

C. Trisomy of 18th chromosome

D. It is an autosomal recessive case

Answer: B

Watch Video Solution

140. Lyon hypothesis deals with

A. Centromere position

B. Genetic compatibility

C. Genetic incompatibility

D. Number of barr bodies

Answer: D

Watch Video Solution

141. The genetic disorder, where a person possesses more than five digits is known as

A. Albinism

B. Muscular dystrophy

C. Polydactyly

D. Sickle-cell anaemia

Answer: C

Watch Video Solution

142. Colourblind daughter will be born if

A. Mother is colourblind

B. Only father is colourblind

C. None is colourblind

D. Both parents are colourblind

Answer: D

Watch Video Solution

143. Which condition is caused by mutations that involves entire chromosome rather than a single gene?

A. Haemophilia

B. PKU

C. Down's syndrome

D. Sickle-cell anaemia

Answer: C

Watch Video Solution

144. To make a karyotype, chromosomes are photographed during :

A. Interphase

B. Fertilisation

C. Mitotic metaphase

D. Meiotic metaphase

Answer: C

Watch Video Solution

145. If a genetic disease is transferred from a phenotypically normal but carrier female to only some of the male progeny, the disease is

A. Autosomal dominant

B. Autosomal recessive

C. Sex-linked dominant

D. Sex-linked recessive

Answer: D

Watch Video Solution

146. Separation of the twins in some cases is incomplete such a twin is

A. Fraternal

B. Siamese

C. Identical

D. None of these

Answer: B

Watch Video Solution

147. The diploid number of human chromosomes was corrected from 48-46 by

A. Waldeyer

B. Harris and Watkin

C. Tijo and levan

D. Beadle and tatum

Answer: C

Watch Video Solution

148. As per denver convention, the autosomes of man have been classified in..... Groups

A. 7

B. 4

C. 3

D. 16

Answer: A

Watch Video Solution

149. The most rare blood group-AB was discovered in 1902 by

A. Landsteiner

B. De castello

C. Sturli

D. Both (b)and (c)

Answer: D

Watch Video Solution

150. Antigen A and B are..... In nature

A. Proteinaceous

B. Glycopolysaccharides

C. Mucopolysaccharides

D. Glycoproteins

Answer: D

Watch Video Solution

151. If one parent is AB and other is O then which blood group in children cannot occur?

A. AB and O

B. A and B

C. A,B,O

D. B and O

Answer: A

Watch Video Solution

152. A man who carries holandric gene in his Y-chromosome marries a normal woman.The said gene will be transmitted to:

A. All their sons

B. 50% of their sons

C. All their daughters

D. 50% of their daughters

Answer: A

Watch Video Solution

153. Probability of all the four sons to a couple is

A. 0.25

B. 0.125

C. 0.0625

D. 0.03125

Answer: C

Watch Video Solution

154. In hardy-weinberg equation, frequency of recessive genotype is represented by

A. p2

B. 2pq

C. q2

D. (p+q)2

Answer: C

Watch Video Solution

155. Barr body seen in saliva test in olympic games is associated with

A. Y-chromosome

B. X-chromosome

C. Autosomes

D. Male sex

Answer: B

Watch Video Solution

156. Which of the following does not undergo transcription of its genes?

A. Barr bodies

B. Polytene chromosome

C. Euchromation

D. Chromosome puff

Answer: A

Watch Video Solution

157. Which one of the following conditions is caused due to Rh factor incompatibility?

A. AIDS

B. Turner's syndrome

C. Erythroblastosis foetalis

D. Sickle-cell anaemia

Answer: C

Watch Video Solution

158. A person with type A blood group may safely receive a transfusion of

A. Type AB

B. Type AB and type O

C. Type AB and type AB

D. Type A and type O

Answer: D

Watch Video Solution

159. Select the hereditary disease which is carried on autosomes?

A. Haemophilia

B. G-6-PD Deficiency

C. Colour blindness

D. Sickle-cell anaemia

Answer: D

Watch Video Solution

160. The genotype of a person with sickle-cell trait is :

A. HbAHbA

B. HbsHbs

C. HbsHbA

D. None of these

Answer: C

Watch Video Solution

161. Progressive degeneration of brain cells result from :

A. Cystic fibrosis

B. Marfan syndrome

C. Thalassemia

D. Huntington disease

Answer: B

Watch Video Solution

162. Von Recklinghausen's disease is another name of :

A. Gaucher's disease

B. A zheimer's disease

C. Neurofibromatosis

D. Sickle-cell disease

Answer: A

Watch Video Solution

163. Hexosaminidase deficiency results in :

A. Tay-sach's syndrome

B. Huntington disease

C. Sickle-cell disease

D. Marfan syndrome

Answer: A

Watch Video Solution

164. Which of the following is a lethal genetic disease due to an autosomal recessive mutaion ?

A. Haemophilia

B. Cystic fibrosis

C. Neurofibromatosis

D. Huntington disease

Answer: B

Watch Video Solution

165. Which of the following is a dominant autosomal mutation ?

A. Haemophilia

B. Cystic fibrosis

C. Colour blindness

D. Chondrodyatropic

Answer: D

Watch Video Solution

166. Amyloid B-protein deposition damages the brain of patiets suffering from

A. Tay-sach's disease

B. Cystic fibrosis

C. Alzheimer's disease

D. Huntington disease

Answer: C

Watch Video Solution

167. Which one of the following conditions applies to albinism?

A. Polygenic

B. Recessive trait

C. Multiple allelism

D. Dominant trait

Answer: B

Watch Video Solution

168. In which blood group,antibodies are absent ?

A. A

B. B

C. O

D. AB

Answer: D

Watch Video Solution

169. Agglitinogens A and B are found in Platelets

A. Blood plasma

B. Plasma membrane of RBCs

C. Plasma membrane of WBCs

D.

Answer: C

View Text Solution

170. Chromosome number in down's syndroom is

A. 46

B. 47

C. 23

D. 45

Answer: A

Watch Video Solution

171. Which of the following is related to the high frequency of Down syndrome ?

A. Maternal age

B. Paternal age

C. Both (a) and (b)

D. None of these

Answer: A

Watch Video Solution

172. Epicanthus' is the symptom of

A. Haploidy

B. Heteroploidy

C. Down's syndrome

D. Turner's syndrome

Answer: C

Watch Video Solution

173. Any change in sex chromosome constitution is not involved in :

A. Super male

B. Super female

C. Turner's syndrome

D. Down's syndrome

Answer: D

Watch Video Solution

174. In most animals,sex of the offspring is established during :

A. Cleavage

B. Fertilisation

C. Crossing over

D. Embryo formation

Answer: B

Watch Video Solution

175. The male child is born when sperm with,

A. X fertilise the ovum

B. Y fertilises the ovum

C. Both X and Y fertilise with ovum

D. None of the above

Answer: B

Watch Video Solution

176. XY sex chromosomes were discovered by :

A. Nettie stevens

B. MJD white

C. Robert Brown

D. Mendel

Answer: A

Watch Video Solution

177. From the pedigree of a family given below, it is clear that trait is inherited as dominant autosomal trait. What will the genotype mother and father?

