Chapter: 15

Inheritance

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Objective

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1. These are the units of inheritance:

Ⓐ phenotype Ⓑ Alleles Ⓒ genotype **Ⓓ genes**

2. Inherited characters are called:

Ⓐ fertilization Ⓑ Genetics **Ⓒ Traits** Ⓓ Genes

3. The branch of Biology in which we study about inheritance is called:

Ⓐ Ecology **Ⓑ Genetics** Ⓒ Physiology Ⓓ Microbiology

4. …… hydrogen bonds are present between cytosine and guanine.

Ⓐ 3 Ⓑ 4 Ⓒ 5 Ⓓ 2

5. Alternative form of a gene are called:

Ⓐ Gamete Ⓑ Chromosome Ⓒ DNA **Ⓓ Allele**

6. Locations of genes on chromosomes are called:

Ⓐ Genotypes Ⓑ Phenotypes **Ⓒ Loci** Ⓓ Allele

7. Cytosine always makes pair with:

Ⓐ Adenine **Ⓑ Guanine** Ⓒ Thymine Ⓓ Hydrogen

8. Dominant alleles are represented by:

Ⓐ Capital letters Ⓑ Roman numbers Ⓒ Numerical number Ⓓ Small letters

9. Physical appearance of organisms such as colour and height etc. are called:

Ⓐ karyotpe **Ⓑ phenotype** Ⓒ Genotype Ⓓ Genome

10. How many pairs of homologous chromosomes are present in human body cells:

Ⓐ 25 Ⓑ 24 **Ⓒ 23** Ⓓ 22

11. In the structure of DNA adenine of one nucleotide pairs with which of the nitrogenous base of opposite nucleotide:

Ⓐ cytosine Ⓑ Uracil Ⓒ guanine **Ⓓ thymine**

12. Formation of messenger RNA from DNA is called:

Ⓐ Transduction Ⓑ Translocation Ⓒ Translation **Ⓓ Transcription**

13. It is a genetic material:

Ⓐ r. RNA Ⓑ RNA **Ⓒ DNA** Ⓓ T, RNA

14. The no. of pairs of homologous chromosome in human is:

Ⓐ 28 **Ⓑ 23** Ⓒ 46 Ⓓ 56

15. Model of DNA structure was presented by:

Ⓐ Watson & Crick Ⓑ Mendel Ⓒ Watson Ⓓ Crick

16. Albinism is a trait:

Ⓐ heterozygous **Ⓑ recessive** Ⓒ dominant Ⓓ co-dominant

17. DNA is surrounded by a protein and from a structure called:

Ⓐ Nucleoside Ⓑ Nucleus **Ⓒ Nucleosome** Ⓓ Nucleotide

18. Chromatin material is made up of:

Ⓐ RNA and Protein Ⓑ DNA Ⓒ Protein **Ⓓ DNA and Protein**

19. No, of hydrogen bonds between Adenine and thymine is:

Ⓐ 1 Ⓑ 4 Ⓒ 3 **Ⓓ 2**

20. James Watson and Francis Crick proposed the structure of DNA in:

Ⓐ 1954 A.D Ⓑ 1952 A.D **Ⓒ 1953 A.D** Ⓓ 1951 A.D

21. Genotype in which Gene Pair contains two identical Alleles is called:

Ⓐ Heterologous **Ⓑ Homozygous** Ⓒ homologous Ⓓ Heterozygous

22. On which vegetable Mendel carried out a large number of experiments:

Ⓐ Garden pea Ⓑ Potato Ⓒ Cabbage Ⓓ Tomato

23. How many pea plants were used in the experiments of Mendel:

Ⓐ 27,000 **Ⓑ 28,000** Ⓒ 29,000 Ⓓ 26,000

24. Union of sperm and ovum is called:

Ⓐ Allele Ⓑ Genes **Ⓒ Fertilization** Ⓓ Gamete

25. Which organism has a short but fast life cycle by Mendel?

Ⓐ onion Ⓑ tulip Ⓒ ginger **Ⓓ pea**

26. The term “True breeding" means:

Ⓐ homologous Ⓑ heterologous Ⓒ heterozygous **Ⓓ homozygous**

27. In monohybrid crosses the ratio of the phenotypes was:

Ⓐ 4:0 Ⓑ 9:4:3:0 **Ⓒ 3:1** Ⓓ 9:3:3:1

28. If two plants having genotype (Rr) are crossed with each other what percentage of newly produced plants will have genotype (rr):

