

NEET PRINCIPLES OF INHERITANCE AND VARIATION — PYQS

Max. Marks: 672

Questions: 168

Section A (MCQ) — 168 questions

Q.1 Which of the following statements are true with reference to the sex-determination in honeybees?

- A. An offspring formed from the union of a sperm and an egg, develops as a female (queen or worker).
- B. An unfertilized egg develops as a male by parthenogenesis.
- C. A male has half the number of chromosomes than that of a female.
- D. Males produce sperms by meiosis.
- E. Honeybees have a haplodiploid sex-determination system.

Choose the correct answer from the options given below : [NEET (UG) 2026]

- (1) A, B, C and E only (2) A, B, C and D only
(3) B, C, D and E only (4) A, B, D and E only

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Q.2 Which one of the following disorders is caused by the substitution of Glutamic acid (Glu) by Valine (Val) at the sixth position of the beta globin chain of the haemoglobin molecule ? [NEET (UG) 2026]

- (1) Phenylketonuria (2) Haemophilia
(3) Sickle-cell anaemia (4) Thalassemia

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Q.3 Match List I with List II : [NEET (UG) 2026]

List-I		List-II	
A.	Incomplete dominance	I.	Human skin colour
B.	Co-dominance	II.	Inheritance of flower colour in <i>Antirrhinum</i> sp.
C.	Pleiotropy	III.	Phenylketonuria disease in humans
D.	Polygenic inheritance	IV.	ABO blood groups

- (1) A-I, B-IV, C-III, D-II (2) A-I, B-III, C-II, D-IV
(3) A-II, B-IV, C-III, D-I (4) A-II, B-I, C-III, D-IV

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Q.4 What is the probability of having children with 'O' blood group, where both mother and father are heterozygous for 'A' and 'B' blood group, respectively ? [NEET (UG) 2026]

- (1) 0% (2) 50% (3) 25% (4) 75%

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Q.5 The sixth mutant codon of beta globin gene causing polymerization of Haemoglobin and change in RBC shape is _____. [NEET (UG) 2026]

- (1) CAG (2) AUG (3) GUG (4) GAG

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Q.6 In a population of a grasshopper species, the chromosome number of some members is 23 and some other members possess 24 chromosomes. The 23 and 24 chromosome-bearing members in this species are _____. [NEET (UG) 2026]

- (1) females and males, respectively
(2) males and females, respectively
(3) all males
(4) all females

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Q.7 Given below are two statements: one is labelled as **Assertion (A)** and the other is labelled as **Reason (R)**.

Assertion (A): In an experiment, Mendel observed that the F_1 progeny plants are all tall and none are dwarf.

Reason (R): Stem height is a contrasting trait, with tall being dominant and dwarf being recessive.

In the light of the above statements, choose the most appropriate answer from the options given below:

[RE-NEET (UG) 2026]

- (1) A is not correct but R is correct
(2) Both A and R are correct and R is the correct explanation of A
(3) Both A and R are correct but R is not the correct explanation of A
(4) A is correct but R is not correct

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Q.8 For a person with blood group 'O', which of the following is not a possible combination of parents' blood group genotypes? [RE-NEET (UG) 2026]

- (1) Father : $I^A I^B$ and Mother : $I^A i$
- (2) Father : $I^A i$ and Mother : $I^A i$
- (3) Father : $I^A i$ and Mother : $I^B i$
- (4) Father : $I^B i$ and Mother : $I^B i$

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Q.9 Given below are two statements:

Statement-I: Down's syndrome is caused by the absence of one of the X-chromosomes.

Statement-II: Turner's syndrome is caused by the presence of an additional copy of the chromosomes.

In the light of the above statements, choose the correct answer from the options given below:

[RE-NEET (UG) 2026]

- (1) Statement-I is incorrect but Statement-II is correct
- (2) Both Statement-I and Statement-II are correct
- (3) Both Statement-I and Statement-II are incorrect
- (4) Statement-I is correct but Statement-II is incorrect

Scan or tap for the full solution



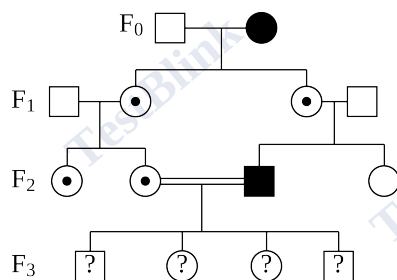
Q.10 What is the pattern of inheritance for polygenic trait? [NEET (UG) 2025]

- (1) Autosomal dominant pattern
- (2) X-linked recessive inheritance pattern
- (3) Mendelian inheritance pattern
- (4) Non-Mendelian inheritance pattern

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Q.11 With the help of given pedigree, find out the probability for the birth of a child having no disease and being a carrier (has the disease mutation in one allele of the gene) in F_3 generation. [NEET (UG) 2025]



- Unaffected male
 ■ Affected male
 ○ Carrier female
 ○ Unaffected female
 ● Affected female

- (1) $1/8$ (2) Zero (3) $1/4$ (4) $1/2$

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Q.12 Genes R and Y follow independent assortment. If RRRYY produce round yellow seeds and rrryy produce wrinkled green seeds, what will be the phenotypic ratio of the F_2 generation? [NEET (UG) 2025]

- (1) Phenotypic ratio - 9:3:3:1
- (2) Phenotypic ratio - 9:7
- (3) Phenotypic ratio - 1:2:1
- (4) Phenotypic ratio - 3:1

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Q.13 Which one of the following can be explained on the basis of Mendel's Law of Dominance?

- A. Out of one pair of factors one is dominant and the other is recessive.
- B. Alleles do not show any expression and both the characters appear as such in F_2 generation.
- C. Factors occur in pairs in normal diploid plants.
- D. The discrete unit controlling a particular character is called factor.
- E. The expression of only one of the parental characters is found in a monohybrid cross.

Choose the correct answer from the options given below:

[NEET (UG) 2024]

- (1) A, B and C only
- (2) A, C, D and E only
- (3) B, C and D only
- (4) A, B, C, D and E

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Q.14 A pink flowered Snapdragon plant was crossed with a red flowered Snapdragon plant. What type of phenotype/s is/are expected in the progeny?

[NEET (UG) 2024]

- (1) Only red flowered plants
- (2) Red flowered as well as pink flowered plants
- (3) Only pink flowered plants
- (4) Red, Pink as well as white flowered plants

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Q.15 In a plant, black seed color (BB/Bb) is dominant over white seed color (bb). In order to find out the genotype of the black seed plant, with which of the following genotype will you cross it? [NEET (UG) 2024]

- (1) BB
- (2) bb
- (3) Bb
- (4) BB/Bb

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Q.16 Match List I with List II

List - I		List - II	
A.	Two or more alternative forms of a gene	I.	Back cross
B.	Cross of F_1 progeny with homozygous recessive parent	II.	Ploidy
C.	Cross of F_1 progeny with any of the parents	III.	Allele
D.	Number of chromosome sets in plant	IV.	Test cross

Choose the correct answer from the options given below: [NEET (UG) 2024]

- (1) A-I, B-II, C-III, D-IV (2) A-II, B-I, C-III, D-IV
(3) A-III, B-IV, C-I, D-II (4) A-IV, B-III, C-II, D-I

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Q.17 Match List I with List II :

List - I		List - II	
A.	Down's syndrome	I.	11 th chromosome
B.	α -thalassemia	II.	'X' chromosome
C.	β -thalassemia	III.	21 st chromosome
D.	Klinefelter's syndrome	IV.	16 th chromosome

Choose the correct answer from the options given below: [NEET (UG) 2024]

- (1) A-I, B-II, C-III, D-IV (2) A-II, B-III, C-IV, D-I
(3) A-III, B-IV, C-I, D-II (4) A-IV, B-I, C-II, D-III

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Q.18 As per ABO blood grouping system, the blood group of father is B^+ , mother is A^+ and child is O^+ . Their respective genotype can be

- A. $I^B i / I^A i / ii$ B. $I^B I^B / I^A I^A / ii$
C. $I^A I^B / ii I^A / I^B i$ D. $I^A i / I^B i / I^A i$
E. $ii I^B / ii I^A / I^A I^B$

Choose the most appropriate answer from the options given below: [NEET (UG) 2024]

- (1) A only (2) B only
(3) C & B only (4) D & E only

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Q.19 Given below are two statements:

Statement-I: When many alleles of a single gene govern a character, it is called polygenic inheritance.