A. Mother is aa and father is Aa

B. Father is AA and mother is aa

C. Father is Aa and mother is Aa

D. None of the above

Answer: A

View Text Solution

178. Haploids are used for research because

A. They contain only one chromosome

B. They contain two sets of chromosomes

C. They contain three sets of chromosomes

D. they contain only one set of chromosomes

Answer: D

Watch Video Solution

179. The ezyme which changes amino acid phenylalanine to amino acid tyrosine is

A. Tyrosinase

B. Phenylalanine hydroxylase

C. Pencillase

D. None of these

Answer: B

Watch Video Solution

180. If a genetic disease is transferred from a phenotypically normal but carrier female to only some of the male progeny, the disease is

A. Autosomal dominant

B. Autosomal recessive

C. Sex-linked dominant

D. Sex-linked recessive

Answer: D

Watch Video Solution

181. Male XX and female XY develop sometimes due to

A. Hormonal imbalance

B. Aneuploidy

C. Deletion

D. Transfer of segments between X and Y

Answer: D

Watch Video Solution

182. Turner's syndrome is due to

A. Trisomy of chromosome 21

B. Trisomy of chromosome 18

C. Autosomal recessive gene

D. The absence of one sex chromosome

Answer: C

Watch Video Solution

183. The enzyme tyrosinase is essential for the synthesis of pigment

A. Dihydroxyphenylalanine

B. Carotene

C. Xanthoaphyll

D. Rhodopsin

Answer: A

Watch Video Solution

184. Marriage between close relatives should be avoided because it induces more:

A. Mutations

B. Multiple traits

C. Blood group abnormalities

D. Recessive alleles to come together

Answer: D

Watch Video Solution

185. Tay -sachs disease is an example of :

A. Dominant X-linked trait

B. Autosomal recessive trait

C. Autosomal dominant trait

D. Recessive sex-linked trait

Answer: B

Watch Video Solution

186. All the following traits are X-linked except:

A. Colour blindness

B. Haemophilia

C. Fragile X syndrome

D. Galactosemia

Answer: D

Watch Video Solution

187. A child of 10 yrs is a intelligent as is normally expected in the child of 14 yrs IQ of this child would be

A. 110

B. 100

C. 140

D. 160

Answer: C

View Text Solution

188. Intelligence qutient (IQ) is a ratio of mental age to :

A. Chronological age

B. Chronological age divided by 10

C. Chronological age multiplied by 10

D. Chronological age multiplied by 100

Answer: B

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189. In case of taster and non-taster human beings T is for dominance & t is for recessive gene. Which of the following would not be able to taste PTC :-

A. TT

B. Tt

C. tt

D. None of these

Answer: C

Watch Video Solution

190. Father has AB blood group,mother has B, which of the following will not be in their children?

A. A

B. B

C. AB

D. O

Answer: B

Watch Video Solution

191. A sex -linked recessive trait found on X-chromosome is

A. G-6-PD deficiency syndrome

B. Cystic fibrosis

C. Phenylketonuria

D. Alkaptonuria

Answer: A

Watch Video Solution

192. An abnormality due to dominant gene is

A. Phenylketonuria

B. Alkaptonuria

C. Polydactyly

D. Tay-Sach's syndrome

Answer: C

Watch Video Solution

193. A disease sometimes found in persons above 40 which is charachterised by poor CNS corrdination, forgetfullness and tremor of hands is

A. Epilepsy

B. Alzheimer's disease

C. Migraine

D. Schizophrenia

Answer: D

Watch Video Solution

194. Human syndroms arise due to chromosomal abnormalities Which one of the following is the resultant of monosomic condition?

A. Down's syndrome

B. Turner's syndrome

C. Edward's syndrome

D. Klinefelter's syndrome

Answer: B::C

Watch Video Solution

195. XX chromosomal condition is

A. Female in Drosophila and male in human

B. Female in human and male in Drosophila

C. Female in Drosophila and human

D. Male in Drosophila and human

Answer: C

Watch Video Solution

196. Duchenne muscular dystrophy is caused by the presence of :

A. An extra 21st chromosome

B. An extra 18th chromosome

C. A defective gene in X-chromosome

D. Two X-chromosomes and one Y-chromosome in an individual

Answer: C

Watch Video Solution

197. Parents with blood group O will have children with blood groups

A. A and O in ratio 1 : 4

B. O only

C. B and O in the ratio of 1 : 4

D. A and B in equal ratio

Answer: B

Watch Video Solution

198. After the age of 40 , the percentage of syndrome increased in the offspring of a lady is due to

A. Lady becomes weak

B. Oocyte can show non-disjunction

C. Ovaries become weak

D. Placenta becomes weak

Answer: B

Watch Video Solution

199. An abnormality in men who are always sterile due to improper development of testis because of an additional X-chromosome (47-XXY) is known as

A. Huntington's disease

B. Marafan syndrome

C. Klinefelter's syndrome

D. Turner's syndrome

Answer: C

Watch Video Solution

200. Mental retardation is not related with

A. Trisomy 21

B. Phenylalanine hydrolase

C. Myelinisation of neuron

D. Additional Y-chromosome

Answer: C

Watch Video Solution

201. One way of determining sex-linked inheritance is :

A. Sons and daughters resemble mothers

B. Sons and daughters resemble fathers

C. Sons resemble mother and daughters their father

D. Sons resemble father and daughters their mother

Answer: C

Watch Video Solution

202. A single recessive allele will produce its phenotypic effect when it occurs on

A. An autosome

B. X-chromosome of female

C. Y-chromosome

D. X-chromosome o male

Answer: B

Watch Video Solution

203. Dysgenics is the study of

A. Evolution in man

B. Improving human race

C. Chromosomal mutations

D. Undesirable traits of the human race and the gene causing them

Answer: D

Watch Video Solution

204. Which of thefollowing is not a symptom of alkaptonuria?

A. Darkening of cartilage of ear

B. Darkening of urine

C. Deposition of alkapton causing arthritis

D. Convolusions and tremors

Answer: D

Watch Video Solution

205. The colour blindness is more likely to occur in males than in females because

A. Genes for characters are located on the sex chromosome

B. The trait is dominant in males and recessive in females

C. The Y-chromosomes of male have genes for distinguish colours

D. None of the above

Answer: A

Watch Video Solution

206. If both parents of a male child are normal,what are the chances of the child being colour blind ?

A. It is impossible

B. It is possible only if mother's father was colourblind

C. It is possible only if father's mother was colourblind

D. It is possible even when all the four grandparents have normal vision

Answer: B

Watch Video Solution

207. This pedigree is of a rare trait, in which children have extra fingers and toes. Which one of the following patterns of inheritance is consistent with the pedigree?