Ⓐ 50 % **Ⓑ 25 %** Ⓒ 75 % Ⓓ 100 %

29. A cross in which only one trait is studied is called:

Ⓐ Monohybrid Cross Ⓑ Mutualism Ⓒ Dihybrid Cross Ⓓ Simple Cross

30. Which scientist presented the law of segregation?

Ⓐ De-devi **Ⓑ Mendel** Ⓒ Newton Ⓓ Lamarck

31. The ratio of phenotype in the law of independent assortment is:

Ⓐ 9:3:1:4 Ⓑ 9:3:1:3 **Ⓒ 9:3:3:1** Ⓓ 9:3:2:2

32. If an organism have genotype of AA BB how many types of gametes can it produce:

Ⓐ 4 Ⓑ 3 Ⓒ 2 **Ⓓ 1**

33. Which of the following genes will be termed as homozygous Recessive?

Ⓐ RrYy Ⓑ Rr YY Ⓒ RR YY **Ⓓ rryy**

34. Pea plant with genotype RR yy will produce:

Ⓐ Wrinkled green Ⓑ wrinkled yellow **Ⓒ Round green** Ⓓ Round yellow

35. Human blood group AB is an example of:

Ⓐ Recessiveness **Ⓑ Co-dominance** Ⓒ Incomplete Ⓓ Complete dominance

36. Person with Genotype (ll) has blood group:

Ⓐ O Ⓑ A Ⓒ B Ⓓ AB

37. What will be the colour of flowers produced as a result of cross between red and with white flowered 4'0 clock plants:

(A) Red (B) Pink (C) Purple (D) White

38. Three alleles, I^A, I^B and i control blood group what is the blood group of a person having two alleles ii?

(A) Blood group B (B) Blood group AB (C) Blood group 0 (D) Blood group A

39. Example of co-dominance is:

(A) Blood group AB (B) Blood group O (C) Blood group A (D) Blood groupB

40. For which colour there is no gene in Four o Clock plants:

(A) white (B) red (C) green (D) pink

41. The Punnett square is also called:

(A) mendel board (B) genetic board (C) checker board (D) score board

42. An example of discontinuous variation is:

(A) Intelligence (B) Blood groups (C) Height (D) Weight

43. Sources of variations. in the Organisms are:

(A) Mitosis (B) Crossing Over (C) Both B & C (D) Mutation

44. The types of inheritable variations are:

(A) 2 (B) 5 (C) 4 (D) 3

45. Charles Darwin proposed the mechanism of organic evolution in:

(A) 1840 (B) 1839 (C) 1850 (D) 1838

46. Variations are source of:

(A) Population (B) Artificial Selection (C) Evolution (D) Pollution

47. The anti-evolution idea is called:

(A) Darwinism (B) breeding theory
(C) special evolution theory (D) theory of special creation

48. Theory of natural selection was presented by:

(A) Lamarck (B) Darwin (C) Mendel (D) Buffon

49. Term artificial selection was expressed by a Persian scientist:

(A) Abu Rayhan Biruni (B) C.D Buffon (C) Theophrastus (D) Aristotle

50. Bred plants are called:

(A) Carnivores (B) Cultivars (C) Herbivores (D) Breeds

51. An important example of incomplete dominances is:

(A) Shape of pea seed (B) Color of four O clock flower
(C) Size of pea plant (D) Color of pea plant flower