Statement-II: In Polygenic inheritance, the effect of each allele is additive.

In the light of the above statements, choose the correct answer from the options given below.

[RE-NEET (UG) 2024]

- (1) Statement-I is true but Statement-II is false
(2) Statement-I is false but Statement-II is true
(3) Both Statement-I and Statement-II are true
(4) Both Statement-I and Statement-II are false

Scan or tap for the full solution



Q.20 Match List-I with List-II:

List - I Type of Inheritance		List - II Example	
A.	Incomplete dominance	I.	Blood groups in human
B.	Co-dominance	II.	Flower colour in <i>Antirrhinum</i>
C.	Pleiotropy	III.	Skin colour in human
D.	Polygenic inheritance	IV.	Phenylketonuria

Choose the correct answer from the options given below: [RE-NEET (UG) 2024]

- (1) A-III, B-IV, C-II, D-I (2) A-II, B-I, C-IV, D-III
(3) A-II, B-III, C-I, D-IV (4) A-IV, B-I, C-III, D-II

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Q.21 Given below are two statements:

Statement-I: Failure of segregation of chromatids during cell cycle resulting in the gain or loss of whole set of chromosome in an organism is known as aneuploidy.

Statement-II: Failure of cytokinesis after anaphase stage of cell division results in the gain or loss of a chromosome is called polyploidy.

In the light of the above statements, choose the correct answer from the options given below:

[RE-NEET (UG) 2024]

- (1) Statement-I is true but Statement-II is false
(2) Statement-I is false but Statement-II is true
(3) Both Statement-I and Statement-II are true
(4) Both Statement-I and Statement-II are false

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Q.22 When a tall pea plant with round seeds was selfed, it produced the progeny of :

- (a) Tall plants with round seeds and
(b) Tall plants with wrinkled seeds.

Identify the genotype of the parent plant.

[RE-NEET (UG) 2024]

- (1) $TtRr$ (2) $TtRR$ (3) $TTRR$ (4) $TTRr$

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Q.23 Aneuploidy is a chromosomal disorder where chromosome number is not the exact copy of its haploid set of chromosomes, due to :

- A. Substitution B. Addition
C. Deletion D. Translocation
E. Inversion

Choose the most appropriate answer from the options given below : [RE-NEET (UG) 2024]

- (1) C and D only (2) D and E only
(3) A and B only (4) B and C only

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Q.24 The mother has A + blood group, the father has B + and the child is A + . What can be the possibility of genotypes of all three, respectively?

- A. $I^A I^A | I^{B_i} | I^{B_i}$ B. $I^A I^A | I^{B_i} | I^{A_i}$
C. $I^{B_i} | I^A I^A | I^A I^B$ D. $I^A I^A | I^{B_i} | I^{A_i}$
E. $I^{A_i} | I^{B_i} | I^{A_i}$

Choose the correct answer from the options given below: [RE-NEET (UG) 2024]

- (1) C and D (2) D and A (3) A and B (4) B and E

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Q.25 Frequency of recombination between gene pairs on same chromosome as a measure of the distance between genes to map their position on chromosome, was used for the first time by

[NEET (UG) 2023]

- (1) Sutton and Boveri (2) Alfred Sturtevant
(3) Henking (4) Thomas Hunt Morgan

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Q.26 The phenomenon of pleiotropism refers to

[NEET (UG) 2023]

- (1) Presence of two alleles, each of the two genes controlling a single trait
(2) A single gene affecting multiple phenotypic expression
(3) More than two genes affecting a single character
(4) Presence of several alleles of a single gene controlling a single crossover

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Q.27 Which of the following statements are correct about Klinefelter's Syndrome?

- A. This disorder was first described by Langdon Down (1866).
B. Such an individual has overall masculine development. However, the feminine development is also expressed.
C. The affected individual is short statured.

D. Physical, psychomotor and mental development is retarded.

E. Such individuals are sterile.

Choose the correct answer from the options given below : [NEET (UG) 2023]

- (1) C and D only (2) B and E only
(3) A and E only (4) A and B only

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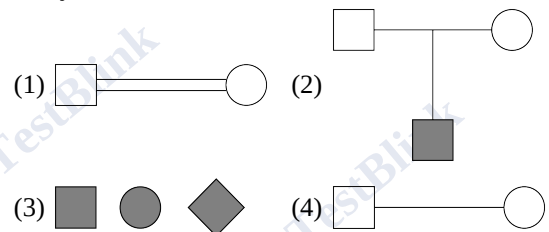
Q.28 Broad palm with single palm crease is visible in a person suffering from- [NEET (UG) 2023]

- (1) Turner's syndrome (2) Klinefelter's syndrome
(3) Thalassemia (4) Down's syndrome

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Q.29 Which one of the following symbols represents mating between relatives in human pedigree analysis? [NEET (UG) 2023]



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Q.30 XO type of sex determination can be found in :

[NEET (UG) 2022]

- (1) *Drosophila* (2) Birds
(3) Grasshoppers (4) Monkeys

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Q.31 Given below are two statements:

Statement-I: Mendel studied seven pairs of contrasting traits in pea plants and proposed the Laws of Inheritance.

Statement-II: Seven characters examined by Mendel in his experiment on pea plants were seed shape and colour, flower colour, pod shape and colour, flower position and stem height.

In the light of the above statements, choose the correct answer from the options given below :

[NEET (UG) 2022]

- (1) Both Statement-I and Statement-II are correct
(2) Both Statement-I and Statement-II are incorrect
(3) Statement-I is correct but Statement-II is incorrect
(4) Statement-I is incorrect but Statement-II is correct

Scan or tap for the full solution



Q.32 Which of the following occurs due to the presence of autosome linked dominant trait?

[NEET (UG) 2022]

- (1) Sickle cell anaemia (2) Myotonic dystrophy
(3) Haemophilia (4) Thalassemia

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Q.33 Given below are two statements : one is labelled as **Assertion (A)** and the other is labelled as **Reason (R)**.

Assertion (A): Mendel's law of independent assortment does not hold good for the genes that are located closely on the same chromosome.

Reason (R): Closely located genes assort independently.

In the light of the above statements, choose the correct answer from the options given below :

[NEET (UG) 2022]

- (1) Both (A) and (R) are correct and (R) is the correct explanation of (A)
(2) Both (A) and (R) are correct but (R) is not the correct explanation of (A)
(3) (A) is correct but (R) is not correct
(4) (A) is not correct but (R) is correct

Scan or tap for the full solution



Q.34 If a colour blind female marries a man whose mother was also colour blind, what are the chances of her progeny having colour blindness?