A. Autosomal recessive

B. Autosomal dominant

C. Y-linkage

D. Sex-linked recessive

Answer: B

View Text Solution

208. Haemophilia is a condition where there is :

A. No production of haemoglobin in the blood

B. No production of melanin in the skin

C. A failure in the clotting mechanism of blood

D. A delay in the cotting of blood

Answer: D

Watch Video Solution

209. Haemophilic female marries normall male, the theoretical ratio of their offsprings regarding haemophilia will be

A. All offsprings are haemophilic

B. All girls are haemophilic

C. All sons are haemophilic

D. Half daughters and half sons are haemophilic

Answer: C

Watch Video Solution

210. Which studying a human blood smear, it was noticed that several white blood corpuscles have a small mass of chromatin close to nuclear membrane.this indicates that blood came from a

A. Diabetic

B. Haemophilic

C. Negro

D. Female

Answer: D

Watch Video Solution

211. Edwrd's, patau's and down's syndrome are

A. Change in autosomes

B. Change in sex chromosomes

C. Both (a) and (b)

D. Mutation due to malnutrition

Answer: A

Watch Video Solution

212. Which is not an X- linked recessive disease?

A. Haemophilia

B. B-thalassemia

C. Colour blindness

D. Glucose-6 phosphate dehydrogenase deficiency

Answer: B

Watch Video Solution

213. Brachydactyly is due to:

A. Dominant gene on the sex chromosome

B. Dominant gene on the autosomes

C. Recessive gene on the autosome

D. None of the aboves

Answer: B

Watch Video Solution

214. Which of the following should be avoided in biological marriages ?

A. A^+ boy and A^+ girl

B. A^+ boy and A^- girl

C. O^+ body and O^+ girl

D. O^- body and O^+ girl

Answer: B

Watch Video Solution

215. Sex -linked chromosomes of man are

A. Present on autosomes

B. Present on X-chromosome

C. Present on short arms (P) of Y-chromosome

D. Long arm (q) present on Y-chromosome

Answer: B

View Text Solution

216. Cri-du-chat syndrome in humans is caused by the :

A. Trisomy of 21th chromosome

B. Loss of half of the long arm of chromosome 5

C. Loss of half of the short arm of chromosome 5

D. Fertilisation of an XX egg by a normal Y-bearing sperm

Answer: C

Watch Video Solution

217. In man, four phenotypes of blood groups are due to the presence of antigen 'A' and antigen 'B' on the surface of RBCs. The chromosome that has the gene to control these antigens is

A. X-chromosome

B. 9th chromosome

C. 7th chromosome

D. 21st chromosome

Answer: B

Watch Video Solution

218. Sex-linked traits are

A. Carried on an autosome, but expressed only in males

B. Coded by genes located on a sex chromosome

C. Found in only one of the mother sex, depending on the sex-determination system of the species

D. Always inherited from the mother in mammals and fruit flies

Answer: B

Watch Video Solution

219. Both sickle-cell anaemia and huntingon's chorea are

A. Congenital disorders

B. Virus related disease

C. Pollutant induced disorders

D. Protozoan disease

Answer: A

Watch Video Solution

220. A Rh^- mother carrying a Rh^- child then :

A. Antibody formed in mothers' blood is transmitted against the erythrocytes of subsequent foetus

B. The RBC of foetus destroys the antibodies present in mother's blood

C. Antigens produced in mother's blood is transmitted against the antibodies in the foetus blood

D. Antigens produced in foetus blood is transmitted againts the antigens present in mother's blood

Answer: A

Watch Video Solution

221. One child is haemophilic (sex-linked trait), while its fraternal twins brother is normal. Which one of the following informations is most appropriate?

A. Haemophilic child is male

B. The other child is female and the father is haemophilic

C. Child is monozygotic twin

D. The mother must have been heterozygous

Answer: D

Watch Video Solution

222. One of the genes present exclusive on the X- chromosome in humans is concerned with :

A. Baldness

B. Red-green colour blindness

C. Facial hair moustaches in males

D. Night blindness

Answer: B

Watch Video Solution

223. A man suffering from a disease marries a normal woman and they have five daughters diseased and three sons. All the daughters inherit the disease the disease is

A. Sex-linked recessive

B. Sex-linked dominant

C. Autosomal dominant

D. Sex-limited

Answer: A

Watch Video Solution

224. Tay-sach's disease is due to

A. Deficiency of hexosaminidase-A

B. Absence of tyrosinase enzyme

C. Absence of enzyme phenylalanine hydroxylase

D. None of the above

Answer: A

Watch Video Solution

225. Baldness is more common in men than in women it could be explained on the basis that

A. It is due to male hormone and genes are not involved

B. Balndness genes are located on Y-chromosome

C. Genes of baldness are autosomal but influenced by androgens

D. Genes of baldness are located on X-chromosome only

Answer: C

Watch Video Solution

226. Usually the recessive character is expresse only when present in a double recessive condition. However, a single recessive gene can express itlself in human beings when the gene is present on

A. The X-chromosome of the female

B. The X- chromosome of the male

C. Any autosome

D. Either an autosome or X-chromosome

Answer: B

Watch Video Solution

227. Individual with Turner's syndrome is

A. Normal female

B. Normal male

C. A female with rudimentary ovaries and undeveloped breasts

D. A male with rudimentary testes and undeveloped penis

Answer: C

Watch Video Solution

228. A man with a certain disease marries a normal woman. They have eight children (3 daughters and 5 sons). All the daughters suffer from their father's disease but none of the sons are affected. Which of the following mode of inheritance do you suggest for this disease?

A. Sex-limited recessive

B. Autosomal dominant

C. Sex-linked dominant

D. Sex -linked recessive

Answer: C

Watch Video Solution

229. The person with turner's syndrome has

A. 44 autosomes and XXY sex chromosomes

B. 44 autosomes and XO sex chromosomes

C. 44 autosomes and XYY sex chromosomes

D. 44 autosomes and XXX sex chromosomes

Answer: B

Watch Video Solution

230. When both parants are of blood type AB,they can have children with

A. A, B, AB and O blood types

B. A, B and AB blood types

C. A and B blood types

D. A,B and O blood types

Answer: B

Watch Video Solution

231. Phenylketonuria, Huntington's disease and sickle-cell anaemia are caused respectively due to disorders associated with