52. The Allele which is not expressed is called:

(A) Homozygous (B) Dominant (C) Recessive (D) Heterozygous

53. Which relationship is found in Alleles of Blood Group I^A and I^B:

(A) Recessive (B) complete Dominance
(C) Co-Dominance (D) incomplete Dominance

54. A define combination of Genes in an individual is called:

(A) Hybrid (B) Breeds (C) Phenotype **(D) Genotype**

55. Phenotypes ratio in incomplete dominance is:

(A) 1:2:1 (B) 3:1 (C) 1:3 (D) 3:3:1

56. The genotype of "O" blood group is:

(A) $I^A i$ **(B) ii** (C) $I^B I^B$ (D) $I^A I^A$

57. Changes in DNA are called:

(A) Zygous (B) Heterozygous **(C) Mutations** (D) Homozygous

58. The book "Natural selection" written by Darwin was published in:

(A) 1960 (B) 1959 (C) 1860 **(D) 1859**

59. How many years Darwin spent his voyage on HMS?

(A) 5 years (B) 6 years (C) 7 years (D) 4 years

60. The part of DNA that contains the instructions for the synthesis of a particular protein is known as:

(A) Chromosome **(B) Gene** (C) Alleles (D) Traits

61. Person with blood group B has genotype:

(A) $I^A i$ (B) ii **(C) $I^B I^B$** (D) $I^A I^A$

62. Transmission of characteristic from parents to offspring is:

(A) chromosome (B) trait (C) genetics **(D) inheritance**

63. Number of Nitrogen bases in DNA is:

(A) 4 (B) 5 (C) 6 (D) 7

64. In artificial selection, the bred animals are called:

(A) Varieties **(B) Breeds** (C) Cultivars (D) Hybrids

65. Transcription is carried out by:

(A) chromatids (B) DNA **(C) mRNA** (D) ribosomes

66. Variations are caused by:

(A) Same combinations of chromosomes in gametes (B) Asexual Reproduction
(C) Different combinations of chromosomes in gametes (D) Mitosis

67. Mendel got the ratio of tall to short plants in F2 as:

(A) 1:3 9:3 (B) 9.:3:3:1 (C) 2:3 **(D) 3:1**

68. In transcription, the specific sequence of DNA nucleotides is copied in the form of ..... nucleotides.

(A) m RNA (B) RNA -polymerase (C) t RNA (D) u RNA

69. Who was first to propose the mechanism of evolution:

(A) Abu Rayhan **(B) Lamarck** (C) Darwin (D) Buffon

70. DNA is a material:

(A) Homogenesis (B) Homotype **(C) Hereditary** (D) Homologus

71. Guanine forms pair with?

(A) Thymine (B) Adenine (C) Catbon **(D) cytosine**

72. How many contrasting traits Mendel studied in pea plant?

(A) 7 (B) 6 (C) 5 (D) 4

73. Which one is an example of continuous variations:

(A) Ribosome (B) Height (C) Blood groups (D) Nucleosome

74. Gregor Mendel was a Priest in:

(A) Australia (B) America (C) Austria (D) England

75. In human body cells, the number of chromosomes is:

(A) 26 (B) 23 (C) 46 (D) 48

76. The name of protein present in chromatin material is:

(A) Histone (B) Fibrin (C) Hemoglobin (D) Insulin

77. In which one histone protein is present:

(A) Centrosome (B) Chromosomes (C) RNA (D) DNA

78. Movement of genes from one population to another is called:

(A) Recombination (B) Mutations (C) Gene flow (D) Crossing over

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Subjective

Q1: ***What is meant by inheritance?***

Ans: *Inheritance means the transmission of characteristics from parents to offspring.*

Q2: ***Define genetics.***

Ans: ***Genetics:***

Genetics is the branch of biology in which we study inheritance.

Q3: ***Define Trait. Write two human Traits.***

Ans: ***Trait:***

The characteristics which are controlled or transmitted to next generation through genes called trait.

Human trait:

In human height colour of eyes, are traits.

Q4: ***What is meant nucleosomes?***

Ans: ***Nucleosomes:***

DNA wraps around histone proteins and forms round nucleosomes.