[NEET (UG) 2022]

- (1) 25% (2) 50% (3) 75% (4) 100%

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Q.35 The recombination frequency between the genes a & c is 5%, b & c is 15%, b & d is 9%, a & b is 20%, c & d is 24% and a & d is 29%. What will be the sequence of these genes on a linear chromosome?

[NEET (UG) 2022]

- (1) a, d, b, c (2) d, b, a, c (3) a, b, c, d (4) a, c, b, d

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Q.36 Given below are two statements:

Statement-I: Sickle cell anaemia and haemophilia are autosomal dominant traits.

Statement-II: Sickle cell anaemia and haemophilia are disorders of the blood.

In the light of the above statements, choose the correct answer from the options given below :

[NEET (UG) 2022 (Phase 2)]

- (1) Statement-I is incorrect but Statement-II is correct
(2) Both Statement-I and Statement-II are correct
(3) Both Statement-I and Statement-II are incorrect
(4) Statement-I is correct but Statement-II is incorrect

Scan or tap for the full solution



Q.37 The chromosomal theory of inheritance was proposed by

[NEET (UG) 2022 (Phase 2)]

- (1) Robert Brown (2) Thomas Morgan
(3) Sutton and Boveri (4) Gregor Mendel

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Q.38 What is the expected percentage of F_2 progeny with yellow and inflated pod in dihybrid cross experiment involving pea plants with green coloured, inflated pod and yellow coloured constricted pod?

[NEET (UG) 2022 (Phase 2)]

- (1) 9% (2) 100% (3) 56.25% (4) 18.75%

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Q.39 If a female individual is with small round head, furrowed tongue, partially open mouth and broad palm with characteristic palm crease. Also the physical, psychomotor and mental development is retarded. The karyotype analysis of such an individual will show :

[NEET (UG) 2022 (Phase 2)]

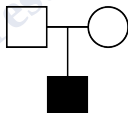
- (1) Trisomy of chromosome 21
(2) 47 chromosomes with XXY sex chromosomes
(3) 45 chromosomes with XO sex chromosomes
(4) 47 chromosomes with XYY sex chromosomes

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Q.40 Select the incorrect match regarding the symbols used in the Pedigree analysis:

[NEET (UG) 2022 (Phase 2)]

- (1)  – Parent with male child affected with disease
(2)  – Sex unspecified
(3)  – Affected individual
(4)  – Consanguineous mating

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Q.41 A normal girl, whose mother is haemophilic marries a male with no ancestral history of haemophilia. What will be the possible phenotypes of the offspring?

- A. Haemophilic son and haemophilic daughter.
 B. Haemophilic son and carrier daughter.
 C. Normal daughter and normal son.
 D. Normal son and haemophilic daughter.

Choose the most appropriate answer from the options given below: [NEET (UG) 2022 (Phase 2)]

- (1) B and D only (2) A and B only
 (3) B and C only (4) A and D only

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Q.42 The production of gametes by the parents, formation of zygotes, the F_1 and F_2 plants, can be understood from a diagram called :

[NEET (UG) 2021]

- (1) Net square (2) Bullet square
 (3) Punch square (4) Punnett square

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Q.43 In a cross between a male and female, both heterozygous for sickle cell anaemia gene, what percentage of the progeny will be diseased?

[NEET (UG) 2021]

- (1) 100% (2) 50% (3) 75% (4) 25%

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Q.44 Experimental verification of the chromosomal theory of inheritance was done by

[NEET (UG) 2020]

- (1) Sutton (2) Mendel (3) Morgan (4) Boveri

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Q.45 Select the correct match

[NEET (UG) 2020]

- (1) Thalassemia – X linked
 (2) Sickle cell anaemia – Autosomal recessive trait, chromosome-11
 (3) Phenylketonuria – Autosomal dominant trait
 (4) Haemophilia – Y linked

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Q.46 Identify the wrong statement with reference to the gene 'I' that controls ABO blood groups.

[NEET (UG) 2020]

- (1) Allele 'i' does not produce any sugar.
 (2) The gene (I) has three alleles.
 (3) When I^A and I^B are present together, they express same type of sugar.
 (4) A person will have only two of the three alleles.

Scan or tap for the full solution



Q.47 How many true breeding pea plant varieties did Mendel select as pairs, which were similar except in one character with contrasting traits?

[NEET (UG) 2020]

- (1) 14 (2) 4 (3) 2 (4) 8

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Q.48 The frequency of recombination between gene pairs on the same chromosome as a measure of the distance between genes was explained by :

[NEET (UG) 2019]

- (1) Alfred Sturtevant (2) Gregor J. Mendel
 (3) Sutton Boveri (4) T.H. Morgan

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Q.49 In *Antirrhinum* (Snapdragon), a red flower was crossed with a white flower and in F_1 generation, pink flowers were obtained. When pink flowers were selfed, the F_2 generation showed white, red and pink flowers. Choose the **incorrect** statement from the following : [NEET (UG) 2019]

- (1) Ratio of F_2 is $\frac{1}{4}$ (Red) : $\frac{2}{4}$ (Pink) : $\frac{1}{4}$ (White)
 (2) Law of Segregation does not apply in this experiment
 (3) This experiment does not follow the Principle of Dominance
 (4) Pink colour in F_1 is due to incomplete dominance

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Q.50 What map unit (Centimorgan) is adopted in the construction of genetic maps? [NEET (UG) 2019]

- (1) A unit of distance between genes on chromosomes, representing 1% cross over.
 (2) A unit of distance between genes on chromosomes, representing 50% cross over.
 (3) A unit of distance between two expressed genes, representing 10% cross over.
 (4) A unit of distance between two expressed genes, representing 100% cross over.

Scan or tap for the full solution



Q.51 What is the genetic disorder in which an individual has an overall masculine development, gynaecomastia, and is sterile? [NEET (UG) 2019]

- (1) Edward syndrome (2) Down's syndrome
 (3) Turner's syndrome (4) Klinefelter's syndrome

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Q.52 Select the **incorrect** statement. [NEET (UG) 2019]

- (1) In domesticated fowls, sex of progeny depends on the type of sperm rather than egg.
- (2) Human males have one of their sex-chromosome much shorter than the other.
- (3) Male fruit fly is heterogametic
- (4) In male grasshoppers, 50% of sperms have no sex-chromosome.

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Q.53 Which of the following pairs is wrongly matched?

[NEET 2018]

- (1) Starch synthesis in pea : Multiple alleles
- (2) ABO blood grouping : Co-dominance
- (3) XO type sex determination: Grasshopper
- (4) T.H. Morgan : Linkage

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Q.54 Which of the following characteristics represent 'Inheritance of blood groups' in humans?

- A. Dominance B. Co-dominance
C. Multiple allele D. Incomplete dominance
E. Polygenic inheritance

[NEET 2018]

- (1) B, C and E only (2) A, B and C only
- (3) B, D and E only (4) A, C and E only

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Q.55 A woman has an X-linked condition on one of her X chromosomes. This chromosome can be inherited by

[NEET 2018]

- (1) only daughters
- (2) only sons
- (3) only grandchildren
- (4) both sons and daughters

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Q.56 Select the correct statement :

[NEET 2018]

- (1) Franklin Stahl coined the term “linkage”.
- (2) Punnett square was developed by a British scientist.
- (3) Spliceosomes take part in translation.
- (4) Transduction was discovered by S. Altman.

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Q.57 Thalassemia and sickle cell anemia are caused due to a problem in globin molecule synthesis.