A. Chromosome 7, Chromosome 11 and Chromosome 12

B. Chromosome 12, Chromosome 4, and Chromosome 11

C. Chromosome 7, Chromosome 12, and Chromosome 11

D. Chromosome 4, Chromosome 7, and Chromosome 11

Answer: B

Watch Video Solution

232. A colourblind man marries a daughter of colourblind father, then in the offsprings :-

A. All their sons will be colourblind

B. Half of their sons will be colourblind

C. None of their daughters will be colourblind

D. All their daughters will be colourblind

Answer: B

Watch Video Solution

233. Erythroblastosis foetalis occurs

A. When the mother is Rh negetive and the child is Rh positive

B. When the father and child are both negative, but the mother is positive

C. When the mother and child are both Rh positive, but the father is Rh negative

D. When the mother and father are Rh positive, but child is Rh negative

Answer: A

Watch Video Solution

234. In human red-green colour blindness is recessive and sex-linked, while albinism is recessive and autosomal. A marriage between two homozygous parents, a normal visioned albino woman and a colourblind and normally pigmented man will produce children

A. Who are all phenotypically normal visioned and have normal pigmentation

B. Half of whom are colourblind and other half having normal vision and all of them having normal pigmentation

C. All of whom have normal vision, but half of whom are albino and the other half with normal pigmentation

D. Of four categories normal visioned pigmented, normal visioned albino, colourblind, pigment, colourblind, albino, all in equal proportions

Answer: A

View Text Solution

235. Father has blood group A and mother's blood group is B. Both are haterozygous. If they have identical twins, the percentage probability of both twins having blood group A is

A. 1

B. 0.5

C. 0.25

D. 0.065

Answer: C

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236. A holandric gene is known for hypertrichosis (long hair on ears) When a man with hairy ears marries a normal women, what percentage of their daughters would be expected to have hairy ears?

A. 0

B. 1

C. 0.5

D. 0.025

Answer: A

Watch Video Solution

237. Find out the mismatch

A. Klinefelter's syndrome - XO

B. Haemophilia - Sex-linked

C. Down's syndrome - Autosomal aneuploidy

D. Turner's syndrome Females with retarded sexual development

Answer: A

Watch Video Solution

238. Of a normal couple, half of sons are haemophilic and half the daughters are heterozygous. The gene for this disease in couple are located on

A. Both X-chromosomes of mother

B. Y-chromosomes of father

C. One X-chromosomes of mother

D. Both sex chromosemes of the father

Answer: C

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239. A man with type A blood married a woman, who has type AB blood . We do not known either the man is homozygous or heterzygous for the I allele. Which one of the following types in the progeny of this couple would indicate that the man is heterozygous?

A. O

B. A

C. B

D. AB

Answer: C

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240. A colourblind girl is rare and can be born when

A. Her father is colourblind and mother has normal vision but her mother's father (maternal grandfather) is colourblind

B. Her mother is colourblind, even if father has normal vision

C. Even when both her parents have normal visioon provided the grand parents were colourblind

D. Her mother is colourblind and her father had normal vision but her paternal grandfather (father's father was colourblind)

Answer: A

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241. The probability of either a male or a female child in a pregnancy is

A. Always 50%

B. Dependent on the ratio of the children, the couple has already

C. Dependent on the number of male child, the couple has

D. Dependent on the number of female child, the couple has

Answer: A

Watch Video Solution

242. Man is usually colourblind than woman because

A. Man suffers from vitamin-A deficiencyy

B. Y-chromosome in man has the genes for this character

C. Genes are located on sex-chromosomes

D. Character is dominant in man and recessive in women

Answer: D

Watch Video Solution

243. In man, the machanism of sex-linked inheritance is generally from

A. Father to daughter to grandson

B. Father to daughter

C. Daughter to grandson

D. Father to son to grandson

Answer: A

Watch Video Solution

244. The gene for haemophilia is located on the chromosome of humans.It is normally impossible for a

A. Haemophilic father to pass the gene to his son

B. Carrier mother to pass the gene to her son

C. Haemophilic father to pass the gene to his daughter

D. Carrier mother to pass the gene to her daughter

Answer: C

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245. A woman with cstic fibrosis, an autosomal recondition, marries her first cousin. What is the risk that their first child will have cystic fibrosis?

A. 0.25

B. 0.5

C. 0.75

D. 0.125

Answer: D

View Text Solution

246. A man is affected with brachydactyly, an autosomal dominant trait that cause shortening of several fingers. What is the risk that the man's first child will have brachydactyly ?

A. 0.25

B. 0.5

C. 0.75

D. 1

Answer: D

Watch Video Solution

247. A man and woman who both have 'Bb' genotype at a locus will produce what proportion of 'bb' children ?

A. 0.25

B. 0.5

C. 0.75

D. 1

Answer: A

Watch Video Solution

248. Mr phillips is colourblind. What is the probability of his male child inheriting this disease from him?

A. 1

B. 0.25

C. 0.5

D. 0

Answer: D

View Text Solution

249. How can a female be colour blind ?

A. Both parents normal

B. Father normal, mother carrier

C. Father colourblind, mother carrier

D. Father colourblind , mather normal

Answer: C

Watch Video Solution

250. If a normal woman marries a colour blind man :

A. All daughters are normal, all sons are haemophilic

B. All daughters are normal, half the sons are colour blind

C. All children are normal

D. All children are colourblind

Answer: C

Watch Video Solution

251. What are all the chances of colour blind daughter and sons being born in a marriage of normal man marrying a normal woman whose father was colour blind ?

A. All sons are normal and daughters are colourblind

B. Both the sons and daughters are phenotypically normal

C. Both the sons and daughters are colourblind

D. 50% of sons are colourblind and all daughters are phenotypically normal

Answer: D

Watch Video Solution

252. Which one of the following conditions in humans is correctly matched with its chromosomal abnormality linkage ?

A. Down syndrome - 44 autosomes +XO

B. Colour blindness - Y- linked

C. Klinefelter's syndrome - 44 autosomes + XXY

D. Erythroblastosis foetalis - X- linked

Answer: C

Watch Video Solution

253. A man of blood group 'A' marries a woman of blood group 'B' ,both of them are heterozygygous for blood group ,chances of their first child having blood group 'AB' will be :

A. 0.25

B. 0.5

C. 0.75

D. 1

Answer: A

Watch Video Solution

254. A mother with B blood group has two children, one with A blood group and other with O blood group. Her husband has O blood group .The correct sentence regarding the above data is the

A. Husband is not the father of both the children

B. Husband is the father of both the children

C. Husband must be father of child with O blood group and may be father of child with A blood group

D. Husband could be the father of child with O blood group but not the father of child with A blood group

Answer: D

Watch Video Solution

255. A man known to be victim of haemophilia marries a normal woman whose father was known to be a bleeder. Then it is expected that

A. All their children will be bleeders

B. Half of their sons will be bleeders

C. One fourth of their children will be bleeders

D. All will be normal

Answer: B

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256. A couple got their first daughter quite normal , but the mother was unable to deliver the second child because after conception and before parturition, the embryo got destroyed in womb. The reason may be that

A. Male and female have Rh+ ve

B. Male has Rh+ ve and female Rh- ve

C. Male has Rh- ve and female Rh+ vek

D. Both have Rh+ ve

Answer: B

Watch Video Solution

257. If a boy's father has haemophilia and his mother has one gene for haemophilia, what is the chance that the boy will inherit the disease

A. 1

B. 0.5

C. 0

D. 0.75

Answer: B

Watch Video Solution

258. Mary' s father has haemophilia and her husband is also haemophilic. What is the chance of her daughter having this disease?