Q5: ***Define chromosome. OR What is Chromatin?***

Ans: ***Chromosome:***

Chromosome is made of chromatin material (simply as chromatin). Chromatin is a complex material, made of DNA and proteins (mainly histone proteins).

This diagram is just for information.

Figure Chemical composition of chromosome

Q6: ***What are homologous chromosomes?***

Ans: *Homologous chromosomes:*

The body cells have a constant number of paired chromosomes. The two chromosomes of a pair are known as homologous chromosomes.

Q7: ***How does the DNA of chromosome work?***

Ans: *DNA is the genetic material i.e it contains the instructions to direct all the functions of cells. It performs its role by giving instructions for the synthesis of specific proteins.*

Some proteins perform structural roles while the others act as enzymes to control all biochemical reactions of cells.

In this way, it actually controlled by its DNA. In other words, DNA makes the characteristic or trait of cell or organism.

This diagram is just for information.

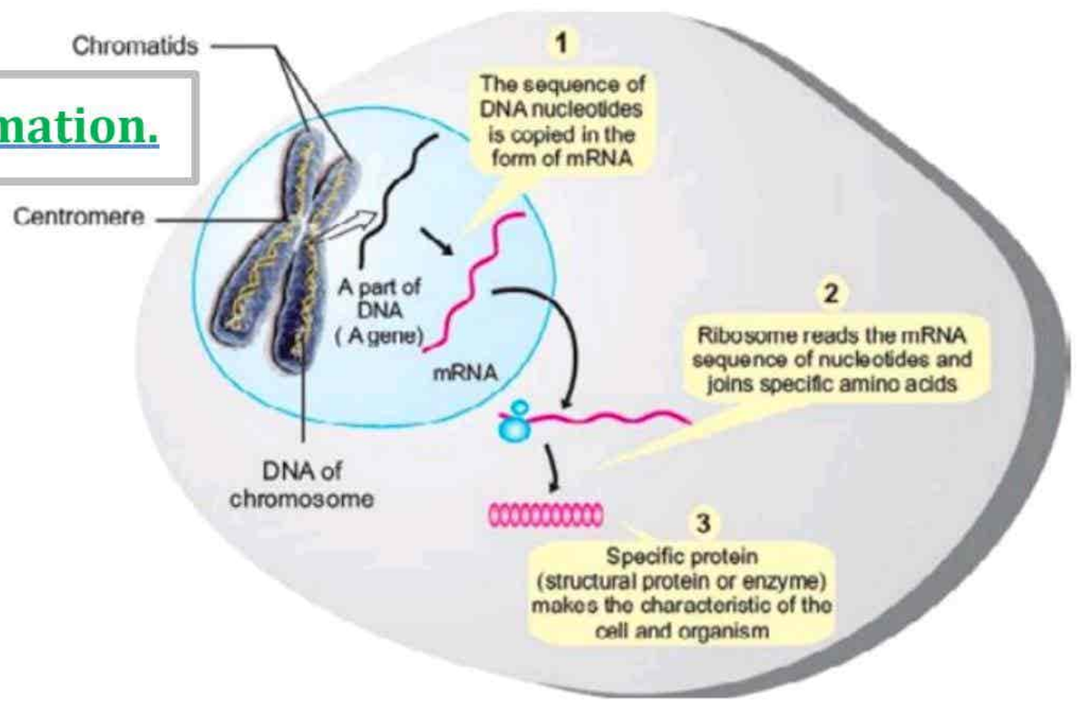

Figure Working of DNA (also called the Central Dogma)

Q8: ***Write two points of Watson - Crick Model of DNA.***

Ans: *The two points of Watson-Crick Model of DNA are:*

- *DNA molecule consists of two polynucleotide strands.*
- *There is a phosphate-sugar backbone on the outside of double helix, and the nitrogenous bases are on the inside.*

Q9: ***What is meant by genotype?***

Ans: ***Genotype:***

The specific combination of genes in an individual. It may be homozygous or heterozygous. This is called genotype.