Select the correct statement. [NEET 2017]

- (1) Both are due to a qualitative defect in globin chain synthesis
- (2) Thalassemia is due to less synthesis of globin molecules
- (3) Sickle cell anemia is due to a quantitative problem of globin molecules
- (4) Both are due to a quantitative defect in globin chain synthesis

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Q.58 The genotypes of a Husband and Wife are $I^A I^B$ and $I^A i$.

Among the blood types of their children, how many different genotypes and phenotypes are possible?

[NEET 2017]

- (1) 4 genotypes ; 3 phenotypes
- (2) 4 genotypes ; 4 phenotypes
- (3) 3 genotypes ; 4 phenotypes
- (4) 3 genotypes ; 3 phenotypes

Scan or tap for the full solution



Q.59 A disease caused by an autosomal primary non-disjunction is :

[NEET 2017]

- (1) Klinefelter's Syndrome
- (2) Down's Syndrome
- (3) Turner's Syndrome
- (4) Sickle Cell Anemia

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Q.60 Which one from those given below is the period for Mendel's hybridisation experiments ?

[NEET 2017]

- (1) 1870 – 1877 (2) 1857 – 1869
- (3) 1840 – 1850 (4) 1856 – 1863

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Q.61 Among the following characters, which one was not considered by Mendel in his experiments on pea?

[NEET 2017]

- (1) Stem-Tall or dwarf
- (2) Pod-Inflated or constricted
- (3) Trichomes-Glandular or non-glandular
- (4) Seed-Green or yellow

Scan or tap for the full solution



Q.62 A cell at telophase stage is observed by a student in a plant brought from the field. He tells his teacher that this cell is not like other cells at telophase stage. There is no formation of cell plate and thus the cell is containing more number of chromosomes as compared to other dividing cells. This would result in -

[NEET 2016 (Phase 1)]

- (1) Polyteny (2) Aneuploidy
(3) Polyploidy (4) Somaclonal variation

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Q.63 Pick out the **correct** statements :

- A. Haemophilia is a sex-linked recessive disease.
B. Down's syndrome is due to aneuploidy.
C. Phenylketonuria is an autosomal recessive gene disorder.
D. Sickle cell anaemia is an X-linked recessive gene disorder.

[NEET 2016 (Phase 1)]

- (1) A, B and C only (2) A, C and D only
(3) A and D only (4) B and D only

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Q.64 A tall true breeding garden pea plant is crossed with a dwarf true breeding garden pea plant. When the F_1 plants were selfed the resulting genotypes were in the ratio of -

[NEET 2016 (Phase 1)]

- (1) 3 : 1 :: Tall : Dwarf
(2) 1 : 2 : 1 :: Tall heterozygous : Tall homozygous : Dwarf
(3) 1 : 2 : 1 :: Tall homozygous : Tall heterozygous : Dwarf
(4) 3 : 1 :: Dwarf : Tall

Scan or tap for the full solution



Q.65 Match the terms in **Column-I** with their description in **Column-II** and choose the correct option :

[NEET 2016 (Phase 1)]

Column-I		Column-II	
a.	Dominance	i.	Many genes govern a single character
b.	Codominance	ii.	In a heterozygous organism only one allele expresses itself
c.	Pleiotropy	iii.	In a heterozygous organism both alleles express themselves fully
d.	Polygenic inheritance	iv.	A single gene influences many characters

- (1) (a)-(ii), (b)-(iii), (c)-(iv), (d)-(i)
(2) (a)-(iv), (b)-(i), (c)-(ii), (d)-(iii)
(3) (a)-(ii), (b)-(ii), (c)-(iv), (d)-(iii)
(4) (a)-(iv), (b)-(iii), (c)-(i), (d)-(ii)

Scan or tap for the full solution



Q.66 In a testcross involving F_1 dihybrid flies, more parental-type offspring were produced than the recombinant-type offspring. This indicates

[NEET 2016 (Phase 1)]

- (1) Both of the characters are controlled by more than one gene
(2) The two genes are linked and present on the same chromosome
(3) The two genes are located on two different chromosomes
(4) Chromosomes failed to separate during meiosis

Scan or tap for the full solution



Q.67 Which of the following most appropriately describes haemophilia ?

[NEET 2016 (Phase 1)]

- (1) Chromosomal disorder
(2) X-linked recessive gene disorder
(3) Dominant gene disorder
(4) Recessive gene disorder

Scan or tap for the full solution



Q.68 The mechanism that causes a gene to move from one linkage group to another is called

[NEET 2016 (Phase 2)]

- (1) crossing-over (2) translocation
(3) duplication (4) inversion

Scan or tap for the full solution



Q.69 If a colour-blind man marries a woman who is homozygous for normal colour vision, the probability of their son being colour-blind is

[NEET 2016 (Phase 2)]

- (1) 0.75 (2) 0.5 (3) 0 (4) 1

Scan or tap for the full solution



Q.70 A true breeding plant is -

[NEET 2016 (Phase 2)]

- (1) produced due to cross-pollination among unrelated plants
(2) one that is able to breed on its own
(3) near homozygous and produces offspring of its own kind
(4) always homozygous recessive in its genetic constitution

Scan or tap for the full solution



Q.71 The movement of a gene from one linkage group to another is called [AIPMT 2015 (Cancelled)]

- (1) inversion (2) translocation
(3) duplication (4) crossing over

Scan or tap for the full solution



Q.72 Alleles are [AIPMT 2015 (Cancelled)]

- (1) true breeding homozygotes
(2) different phenotype
(3) heterozygotes
(4) different molecular forms of a gene

Scan or tap for the full solution



Q.73 Multiple alleles are present [AIPMT 2015 (Cancelled)]

- (1) on different chromosomes
(2) at the same locus of the chromosome
(3) at different loci on the same chromosome.
(4) on non-sister chromatids

Scan or tap for the full solution



Q.74 A man with blood group 'A' marries a woman with blood group 'B'. What are all the possible blood groups of their offsprings? [AIPMT 2015 (Cancelled)]

- (1) A and B only (2) A, B, AB and O
(3) A, B and AB only (4) O only

Scan or tap for the full solution



Q.75 How many pairs of contrasting characters in pea plants were studied by Mendel in his experiments? [AIPMT 2015 (Cancelled)]

- (1) Eight (2) Five (3) Seven (4) Six

Scan or tap for the full solution



Q.76 An abnormal human baby with 'XXX' sex chromosomes was born due to [AIPMT 2015 (Cancelled)]

- (1) formation of abnormal sperms in the father
(2) fusion of two ova and one sperm
(3) formation of abnormal ova in the mother
(4) fusion of two sperms and one ovum

Scan or tap for the full solution



Q.77 Select the incorrect statement with regard to Haemophilia : [NEET 2013]

- (1) It is a dominant disease
(2) A single protein involved in the clotting of blood is affected
(3) It is a recessive disease
(4) It is a sex-linked disease

Scan or tap for the full solution



Q.78 If both parents are carriers for thalassemia, which is an autosomal recessive disorder, what are the chances of pregnancy resulting in an affected child ? [NEET 2013]

- (1) 100% (2) 25%
(3) no chance (4) 50%

Scan or tap for the full solution



Q.79 If two persons with 'AB' blood group marry and have sufficiently large number of children, these children could be classified as 'A' blood group : 'AB' blood group : 'B' blood group in 1 : 2 : 1 ratio. Modern technique of protein electrophoresis reveals presence of both 'A' and 'B' type proteins in 'AB' blood group individuals. This is an example of :

[NEET 2013]

- (1) Codominance
(2) Partial dominance
(3) Incomplete dominance
(4) Complete dominance

Scan or tap for the full solution



Q.80 Which idea is depicted by a cross in which the F_1 generation resembles both the parents? [NEET 2013]

- (1) law of dominance
(2) co-dominance
(3) incomplete dominance
(4) inheritance of one gene

Scan or tap for the full solution



Q.81 Which of the following statements is not true of two genes that show 50% recombination frequency ? [NEET 2013]

- (1) The genes are tightly linked
(2) The genes show independent assortment
(3) If the genes are present on the same chromosome, they undergo more than one crossovers in every meiosis.
(4) The genes may be on different chromosomes

Scan or tap for the full solution



Q.82 In our society women are blamed for producing female children. Choose the correct answer for the sex-determination in humans.