A. 0

B. 0.5

C. 1

D. 0.25

Answer: A

Watch Video Solution

259. What are the chances that sons of a man with a rare X-linked disorder will inherit from him?

A. 0

B. 0.25

C. 0.5

D. 1

Answer: B

Watch Video Solution

260. One of the following is a mismatch

A. Down syndrome - Autosomal anaeuploidy

B. Klinefelter syndrome - XO complement

C. Haemophilia - Sex linked

D. Turner syndrome - Females with retarted sexual development

Answer: B

Watch Video Solution

261. Parents are colourblind. What is the phenotype of grandsons in f2-generation?

A. 50% colourblind and 50% normal

B. All normal

C. All colourblind

D. All are carriers

Answer: C

Watch Video Solution

262. A woman with straight hair marries a man with curly hair and who is known to be heterozygous for the trait .What is the chance that their first child will have curly hair ?

A. No chance

B. One in two

C. It is certain

D. One in four

Answer: B

Watch Video Solution

263. In man ,which of the following genotypes and phenotypes may be the correct result of aneuploidy in sex chromosomes ?

A. 22 pairs + XXY - Males

B. 22 pairs + XX - Females

C. 22 pairs + XXXY - Females

D. 22 pairs + Y - Females

Answer: A

Watch Video Solution

264. What will be the phenotypic sex of the following organisms on the basis of the sex chromosomal constitution indicated againts each organism?

Organism constitution

(i) Human being

(ii) Drosohila

(iii) Human being

(iv) Drosophila

Sex chromosome

Xo

XO

XXY

XXY

select the correct answer using the codes givenl below

A. Male

(a) I and III

Female

II and Iv

B. III and IV

I and II

C. II and IV

I and III

D. II and III

I and IV

Answer: D

View Text Solution

265. In recent years,nucleotidesequence of DNA and Y-chromosome were considered for the study of human evolution, because

A. Their structureis known in greater detail

B. They can be studied from the samples of fossil remains

C. They are small and therfore easy to study

D. They are uniparental in origin and do not take part in recombination

Answer: D

View Text Solution

266. Sita and Ram have their first child .Sita knows her blood type is A, but ram does not known his blood type. However, Ram knows that both his mother and father have type B blood. The first child is boy named kush. Kush has type O blood. Sita and ram do not understand how this happened . Which of the following is the best explanation?

A. Sita's genotype is AA and Ram's genotype is OO,thus, skip expresses the O phenotype

B. Sita's genotype is AO and Ram's genotype is OO, thus, skip expresses the O phenotype

C. Because Ram's parents are both type B, Ram is not Khus's father

D. Khus's blood type will need to be checked after his first month of life, If sita and ram want to known his blood type, as it takes about a month for the blood type to develop in a newborn child

Answer: B

View Text Solution

Chapter Exercise Medical entrances special format questions (Statement Based)

1. Consider the following humans genetic disorders due to recessive genes on autosomal chromosomes and choose which ones are

(I) Sickle-cell anaemia

(II) Phenylketonuria

(III) Haemophilia

(IV) Tuberculosis

A. I and II

B. II, III and IV

C. III and IV

D. Only IV

Answer: A

Watch Video Solution

2. Consider the following abnormalities due to changes in sex chromosome number

(I) Turner's syndrome

(II) Klinefelter's syndrome

(III) Cri-du-chat syndrome

(IV) Down's syndrome

A. I and III

B. II and IV

C. III and IV

D. I and II

Answer: D

Watch Video Solution

3. Go through the given genetic disorders

(I) Down's syndrome

(II) Edward's syndrome

(III) Patau's syndrome

(IV) Turner's syndrome

Which ones are due to trisomy of 21 chromosome?

A. I and II

B. II and III

C. I, II and III

D. IV only

Answer: C

Watch Video Solution

4. Inborn error of metabolism lead to genetic disorders

(I) Phenylketonuria

(II) Alkaptonuria

(III) Leprosy

(IV) Down's syndrome

A. I, II and III

B. III and IV

C. IV only

D. I and II

Answer: D

Watch Video Solution

5. The gene for brown eyes is dominant over the gene for blue eyes. Following are given some statements

(I) For the child to be blue-eyed, at least one parent should be blue-eyed

(II) Both parents with blue-eyes will have a blue-eyed child

(III) Both-eyed person will always show both the alleles different from brown-eyed person

(IV) Identical twins of of blue-eyed parents will both have either blue or brown eyes

(V) For the child to be brown-eyed, one parent should be browneyed

The correct statements are

A. I, IV and V

B. II and V

C. II and III

D. I and III

Answer: B

View Text Solution

6. Sickle-cell anaemia

(I) Follows the same inheritance pattern as that of haemophilia

(II) Follows the same inheritance pattern as that of albinism

(III) Is a sex-linked trait

(IV) Is due to a single recessive point mutation leading to the substitution of a single amino acid in the B-chain of Haemoglobin

Choose the correct option

A. I,II,III and IV

B. II, III and IV

C. I, II and IV

D. II and IV

Answer: D

Watch Video Solution

7. Choose the correct set of statements from the following

(I) Phenylketonuria is an inborn error of Metabolism

(II) Haemophilia is not a congenital disease

(III) Bleeder's disease is known as Royal family Disease

(IV) Dizygotic twins are common in human beings

A. I and II

B. II and III

C. I and III

D. III and IV

Answer: C

Watch Video Solution

8. Assertion : Haemophilia never occurs in women.

Reason : Gene for hemophilia is located on X chromoseome.