Genotype has two types:

- *Homozygous*
- *Heterozygous*

Q10: ***What is meant by Phenotype?***

Ans: ***Phenotype:***

The expression of the genotype in the form of trait.

Example:

Albino.

Q11: ***What is difference between gene and loci?***

Ans: *The difference between gene and loci is:*

Gene	Loci
It is the unit of inheritance. It consists of the length of DNA that contains specific instruction for synthesis of a protein molecule.	*The location or position of gene on chromosomes is known as loci.*

Q12: ***What is the difference between transcription and translation?***

Ans: *The difference between transcription and translation is:*

Transcription	Translation
The specific sequence of DNA nucleotides is copied in the form of messenger RNA (mRNA) nucleotides. This process is	*The mRNA carries the sequence of its nucleotides to ribosome. This ribosome reads this sequence and joins specific amino*

called transcription.	*acids. According to it to form protein. This step is known as translation.*

Q13: ***What is difference between homozygous genotype and heterozygous genotype?***

Ans: The difference between homozygous genotype and heterozygous genotype is:

Homozygous genotype	***Heterozygous genotype***
The genotype in which the gene pair contains two similar alleles (AA) is called homozygous genotype.	*The genotype in which the gene pair contains two different alleles (Aa) is called heterozygous genotype.*

Q14: ***What is meant by dominant allele?***

Ans: ***Dominant allele:***

When in the heterozygous condition one, allele makes or prevents the expression of the other, it is called dominant allele.

Q15: ***What is meant by Recessive allele?***

Ans: ***Recessive allele:***

The allele which does not express is called recessive allele.

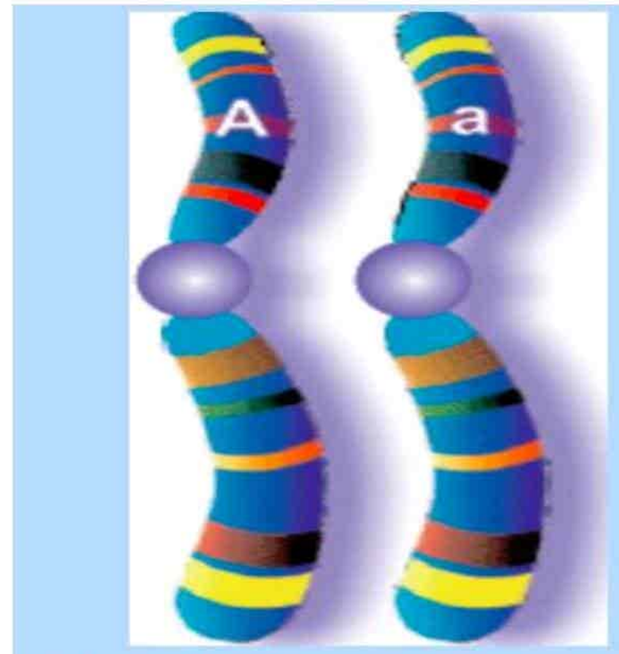

Figure Location of alleles on chromosomes

Q16: ***What is difference between gene and allele?***

Ans: The difference between gene and allele is:

Gene	***Allele***
It is the unit of inheritance consist the strand of DNA that contains specific instruction for the synthesis of protein molecule.	*The alternate, forms of genes are called alleles.*

Q17: ***What is meant by Albinism?***

Ans: ***Albinism:***

A condition in which normal body pigments are absent. It is a recessive trait. It is produced when both alleles are recessive.

Q18: ***Define DNA Replication.***

Ans: ***DNA Replication:***

DNA is replicated before a cell divides. It is done to make the copies of the chromatids of chromosomes. During replication, DNA double helix is unwound and the two stands are separated, much like the two sides of a zipper. Each stand act as template to produce another strand. Its nitrogenous bases make pairs with the N-bases' of new nucleotides. In this way, both template strands make new polynucleotide strands in front of them.

This diagram is just for information.