[NEET 2013 (Karnataka)]

- (1) Due to some defect like aspermia in man
- (2) Due to the genetic make up of the particular sperm which fertilizes the egg
- (3) Due to the genetic make up of the egg
- (4) Due to some defect in the women

Scan or tap for the full solution



Q.83 Which one is the incorrect statement with regards to the importance of pedigree analysis?

[NEET 2013 (Karnataka)]

- (1) It confirms that DNA is the carrier of genetic information
- (2) It helps to trace the inheritance of a specific trait
- (3) It confirms that the trait is linked to one of the autosome
- (4) It helps to understand whether the trait in question is dominant or recessive

Scan or tap for the full solution



Q.84 Down's syndrome in humans is due to :

[NEET 2013 (Karnataka)]

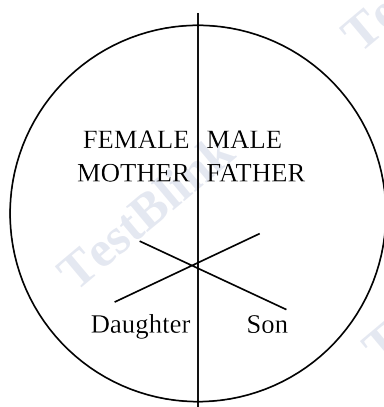
- (1) Three 'X' chromosomes
- (2) Monosomy
- (3) Three copies of chromosome 21
- (4) Two 'Y' chromosomes

Scan or tap for the full solution



Q.85 Represented below is the inheritance pattern of a certain type of traits in humans. Which one of the following conditions could be an example of this pattern ?

[AIPMT 2012 (Mains)]



- (1) Haemophilia
- (2) Sickle cell anaemia
- (3) Thalassemia
- (4) Phenylketonuria

Scan or tap for the full solution



Q.86 A test cross is carried out to : [AIPMT 2012 (Mains)]

- (1) Determine whether two species or varieties will breed successfully
- (2) Determine the genotype of a plant at F_2
- (3) Predict whether two traits are linked
- (4) Assess the number of alleles of a gene

Scan or tap for the full solution



Q.87 Which one of the following is a wrong statement regarding mutations ? [AIPMT 2012 (Mains)]

- (1) UV and gamma rays are mutagens
- (2) Deletion and insertion of base pairs cause frame-shift mutations
- (3) Cancer cells commonly show chromosomal aberrations
- (4) Change in a single base pair of DNA does not cause mutation

Scan or tap for the full solution



Q.88 A normal-visioned man whose father was colour-blind, marries a woman whose father was also colour-blind. They have their first child as a daughter. What are the chances that this child would be colour-blind ? [AIPMT 2012 (Prelims)]

- (1) 50%
- (2) 25%
- (3) 100%
- (4) Zero percent

Scan or tap for the full solution



Q.89 F_2 generation in a Mendelian cross showed that both genotypic and phenotypic ratios are same as 1 : 2 : 1. It represents a case of [AIPMT 2012 (Prelims)]

- (1) Monohybrid cross with incomplete dominance
- (2) Co-dominance
- (3) Monohybrid cross with complete dominance
- (4) Dihybrid cross

Scan or tap for the full solution



Q.90 Which one of the following conditions of the zygotic cell would lead to the birth of a normal human female child? [AIPMT 2011 (Mains)]

- (1) only one Y chromosome
- (2) only one X chromosome
- (3) one X and one Y chromosome
- (4) two X chromosomes

Scan or tap for the full solution



Q.91 Test cross in plants or in *Drosophila* involves crossing: [AIPMT 2011 (Mains)]

- (1) the F_1 hybrid with a double recessive genotype
- (2) between two genotypes with dominant trait
- (3) between two F_1 hybrids
- (4) between two genotypes with recessive trait

Scan or tap for the full solution



Q.92 Which one of the following conditions correctly describes the manner of determining the sex ?

[AIPMT 2011 (Prelims)]

- (1) XO condition in humans as found in Turner Syndrome, determines female sex
- (2) XO type of sex chromosomes determine male sex in grasshopper
- (3) Homozygous sex chromosomes (ZZ) determine female sex in Birds
- (4) Homozygous sex chromosomes (XX) produce male in *Drosophila*

Scan or tap for the full solution



Q.93 Mutations can be induced with :

[AIPMT 2011 (Prelims)]

- (1) Gamma radiation
- (2) Infra Red radiations
- (3) IAA
- (4) Ethylene

Scan or tap for the full solution



Q.94 ABO blood grouping is controlled by gene I which has three alleles and shows co-dominance. There are six genotypes. How many phenotypes in all are possible -

[AIPMT 2010 (Mains)]

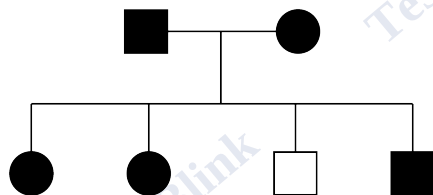
- (1) five
- (2) four
- (3) three
- (4) six

Scan or tap for the full solution



Q.95 Study the pedigree chart of a certain family given below and select the correct conclusion which can be drawn for the character -

[AIPMT 2010 (Mains)]



- (1) The trait under study could not be colourblindness
- (2) The female parent is heterozygous
- (3) The parents could not have had a normal daughter for this character
- (4) The male parent is homozygous dominant

Scan or tap for the full solution



Q.96 A cross in which an organism showing a dominant phenotype is crossed with the recessive parent in order to know its genotype is called -

[AIPMT 2010 (Mains)]

- (1) Dihybrid cross
- (2) Back cross
- (3) Monohybrid cross
- (4) Test cross

Scan or tap for the full solution



Q.97 In *Antirrhinum* two plants with pink flowers were hybridized. The F_1 plants produced red, pink and white flowers in the proportion of 1 red, 2 pink and 1 white. What could be the genotype of the two plants used for hybridization? Red flower colour is determined by RR, and White by rr genes -

[AIPMT 2010 (Mains)]

- (1) rrrr
- (2) rr
- (3) Rr
- (4) RR

Scan or tap for the full solution



Q.98 Which one of the following symbols and its representation, used in human pedigree analysis is correct -

[AIPMT 2010 (Prelims)]

- (1) = mating between relatives
- (2) = unaffected female
- (3) = unaffected male
- (4) = male affected

Scan or tap for the full solution



Q.99 ABO blood groups in humans are controlled by the gene I. It has three alleles - I^A , I^B and i. Since there are three different alleles, six different genotypes are possible. How many phenotypes can occur -

[AIPMT 2010 (Prelims)]

- (1) One
- (2) Two
- (3) Three
- (4) Four

Scan or tap for the full solution



Q.100 Select the correct statement from the ones given below with respect to dihybrid cross -

[AIPMT 2010 (Prelims)]

- (1) Genes far apart on the same chromosome show very few recombinations
- (2) Tightly linked genes on the same chromosome show very few recombinations
- (3) Tightly linked genes on the same chromosome show higher recombinations
- (4) Genes loosely linked on the same chromosome show similar recombinations as the tightly linked ones

Scan or tap for the full solution



Q.101 The genotype of a plant showing the dominant phenotype can be determined by –

[AIPMT 2010 (Prelims)]

- (1) Pedigree analysis (2) Back cross
(3) Test cross (4) Dihybrid cross

Scan or tap for the full solution



Q.102 Which one of the following cannot be explained on the basis of Mendel's Law of Dominance?