A. Both Assertion and Reason are true and reason is the correct explanation of assertion

B. Both Assertion and Reason are true, but Reason is not the correct explanation of Assertion

C. Assertion is true, but Reason is false

D. Assertion is false, but Reason is true

Answer: C

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9. Assertion Mother may be a a carrier for haemophilia

Raeson Holandric genes are found on Y-chromosome

A. Both Assertion and Reason are true and reason is the correct explanation of assertion

B. Both Assertion and Reason are true, but Reason is not the correct explanation of Assertion

C. Assertion is true, but Reason is false

D. Assertion is false, but Reason is true

Answer: C

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10. Assertion Inheritance of halandric genes is always from father to son

Reason Holandric genes are found on Y-chromosome

A. Both Assertion and Reason are true and reason is the correct explanation of assertion

B. Both Assertion and Reason are true, but Reason is not the correct explanation of Assertion

C. Assertion is true, but Reason is false

D. Assertion is false, but Reason is true

Answer: A

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11. Assertion In human, female sex is determined by XX chromosome

Reason Male sex is determined by XY-chromosome

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Chapter Exercise (c) Medical entrances gallery (Collection of questions asked in NEET & Various Medical Entrance Exams)

1. Pick out the correct statement

(I) Haemophilia is a sex-linked recessive disease

(II) Down's syndrome is due to aneuploidy

(III) Phenylketonuria is an autosomal recessive gene disorder lt brgt (IV) Sickle-cell anaemia is an X-linked recessive gene disorder

A. II and IV

B. I, III and IV

C. I, II and III

D. I and IV

Answer: C

Watch Video Solution

2. If a colour blind man marries a woman who is homozygous for normal colour vision,the probability of their son being colour blind is :

A. 0

B. 0.5

C. 0.75

D. 1

Answer: A

Watch Video Solution

3. Which one of the following statements is wrong with reference to Barr bodies

A. The heterochromatinised X-chromosome is called Barr body

B. The inactivation of X-chromosome is called Lyonisation

C. The extra X-chromosome undergoes heterochromatinisation and becomes active during early embryonic development

D. The heterochromatinised X-chromosome remains attached to the nuclear membrane

Answer: C

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4. In the following human pedigree, the filled symbols represent the affected individuals. Identify the type of given pedigree

A. autosomal dominant

B. X-linked recessive

C. autosomal recessive

D. X-linked dominant

View Text Solution

5. A colourblind man marries a woman with bormal sight who has no histroyh of colour blindess in her family. What is the probability of their grandson becoming blind

A. 0.5

B. 1

C. Nil

D. 0.25

Answer: D

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6. With respec to phenylketonuria identify which statement is not correct

A. It is a case of aneuploidy

B. It is an example of pleiotropy

C. Caused due to the autosomal recessive trait

D. It is an error in matabolism

Answer: C

Watch Video Solution

7. Double lines in pedigree analysis show

A. Unaffected offspring

B. Sex unspecified

C. Normal mating

D. Consangunieous marriage

Answer: D

View Text Solution

8. Three copies of chromosome 21 in a child with Down's syndrome have been analysed using molecular biology technology to detect any possible DNA polymorphism with reference to different alleles located on chromosome 21. Results showed That out of 3 copies 2 of the chromosomes of the child contain the same alleles as one of the mother's alleles. Based on this when did the non-disjunction event most likely occur?

A. Paternal meiosis-I

B. Maternal meiosis-I

C. Paternal meiosis-II

D. Maternal meiosis-II

Answer: B

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9. A person with 44A + XXY chromosome setup has gynaecomastia and are Barr body positive. They have symptoms of

A. Turner's syndrome

B. Klinefelter' syndrome

C. Down's syndrome

D. Edward's syndrome

Answer: B

Watch Video Solution

10. Find out the mismatched pair

A. Lyonisation - Liane Russell and mary Lyon

B. Y-chromosome - Stevens and Wilson

C. X-body - Henking

D. Shortgun sequencing - Jeffreys

Answer: D

View Text Solution

11. Which one of the following statement is relevant to sex linked characters ?

A. They always follow criss-cross inheritance

B. They do not follow criss-cross inheritance

C. They are mostly present on Y-chromosome

D. They are only present on X-chromosome

Answer: D

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12. Down's syndrome is characterised by

A. 19 trisomy

B. 21 trisomy

C. One X-chromosome

D. Two X and one Y-chromosome

Answer: B

Watch Video Solution

13. An abnormal human baby with XXX sex chromosomes was born due to

A. Formation of abnormal sperms in the father

B. Formation of abnormal ova in the mother

C. Fusion of two ova and one sperm

D. Fusion of two sperms and one ovum

Answer: B

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14. Which of the following is correct?

A. Haemophilic-Y-chromosome

B. Down's syndrome - 21st chromosome

C. Sickle-cell anaemia - X- chromosome

D. Parkinson's disease -X and Y chromosome

Answer: B

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15. In sickle-cell anaemia substitution of glutamic acid molecule by valine molecule takes place at

A. Position 6 of the a-chain of haemoglobin

B. Position 6 of the B- chain of haemoglobin

C. Position 5 of the B-chain of haemoglobin

D. Position 5 of the a-chain of haemoglobin

Answer: B

Watch Video Solution

16. If a boy's father has haemophilia and mither is heterozygous what is the chance that the boy will inherit haemophilia

A. 0.5

B. 0.25

C. 0.75

D. 1

Answer: A

Watch Video Solution

17. A human female with turner's syndrome

A. Has 45 chromosomes with XO

B. Has one additional X-chromosome

C. Exhibits male characters

D. Is able to produce children with normal husband

Answer: A

Watch Video Solution

18. A man whose father was colourblind marries a woman, who had a colourblind mother and normal father. What percentage of male children of this couple will be colourblind?

A. 0.25

B. 0

C. 0.5

D. 0.75

Answer: C

Watch Video Solution

19. A couple both carriers of sickle cell anaemia planning to get married, wants to know the chances of having anaemic progeny

A. 1

B. 0.75

C. 0.5

D. 0.25

Answer: D

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20. Which of the following is correctly matched?

A.

Column I	Column II	Column III
Thalassemia	A. XO	(i) Fat nose, simian crease

B.

Column I	Column II	Column III
Down's synderome	B. 42 AA+XY	(ii) Webbing of neck

C.

Column I	Column II	Column III
Turner's synderome	C. 44 AA+XXX	(iii) Anaemia, jaundice

D.

Column I	Column II	Column III
Klinefelter's synderome	D. 44 AA+XXY	(iv) Tall thin eunuchoid

Answer: D

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21. A person affected with phenylketonuria lacks an enzyme that converts the amino acid phenylalanine into :

A. Valine

B. Proline

C. Histidine

D. Tyrosine

Answer: D

Watch Video Solution

22. In sickle cell anaemia, the sequence of amino acid from first to seventh position of β-chain of haemoglobin S (HbS) is

A. His, Leu, Thr, Pro, Glu, Val, Val

B. Val, His, Leu, Thr, Pro, Glu,Glu

C. Thr, His, Pro, Val, Pro, Val, Glu

D. Glu, His, Leu, Pro, Val, Glu, Glu

Answer: C

Watch Video Solution

23. Anish is having colour blindness and married to Sheela, who is not colourblind. What is the chance that their son will have the disease?