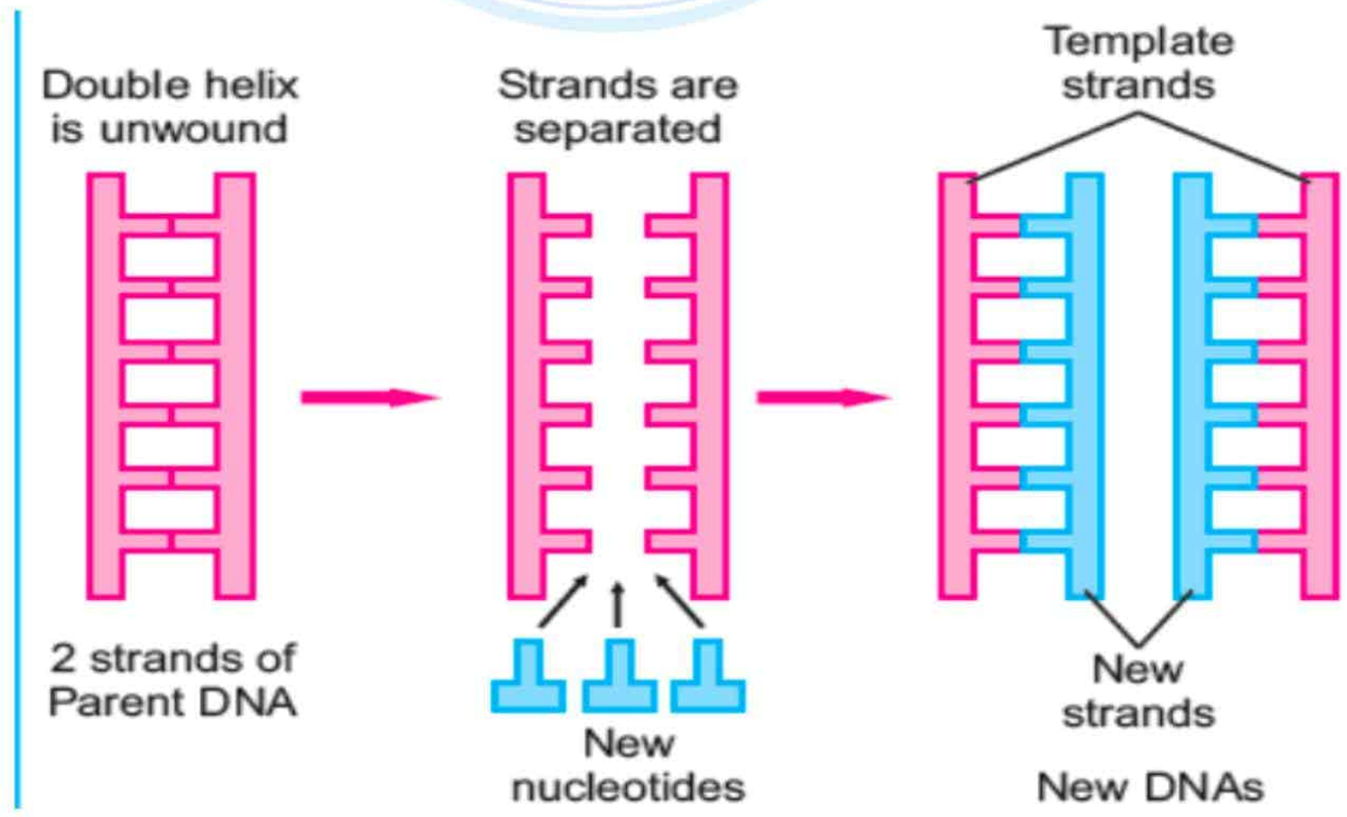

Figure How does DNA replicate?

Q19: ***Write the name of nitrogenous bases of DNA?***

Ans: The name of nitrogenous bases of DNA is:

- *Adenine*

- *Cytosine*
- *Thymine*
- *Guanine*

Q20: ***Why Mendel selected pea plants?***

Ans: Mendel selected pea plants because:

- *Pea plant has short life span and fast life cycle.*
- *Pea plant is self-pollinated as well as cross pollinated.*
- *There is presence of several contrasting character / sub character.*
- *Cross-pollination can be done easily.*

This diagram is just for information.