[AIPMT 2010 (Prelims)]

- (1) Out of one pair of factors one is dominant, and the other recessive
(2) Alleles do not show any blending and both the characters recover as such in F_2 generation
(3) The discrete unit controlling a particular character is called a factor
(4) Factors occur in pairs

Scan or tap for the full solution



Q.103 Select the incorrect statement from the following:

[AIPMT 2009]

- (1) Baldness is a sex limited trait
(2) Galactosemia is an inborn error of metabolism
(3) Linkage is an exception to the principle of independent assortment in heredity
(4) Small population size results in random genetic drift in a population

Scan or tap for the full solution



Q.104 Sickle-cell anaemia is:

[AIPMT 2009]

- (1) Caused by substitution of valine by glutamic acid in the beta globin chain of haemoglobin
(2) An autosomal linked dominant trait
(3) Caused by a change in a single base pair of DNA
(4) Characterised by elongated sickle like RBCs with a nucleus

Scan or tap for the full solution



Q.105 The most popularly known blood grouping is the ABO grouping. It is named ABO and not ABC, because "O" in it refers to having:

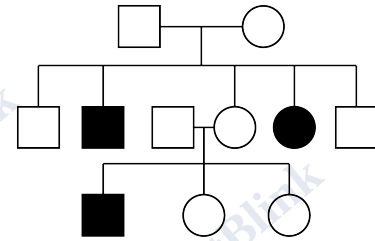
[AIPMT 2009]

- (1) Other antigens besides A and B on RBCs
(2) No antigens A and B on RBCs
(3) Overdominance of this type on the genes for A and B types
(4) One antibody only – either anti-A or anti-B on the RBCs

Scan or tap for the full solution



Q.106 Study the pedigree chart given below:



What does it show?

[AIPMT 2009]

- (1) Inheritance of a recessive sex-linked disease like haemophilia
(2) Inheritance of a sex-linked inborn error of metabolism like phenylketonuria
(3) The pedigree chart is wrong as this is not possible
(4) Inheritance of a condition like phenylketonuria as an autosomal recessive trait

Scan or tap for the full solution



Q.107 Which one of the following conditions in humans is correctly matched with its chromosomal abnormality/linkage?

[AIPMT 2008]

- (1) Klinefelter's syndrome — 44 autosomes + XXY
(2) Colour-blindness — Y-linked
(3) Down syndrome — 44 autosomes + XO
(4) Erythroblastosis foetalis — X-linked

Scan or tap for the full solution



Q.108 Haploids are more suitable for mutation studies than the diploids. This is because:

[AIPMT 2008]

- (1) all mutations, whether dominant or recessive are expressed in haploids
(2) mutagens penetrate in haploids more effectively than in diploids
(3) haploids are reproductively more stable than diploids
(4) haploids are more abundant in nature than diploids

Scan or tap for the full solution



Q.109 A human male produces sperms with the genotypes AB, Ab, aB, and ab pertaining to two diallelic characters in equal proportions. What is the corresponding genotype of this person?

[AIPMT 2007]

- (1) AaBb (2) AABb (3) AaBB (4) AABb

Scan or tap for the full solution



Q.110 In pea plants, yellow seeds are dominant to green. If a heterozygous yellow seeded plant is crossed with a green seeded plant, what ratio of yellow and green seeded plants would you expect in F_1 generation?

[AIPMT 2007]

- (1) 9 : 1 (2) 3 : 1 (3) 50 : 50 (4) 1 : 3

Scan or tap for the
full solution



Q.111 Inheritance of skin colour in humans is an example of: [AIPMT 2007]

- (1) Chromosomal aberration
- (2) Polygenic inheritance
- (3) Codominance
- (4) Point mutation

Scan or tap for the
full solution



Q.112 In the hexaploid wheat, the haploid (n) and basic (x) numbers of chromosomes are: [AIPMT 2007]

- (1) $n = 21$ and $x = 14$ (2) $n = 21$ and $x = 21$
 (3) $n = 7$ and $x = 21$ (4) $n = 21$ and $x = 7$

Scan or tap for the
full solution



Q.113 A common test to find the genotype of a hybrid is by:- [AIPMT 2007]

- (1) Crossing of one F_1 progeny with recessive parent
- (2) Crossing of one F_2 progeny with female parent
- (3) Crossing of one F_2 progeny with male parent
- (4) Studying the sexual behaviour of F_1 progenies

Scan or tap for the
full solution



Q.114 Both sickle cell anemia and Huntington's chorea are- [AIPMT 2006]

- (1) Congenital disorders
- (2) Bacteria-related diseases
- (3) Virus-related diseases
- (4) Pollutant-induced disorders

Scan or tap for the
full solution



Q.115 Test cross involves-

[AIPMT 2006]

- (1) Crossing between two F_1 hybrids
- (2) Crossing the F_1 hybrid with a double recessive genotype
- (3) Crossing between two genotypes with recessive trait
- (4) Crossing between two genotypes with dominant trait

Scan or tap for the
full solution



Q.116 If a colour blind woman marries a normal visioned man, their sons will be [AIPMT 2006]

- (1) All normal visioned
- (2) Three-fourths colourblind and one-fourth normal
- (3) One-half colourblind and one-half normal
- (4) All colourblind

Scan or tap for the
full solution



Q.117 Cri-du-chat syndrome in humans is caused by the-

[AIPMT 2006]

- (1) Loss of half of the long arm of chromosome 5
- (2) Loss of half of the short arm of chromosome 5
- (3) Trisomy of 21st chromosome
- (4) Fertilization of an XX egg by a normal Y-bearing sperm

Scan or tap for the
full solution



Q.118 Sickle cell anaemia has not been eliminated from the African population because- [AIPMT 2006]

- (1) It is not a fatal disease
- (2) It is controlled by dominant genes
- (3) It is controlled by recessive genes
- (4) It provides immunity against malaria

Scan or tap for the
full solution



Q.119 In Mendel's experiments with garden pea, round seed shape (RR) was dominant over wrinkled seeds (rr), yellow cotyledon (YY) was dominant over green cotyledon (yy). What are the expected phenotypes in the F_2 generation of the cross $RRYY \times rryy$? [AIPMT 2006]

- (1) Round seeds with yellow cotyledons, and wrinkled seeds with yellow cotyledons
- (2) Only wrinkled seeds with green cotyledons
- (3) Only wrinkled seeds with yellow cotyledons
- (4) Only round seeds with green cotyledons

Scan or tap for the
full solution



Q.120 How many different kinds of gametes will be produced by a plant having the genotype $AABbCC$?