A. 1

B. 0.5

C. 0.25

D. 0

Answer: D

Watch Video Solution

24. The genotype of a person suffering from Klinefelter's symdrome is

A. XXX

B. XO

C. XY

D. XXY

Answer: D

Watch Video Solution

25. In alpha thalasssemia the gene HBAI is located on chromosome

A. 8

B. 22

C. 9

D. 16

Answer: D

Watch Video Solution

26. Sickle-cell anaemia is caused due to the substitution of :

A. Valine at the 6th position of alpha globin chain by glutamic acid

B. Glutamic acid at the 6th position of beta globin chain by valine

C. Valine at the 6th position of beta globin chain by glutamic

D. Glycine at the 6th position of alpha globin chain by glutamic acid

Answer: B

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27. Down's syndrome is an example

A. Aneuploidy of sex chromosome

B. Aneuploidy of autosome

C. Syndrome caused due to gene mutation

D. Loss of one sex chromosome from the diploid sel

Answer: B

Watch Video Solution

28. In down's syndrome (Mongolism), each cell has how many chromosomes?

A. 21 pair having one less

B. 23 pair with one less

C. 25

D. 47

Answer: D

Watch Video Solution

29. In the given pedigree, the shaded individuals are homozygous recessive for colour blindness. What is the genotype of individual B?

A. Heterozygous

B. Homozygous recessive

C. Homozygous dominant

D. None of the above

Answer: B

View Text Solution

30. Haemophilia is related to

A. Albinism

B. Sickle-cell anaemia

C. Colour blindness

D. Thalassemia

Answer: C

Watch Video Solution

31. The gene of sickle cell anaemia is inherited by

A. Blood cells

B. Bone cells

C. Sex chromosomes

D. Autosomes

Answer: D

Watch Video Solution

32. Represented below is the inheritance pattern of a certain type of traits in humans. Which one of the folloewing conditions could be an example of this pattern?

A. Phenylketonuria

B. Sickle-cell anaemia

C. Haemophilia

D. Thalassemia

Answer: C

View Text Solution

33. A normal - visioned man whose father was colourblind. Theiy have their child as a daughter. What are the chances that this child would be colourblind?

A. 1

B. 0

C. 0.25

D. 0.5

Answer: B

Watch Video Solution

34. A woman with albinic father marries an albinic man. The proportion of her progeny is

A. 2 normal: 1 albinic

B. All normal

C. All albinic

D. 1 normal : 1 albinic

Answer: D

Watch Video Solution

35. Which following pair of diseases is caused by two genes located on human X-chomosome ?

A. Colour blindness and phenylketonuria

B. Colour blindness and haemophilia

C. Colour blindness and albinism

D. Colour blindness and hypertrichosis

Answer: B

Watch Video Solution

36. If father shown normal gentype and mother shown a carrier trait for haemophilia then :

A. Female offspring has probability of 50% to have active disease

B. All the female offspring will be normal

C. All the female offspring will be carriers

D. A male offspring has 50% chances of active disease

Answer: D

Watch Video Solution

37. Cri-du-chat syndrome in humans is caused by the :

A. Fertilisation of an XX egg by a normal Y-bearing sperm

B. Loss of half of the short armo of chrosome 5

C. Loss of half of the long arm of chromosome 5

D. Trisomy of 21st chromosome

Answer: B

Watch Video Solution

38. Colour blindness is caused due to

A. Recessive female chromosome

B. Dominant female chromosome

C. Dominant male chromosome

D. Linkage

Answer: A

Watch Video Solution

39. The chromosomal condition in Turner's syndrome is

or A human female with Turner's syndrome

A. 21 trisomy with XY

B. 44 autosomes + XXY

C. 44 autosomes + XYY

D. 44 autosomes + XO

Answer: D

Watch Video Solution

40. A hereditary disease which is never passed on from father to son is :

A. X-chromosomal linked disease

B. Autosomal linked disease

C. Y-chromosomal linked disease

D. None of the above

Answer: A

Watch Video Solution

41. Absence of one sex chromosome causes

A. Turner's syndrome

B. Klinefelter' syndrome

C. Down's syndrome

D. Tay-Sach's syndrome

Answer: A

Watch Video Solution

42. More men suffer from colour blindess than women because

A. Women are more resistant to disease than men

B. The male sex hormone testosterone causes the disease

C. The colourblind gene is carried on the Y-chromosome

D. Men are hemizygous and one defective gene is enough to make them colourblind

Answer: D

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43. Which one of the following symbols and its representation, used in human pedigree analysis is correct ?

A. 

B. 

C. 

D. 

Answer: A

Watch Video Solution

44. If a colourblind woman marries a normal visioned man, their sons will be -

A. All normal visioned

B. One half normal and one half colourblind

C. Three-fourth colourblind and one-fourth normal

D. All colourblind

Answer: D

Watch Video Solution

45. Haemophilia in man is due to

A. Sex-linked inheritance

B. Sex-limited inheritance

C. Sex-influenced inheritance

D. Primary non-disjunction

Answer: A

Watch Video Solution

46. Colour blindness is due to defect in

A. Cones

B. Rods

C. Both (a) and (b)

D. Rhodopsin

Answer: A

Watch Video Solution

47. Gynaecomastia is a common feature seen in

A. Down's syndrome

B. Turner's syndrome

C. PKU

D. Cystic fibrosis

Answer: C

Watch Video Solution

48. Study the pedigree chart given below

What does it show?

A. Inheritance of a sex-linked inborn error of metabolism like phenylketonuria

B. Inheritance of a condition like phenylketonuria as an autosomal recessive trait

C. The pedigree chart is wrong as this is not possible

D. Inhetitance of a recessive sex-linked disease like haemophilia

Answer: D

View Text Solution

49. Which one of the following conditions in humans is correctly matched with its chromosomal abnormality linkage ?

A. Klinefelter's syndrome - 44autosomes + XXY

B. Colour blindness - Y-linked

C. Erythroblastosis foetalis X-linked

D. Down's syndrome - 44 autosomes + XO

Answer: A

Watch Video Solution

50. Barr body in mammals represent

A. All the heterochromatin in female cells

B. One of the two X-chromosomes in somatc cells of females

C. All the heterochromatin in male and female cells

D. The Y-chromosome in somatic cells of male

Answer: D

Watch Video Solution

51. This pedigree is of a rare trait, in which children have extra fingers and toes. Which one of the following patterns of inheritance is consistent with the pedigree?

A. Autosomal recessive

B. Autosomal dominant

C. Y-linkage

D. Sex-linked recessive

Answer: C

View Text Solution

52. Which of the following abnormalities, results from an unnatural presence of a barr body?

A. Turner's syndrome

B. Down's syndrome

C. Klinefelter's syndrome

D. All of these

Answer: C

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53. The "cri-du-chat" syndrome is caused by change in chromosome structure involving

A. Deletion

B. Duplication

C. Inversion

D. Translocation

Answer: A

Watch Video Solution

54. The daughter born to haemophilic father and normal mother could be

A. Normal

B. Carrier

C. Haemophilic

D. None of these

Answer: B

Watch Video Solution

55. XO-chromosomal abnormally in human beings causes

A. Turner's syndrome

B. Down's syndrome

C. Darwin's syndrome

D. Klinefelter's syndrome

Answer: A

Watch Video Solution

56. Which of these statement about Huntington's disease is true ?

A. Genetic tests to defect the presence of the allele responsible for Huntington's disease do not exist at this time

B. The onset of huntington's disease is typically between birth and three yrs of age

C. There is currently no effective treatment of huntington's disease

D. Huntington's disease is caused by the expression of a recessive allele

Answer: C

Watch Video Solution

57. Both husband and wife have normal vision though their father were colour blind and mother did not have any gene for colour blindness .The probability of their daughter becoming colour blind is :

A. 0.5

B. 0.75

C. 0.25

D. None of these

Answer: D

Watch Video Solution

58. Select the correct bases of DNA, RNA and amino acid of beta chain resulting in sickle-cell anaemia.

A.