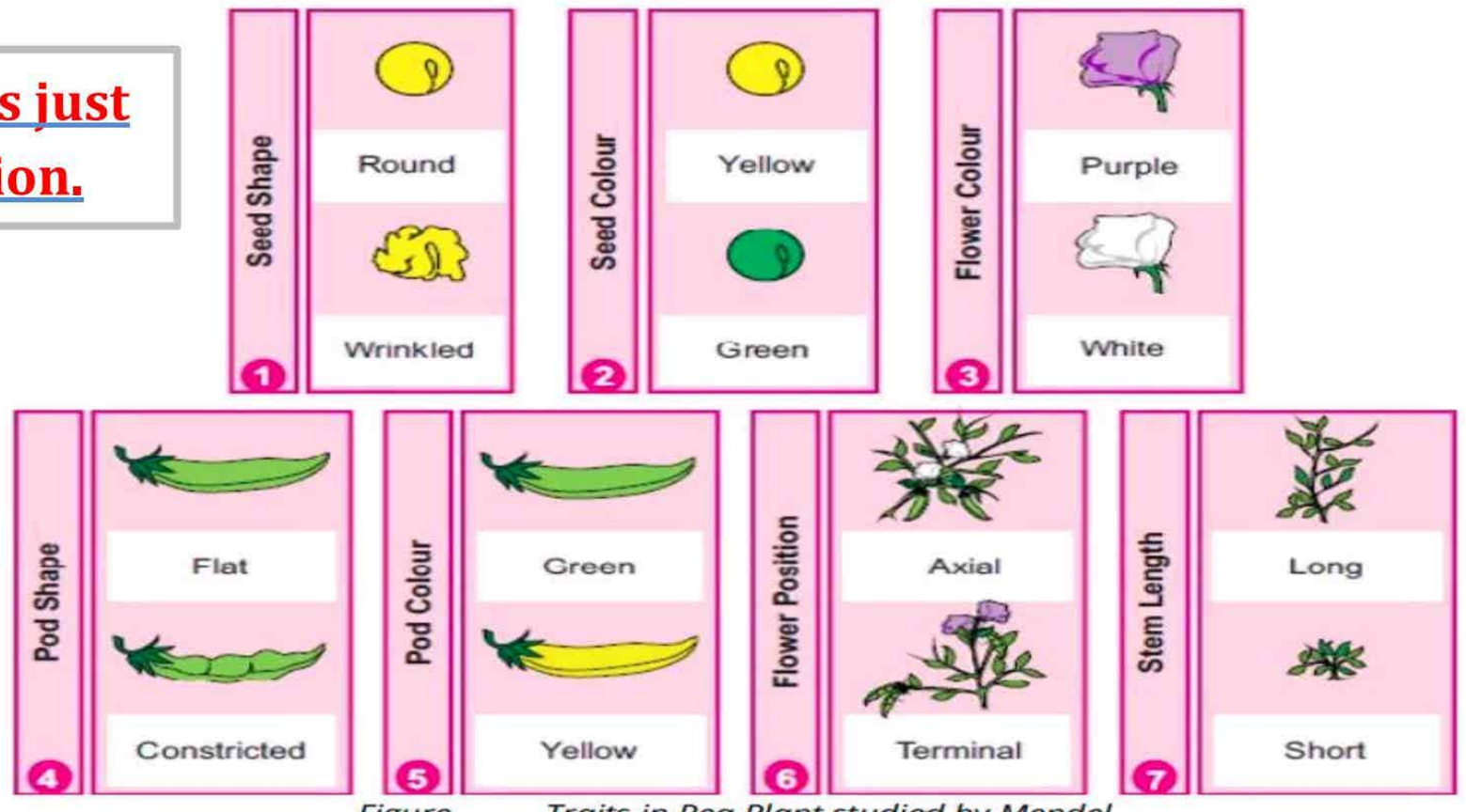

Figure . Traits in Pea Plant studied by Mendel

Q21: ***Write down scientific name of pea plant. How many pea plants were used by Mendel?***

Ans: Scientific name of pea plant is Pisum Sativum.
Mendel used 28000 pea plants in his experiment.