[AIPMT 2006]

- (1) Two (2) Nine (3) Four (4) Three

Scan or tap for the
full solution



Q.121 Phenotype of an organism is the result of-

[AIPMT 2006]

- (1) Environmental changes and sexual dimorphism
- (2) Cytoplasmic effects and nutrition
- (3) Genotype and environment interactions
- (4) Mutations and linkages

Scan or tap for the full solution



Q.122 Which one of the following is an example of polygenic inheritance? [AIPMT 2006]

- (1) Skin colour in humans
- (2) Pod shape in garden pea
- (3) Production of male honey bee
- (4) Flower colour in *Mirabilis jalapa*

Scan or tap for the full solution



Q.123 In order to find out the different types of gametes produced by a pea plant having the genotype AaBb, it should be crossed to a plant with the genotype -

[AIPMT 2005]

- (1) aaBB
- (2) aabb
- (3) AaBb
- (4) AABB

Scan or tap for the full solution



Q.124 G-6-P dehydrogenase deficiency is associated with haemolysis of -

[AIPMT 2005]

- (1) RBCs
- (2) Lymphocytes
- (3) Platelets
- (4) Leucocytes

Scan or tap for the full solution



Q.125 A man and a woman, who do not show any apparent signs of a certain inherited disease, have seven children (2 daughters and 5 sons). Three of the sons suffer from the given disease but none of the daughters are affected. Which of the following mode of inheritance do you suggest for this disease?

[AIPMT 2005]

- (1) Autosomal dominant
- (2) Sex-linked recessive
- (3) Sex-linked dominant
- (4) Sex-limited recessive

Scan or tap for the full solution



Q.126 A woman with 47 chromosomes due to three copies of chromosome 21 is characterized by -

[AIPMT 2005]

- (1) Superfemaleness
- (2) Turner's syndrome
- (3) Triploidy
- (4) Down's syndrome

Scan or tap for the full solution



Q.127 Haemophilia is more commonly seen in human males than in human females because -

[AIPMT 2005]

- (1) This disease is due to an X-linked dominant mutation
- (2) This disease is due to a Y-linked recessive mutation
- (3) This disease is due to an X-linked recessive mutation
- (4) A greater proportion of girls die in infancy

Scan or tap for the full solution



Q.128 Which of the following is not a hereditary disease?

[AIPMT 2005]

- (1) Cretinism
- (2) Cystic fibrosis
- (3) Haemophilia
- (4) Thalassemia

Scan or tap for the full solution



Q.129 A woman with normal vision, but whose father was colour blind, marries a colour blind man. Suppose that the fourth child of this couple was a boy. This boy -

[AIPMT 2005]

- (1) May be colour blind or may have normal vision
- (2) Must have normal colour vision
- (3) Must be colour blind
- (4) Will be partially colour blind since he is heterozygous for the colour blind mutant allele.

Scan or tap for the full solution



Q.130 A woman with 47 chromosomes due to three copies of chromosome 21 is characterized by

[AIPMT 2005]

- (1) triploidy
- (2) Down's syndrome
- (3) superfemaleness
- (4) Turner's syndrome

Scan or tap for the full solution



Q.131 In a plant, red fruit (R) is dominant over yellow fruit (r) and tallness (T) is dominant over shortness (t). If a plant with RRTt genotype is crossed with a plant that is rrtt

[AIPMT 2004]

- (1) 75% will be tall with red fruit
- (2) 25% will be tall with red fruit
- (3) 50% will be tall with red fruit
- (4) All the offspring will be tall with red fruit

Scan or tap for the full solution



Q.132 A male human is heterozygous for autosomal genes A and B and is also hemizygous for hemophilic gene h. What proportion of his sperms will be abh?

[AIPMT 2004]

- (1) 1/16
- (2) 1/32
- (3) 1/8
- (4) 1/4

Scan or tap for the full solution



Q.133 Lack of independent assortment of two genes A and B in fruit fly *Drosophila* is due to

[AIPMT 2004]

- (1) Linkage (2) Recombination
(3) Repulsion (4) Crossing over

Scan or tap for the
full solution



Q.134 One of the parents of a cross has a mutation in its mitochondria. In that cross, that parent is taken as a male. During segregation of F_2 progenies that mutation is found in -

[AIPMT 2004]

- (1) 50% of the progenies
(2) 1/3 of the progenies
(3) None of the progenies
(4) All the progenies

Scan or tap for the
full solution



Q.135 A normal woman, whose father was colour-blind is married to a normal man. The sons would be :-

[AIPMT 2004]

- (1) All colour-blind (2) 75% colour-blind
(3) All normal (4) 50% colour-blind

Scan or tap for the
full solution



Q.136 The recessive genes located on X-chromosomes in humans are always -

[AIPMT 2004]

- (1) Expressed in females (2) Sub-lethal
(3) Expressed in males (4) Lethal

Scan or tap for the
full solution



Q.137 After a mutation at a genetic locus the character of an organism changes due to the change in :-

[AIPMT 2004]

- (1) Protein synthesis pattern
(2) RNA transcription pattern
(3) DNA replication
(4) Protein structure

Scan or tap for the
full solution



Q.138 In a mutational event, when adenine is replaced by guanine, it is a case of -

[AIPMT 2004]

- (1) Frameshift mutation (2) Transition
(3) Transversion (4) Transcription

Scan or tap for the
full solution



Q.139 Which one of the following traits of garden pea studied by Mendel was a recessive feature?

[AIPMT 2003]

- (1) Green seed colour (2) Green pod colour
(3) Axial flower position (4) Round seed shape

Scan or tap for the
full solution



Q.140 The genes controlling the seven pea characters studied by Mendel are now known to be located on how many different chromosomes?

[AIPMT 2003]

- (1) Six (2) Seven (3) Five (4) Four

Scan or tap for the
full solution



Q.141 Two crosses between the same pair of genotypes or phenotypes in which the sources of the gametes are reversed in one cross, is known as:

[AIPMT 2003]

- (1) Reciprocal cross (2) Reverse cross
(3) Test cross (4) Dihybrid cross

Scan or tap for the
full solution



Q.142 Pattern baldness, moustaches and beard in human males are examples of:

[AIPMT 2003]

- (1) Sex limited traits
(2) Sex influenced traits
(3) Sex determining traits
(4) Sex linked traits

Scan or tap for the
full solution



Q.143 Which one of the following conditions though harmful in itself, is also a potential saviour from a mosquito borne infectious disease?

[AIPMT 2003]

- (1) Pernicious anaemia (2) Thalassaemia
(3) Leukemia (4) Sickle cell anaemia

Scan or tap for the
full solution



Q.144 Down's syndrome is caused by an extra copy of chromosome number 21. What percentage of offspring produced by an affected mother and a normal father would be affected by this disorder?

[AIPMT 2003]

- (1) 50% (2) 100% (3) 75% (4) 25%

Scan or tap for the
full solution



Q.145 In *Drosophila*, the sex is determined by:

[AIPMT 2003]

- (1) X and Y chromosomes
- (2) Whether the egg is fertilized or develops parthenogenetically
- (3) The ratio of number of X-chromosomes to the sets of autosomes
- (4) The ratio of pairs of X-chromosomes to the pairs of autosomes

Scan or tap for the full solution



Q.146 Christmas disease is another name for :-

[AIPMT 2003]

- (1) Hepatitis B
- (2) Sleeping sickness
- (3) Haemophilia B
- (4) Down's syndrome

Scan or tap for the full solution



Q.147 Which of the following is the example of pleiotropy ?

[AIPMT 2002]

- (1) Thalassemia
- (2) Haemophilia
- (3) Sickle cell anaemia
- (4) Colour blindness

Scan or tap for the full solution



Q.148 There are three genes a, b and c. The percentage of crossing over between a and b is 20%, b and c is 28% and a and c is 8%. What is the sequence of genes on chromosome?