DNA	RNA	Amino Acid
CTC/GAG	GUG	Glutamic acid

B.

DNA	RNA	Amino Acid
CAC/GAG	GUG	Valine

C.

DNA	RNA	Amino Acid
CTC/GAG	GAG	Valine

D.

DNA	RNA	Amino Acid
CTC/GAG	GUG	Valine

Answer: B

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59. Pic out the correct statements

(I) Haemophilia is a sex-linked recessive disease

Down's syndrome is due to aneuploidy

(III) Phenylketonuria is an autosomal dominant gene disorder

(IV) Phenylketonuria is an autosomal recessive gene disorder

(V) Sickle-cell anaemia is an X-linked recessive gene disorder

A. I, III and V

B. I and III

C. II and V

D. I, IV and V

Answer: C

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60. The genetic defficiency of ADH - receptor leads to

A. Diabetes mellitus

B. Glycosuria

C. Diabetes insipidus

D. Nephrogenic diabetes

Answer: D

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61. Which of the following is not related to sex chromosome-X or Y?

A. Turner's syndrome

B. Klinefelter's syndrome

C. Down's syndrome

D. Haemophilia and colour blindness

Answer: C

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62. A woman has a haemophilic son and three normal children . Her genotype and that of her husband with respect to this gene would be

A. XX and XhY

B. XhXh and XhY

C. XhXh and XY

D. XhX and Xy

Answer: D

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63. 

In the above pedigree, assume that no outsider marrying in, carry a disease. Write the genotypes of C and D.

A. X^CY and X^CX^C

B. X^CX and XY

C. XY and X^CX^C

D. X^CX^C and X^CX

Answer: B

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64. A marriage between normal visioned man and colour blind woman will produce offspring

A. Normal sons and carrier daughters

B. Colourblind sons and carrier daughters

C. Colourblind sons and 50% carrier daughters

D. 50% colourblind sons and 50% carrier daughters

Answer: C

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65. Sickle cell anamia has not been eleiminated from African polulation as

A. Is controlled by recessive genes

B. Is not a fatal disease

C. Provides immunity against malaria

D. Is controlled by dominant genes

Answer: B

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66. Which of these is not a Mendian disorder ?

A. Cystic fibrosis

B. Sickle-cell anaemia

C. Colour blindness

D. Haemophilia

Answer: C

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67. Gene for colour blindness is located on:

A. Y-chromosome

B. 13th chromosome

C. X-chromosome

D. 21st chromosome

Answer: D

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68. Identify a Mendelian disorder from the following

A. Down's syndrome

B. Turner's syndrome

C. Phenylketonuria

D. Klinefelter's syndrome

Answer: D

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69. A man a inherit his X chromosome from

A. Maternal grandmother or maternal grandfather

B. Father

C. Maternal grandfather

D. Paternal grandmother

Answer: C

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70. Excessive growth fo hair one the pinna is a feature found only in males because :

A. The female sex hormone oestrogen supresses the character in females

B. The gene responsible for the character is present on the Y-chromosomes only

C. The gene responsible for the character is recessive in females and dominanr only in males

D. The character Is induced in males as males produce testosterone

Answer: C

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71. Assertion : Phenylketonuria is a recessive hereditary disease caused by the body 's failure to oxidize an amino acid phenylalanine to tyrosine ,

because of a defective enzyme.

Reason : It results in the presence of phenylalanine acid in the urine .

A. Both A and R are correct and R is the correct explanation Of A

B. Both Assertion and reason are correct, but Reason is not the correct explanation of Assertion

C. Assertion is Correct, but Reason is Incorrect

D. Both Assertion and Reason are Incorrect

Answer: B

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72. Which of the following is not a hereditary disease

A. Cretinism

B. Cystic fibrosis

C. Thalassemia

D. Haemophilia

Answer: A

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73. Which of the following disease results from the genetic inability to synthesise a single enzyme?

A. Colour blindness

B. Down's syndrome

C. Phenylketonuria

D. Diabetes

Answer: C

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74. Down's syndrome and Turner's syndrome occur in human being due to

A. Monosomic and nullisomic conditions, respectively

B. Monosomic and trisomic conditions , respectively

C. Trisomic and monosomic conditions, respectively

D. Trisomic and tetrasomic conditions, respectively

Answer: C

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75. A diseased man marries a normal woman and they get three daughters and five sons. All the daughters were diseased and sons were were normal. The gene of this disease is

A. Sex-linked dominant

B. Sex-linked recessive

C. Sex-limited character

D. Autosomal dominant

Answer: A

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76. Haemophilia, an X-linked recessive disease is caused due to deficiency of

A. Blood plasma and vitamin-K

B. Blood platelets and haemoglobin

C. Lack of clotting material and vitamin-K

D. All of the above

Answer: C

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77. A person is suffering from disease phenylketonuria, Which is an autosomal recessive disease. Which of these is lacking in the person?

A. Homogentisic acid

B. Phenylalanine hydroxylase

C. Ceruloplasmin

D. Cystine

Answer: B

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78. Which of the following is the example of sex-linked disease?

A. AIDS

B. Colour blindness

C. Syphilis

D. Gonorrhoea

Answer: B

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79. If a character is always transmitted directly from a father to all his sons and from their sons to all their sons,then which chromosome carries the gene for this character ?

A. Autosome

B. X-chromosome

C. Y-chromosome

D. None of these

Answer: C

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80. X-chromosome of female in a sex - linked inheritance case can be passed on to :

A. Only female progeny

B. Only male progeny

C. Only in granddaughter

D. Male and female progeny

Answer: D

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81. Pattern baldness, moustanches and beard in human males are examples of :

A. Sex-differentiating traits

B. Sex-determining traits

C. Sex-linked traits

D. Sex-influenced traits

Answer: D

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82. A couple has 6 children, 5 are girl and 1 is boy. The percentage of having a girl on next time is

A. 0.1

B. 0.2

C. 0.5

D. 1

Answer: C

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83. When released from ovary human egg contain

A. One Y-chromosome

B. Two X-chromosomes

C. One X-chromosome

D. XY- Chromosome

Answer: C

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