[AIPMT 2002]

- (1) a, b, c
- (2) b, a, c
- (3) a, c, b
- (4) None

Scan or tap for the full solution



Q.149 On selfing a plant of F_1 generation with genotype "AABbCC", the phenotypic ratio in F_2 generation will be

[AIPMT 2002]

- (1) 1 : 1
- (2) 3 : 1
- (3) 9 : 3 : 3 : 1
- (4) 27 : 9 : 9 : 9 : 3 : 3 : 3 : 1

Scan or tap for the full solution



Q.150 A gene is said to be dominant if :- [AIPMT 2002]

- (1) It is expressed only in heterozygous condition
- (2) It expresses its effect only in homozygous stage
- (3) It is never expressed in any condition
- (4) It is expressed both in homozygous and heterozygous condition

Scan or tap for the full solution



Q.151 A diseased man marries a normal woman. They get three daughters and five sons. All the daughters were diseased and sons were normal. The gene of this disease is :-

[AIPMT 2002]

- (1) Sex linked dominant
- (2) Autosomal dominant
- (3) Sex linked recessive
- (4) Sex limited character

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Q.152 Which of the following is a correct match -

[AIPMT 2002]

- (1) Sickle cell anaemia = X – Chromosome
- (2) Down Syndrome = 21st Chromosome
- (3) Haemophilia = Y – Chromosome
- (4) Parkinson Disease = X & Y Chromosome

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Q.153 Change in sequence of nucleotide in DNA is called as -

[AIPMT 2002]

- (1) Recombination
- (2) Mutation
- (3) Mutagen
- (4) Translation

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Q.154 If a diploid cell is treated with colchicine then it becomes :-

[AIPMT 2002]

- (1) Tetraploid
- (2) Monoploid
- (3) Diploid
- (4) Triploid

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Q.155 Two non-allelic genes produce the new phenotype when present together but fail to do so independently then it is called

[AIPMT 2001]

- (1) Polygene
- (2) Complementary gene
- (3) Non-complementary gene
- (4) Epistasis

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Q.156 A and B genes are linked. What shall be genotype of progeny in a cross between AB/ab and ab/ab?

[AIPMT 2001]

- (1) AABB and aabb
- (2) None
- (3) AaBb and aabb
- (4) AAbb and aabb

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Q.157 When dominant and recessive alleles express themselves together it is called

[AIPMT 2001]

- (1) Dominance
- (2) Pseudo dominance
- (3) Co-dominance
- (4) Amphidominance

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Q.158 Ratio of complementary genes is [AIPMT 2001]

- (1) 9 : 3 : 4 (2) 9 : 7
(3) 12 : 3 : 1 (4) 9 : 3 : 3 : 4

Scan or tap for the full solution



Q.159 Independent assortment of genes does not take place when [AIPMT 2001]

- (1) Genes are located on non-homologous chromosomes
(2) Genes are linked and located on same chromosome
(3) Genes are located on homologous chromosomes
(4) All the above

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Q.160 Sickle cell anaemia is due to [AIPMT 2001]

- (1) Change of amino acid in either α or β chain of haemoglobin
(2) Change of amino acid in α chain of haemoglobin
(3) Change of amino acid in both α and β chain of haemoglobin
(4) Change of amino acid in β chain of haemoglobin

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Q.161 Number of Barr bodies in XXXX female is

[AIPMT 2001]

- (1) 3 (2) 1 (3) 2 (4) 4

Scan or tap for the full solution



Q.162 Male XX and female XY sometime occur due to

[AIPMT 2001]

- (1) Aneuploidy
(2) Deletion
(3) Transfer of segments in X and Y chromosomes
(4) Hormonal imbalance

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Q.163 Probability of four sons to a couple is :-

[AIPMT 2001]

- (1) $\frac{1}{16}$ (2) $\frac{1}{8}$ (3) $\frac{1}{4}$ (4) $\frac{1}{32}$

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Q.164 Due to the cross between $TTRr \times ttrr$ the resultant progenies showed how many percent plants tall, red flowered: [AIPMT 2000]

- (1) 50% (2) 100% (3) 75% (4) 25%

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Q.165 According to mendelism which character is showing dominance? [AIPMT 2000]

- (1) Green colour in seed coat
(2) Wrinkled seed
(3) Terminal position of flower
(4) Green pod colour

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Q.166 Mongolian idiots are due to trisomy in 21st chromosome is called: [AIPMT 2000]

- (1) Klinefelter's syndrome
(2) Down's syndrome
(3) Turner's syndrome
(4) Triplex syndrome

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Q.167 Erythroblastosis foetalis is caused when:

[AIPMT 2000]

- (1) Rh^- female & Rh^+ male
(2) Rh^- female & Rh^- male
(3) Rh^+ female & Rh^+ male
(4) Rh^+ female & Rh^- male

Scan or tap for the full solution



Q.168 In *Drosophila* the XXY condition leads to femaleness whereas in human beings the same condition leads to Klinefelter's syndrome in male. It proves: [AIPMT 2000]

- (1) Y chromosome is active in sex determination in both human beings and *Drosophila*
(2) In *Drosophila* Y-chromosome decides femaleness
(3) Y chromosome of man have genes for syndrome
(4) In human beings Y chromosome is active in sex determination

Scan or tap for the full solution



ANSWER KEY

Ques.	1	2	3	4	5	6	7
Ans.	1	3	3	3	3	2	2
Ques.	8	9	10	11	12	13	14
Ans.	1	3	4	3	1	2	2
Ques.	15	16	17	18	19	20	21
Ans.	2	3	3	1	2	2	4
Ques.	22	23	24	25	26	27	28
Ans.	4	4	4	2	2	2	4
Ques.	29	30	31	32	33	34	35
Ans.	1	3	1	2	3	4	4
Ques.	36	37	38	39	40	41	42
Ans.	1	3	4	1	4	3	4
Ques.	43	44	45	46	47	48	49
Ans.	4	3	2	3	1	1	2
Ques.	50	51	52	53	54	55	56
Ans.	1	4	1	1	2	4	2
Ques.	57	58	59	60	61	62	63
Ans.	2	1	2	4	3	3	1
Ques.	64	65	66	67	68	69	70
Ans.	3	1	2	2	2	3	3
Ques.	71	72	73	74	75	76	77
Ans.	2	4	2	2	3	3	1
Ques.	78	79	80	81	82	83	84
Ans.	2	1	2	1	2	1	3
Ques.	85	86	87	88	89	90	91
Ans.	1	2	4	4	1	4	1
Ques.	92	93	94	95	96	97	98
Ans.	2	1	2	2	4	3	1
Ques.	99	100	101	102	103	104	105
Ans.	4	2	3	2	1	3	2
Ques.	106	107	108	109	110	111	112
Ans.	4	1	1	1	3	2	4
Ques.	113	114	115	116	117	118	119
Ans.	1	1	2	4	2	4	1
Ques.	120	121	122	123	124	125	126
Ans.	1	3	1	2	1	2	4
Ques.	127	128	129	130	131	132	133
Ans.	3	1	1	2	3	3	1
Ques.	134	135	136	137	138	139	140
Ans.	3	4	3	4	2	1	4
Ques.	141	142	143	144	145	146	147
Ans.	1	2	4	1	4	3	3
Ques.	148	149	150	151	152	153	154
Ans.	2	2	4	1	2	2	1
Ques.	155	156	157	158	159	160	161
Ans.	2	3	3	2	2	4	1
Ques.	162	163	164	165	166	167	168
Ans.	3	1	1	4	2	1	4