Q22: ***On which plant Mendel performed experiments.***

Ans: Mendal used 28,000 pea plants in his experiments.

Q23: ***Name any four Contrasting traits in pea plant.***

Ans: The name of four Contrasting traits in pea plant is:

- *Seed shape*
- *Pod shape*
- *Seed Colour*
- *Flower Colour*

Q24: ***State Mendel's law of segregation.***

Ans: When the gametes of male and female parents unite, the resulting offspring against gets the genes in pairs. These, conclusions were called the law of segregation.

Q25: ***What is meant by monohybrid and dihybrid cross?***

Ans: ***Monohybrid:***

A cross in which only one trait is studied at a time is called as monohybrid cross.

Dihybrid cross:

Crosses in which two contrasting traits are studied at a time are called dihybrid cross.

Q26: ***What is meant by true breeding?***

Ans: The term true breeding means Homozygous.

Q27: ***State Mendel's Law of Independent Assortment.***

Ans: Mendel's law of independent Assortment is stated as:
The alleles of gene pair segregate (get separated and distributed in gametes) independently from the alleles of other gene pairs.

Q28: ***What is punnet square?***

Ans: Punnet square is a diagram that is used to predict an outcome of a particular cross or breeding experiment.

Q29: ***Write genotype of blood group 'AB' and 'O'.***

Ans: Genotype of blood group "AB" is I^AI^B Genotype of blood group "O" is ii.

Q30: ***What will be the genotype and phenotype of plants produced as a result of cross between red flowered and white flowered" four-o-clock" plants?***

Ans: *In four O clock plants the trait of flower colour is controlled by two alleles (R&r). The true breeding plants RR and rr have red and white flowers. When a homozygous red flowered plant (RR) is crossed with homozygous, white flowered (rr), the heterozygous (Rr) plants produce pink flower.*

This result clearly indicates that neither of red flowered allele (R) and white flowered allele (r) is dominant.

In genotype:

The genes of red flower and white flower combines and produces resultantly blend pink flower.

Q31: ***Differentiate between Co-dominance and incomplete dominance.***

Ans: *The difference between Co-dominance and incomplete dominance is:*

Co-dominance	Incomplete dominance
It is the situation where two different alleles of a gene pair express themselves completely instead of showing a dominant recessive relationship. As a result the heterozygous organism shows a phenotype that is different from both homozygous parents. *The example of co-dominance, is the Expression of human blood group AB.*	*It is situation where in heterozygous genotypes, both the alleles express as blend (mixture) and neither allele is dominant over the other. As a result, an intermediate phenotype is expressed.*

Q32: ***What are two sources of Variations?***

Ans: *The two sources of Variations are:*

- *The genetic recombination produced through crossing over results in gametes with variation.*
- *Mutation is important source of variation. Mutations also happen during gametes formation through meiosis.*

Q33: ***What is meant by Continuous variations?***

Ans: ***Continuous variation:***

In this the phenotypes show a complete range of measurements from one extreme to the other.

Example:

- *Height*
- *Weight*
- *Feet size*
- *Intelligence etc.*

Q34: ***What is meant by discontinuous variations?***

Ans: ***Discontinuous variations****:*

It shows distinct phenotypes. The phenotypes of such variation cannot be measured. The individual of a population either have distinct phenotype, which can be distinguished from each other.

Q35: ***Define theory of special creation.***

Ans: *Theory of special creation is:*

According to this theory all living things had been created in their current form only a few thousand years ago.

Q36: ***Define organic or biological evolution.***

Ans: *Organic evolution (biological evolution) is the change in the characteristics of a population or species of organisms over the course of generations.*

Q37: ***Describe two major processes of organic evolution.***

Ans: *Two major processes of organic evolution are:*

- *Alternation in genetic characteristics (trait) of a type of organism over time.*

- *Creation of new types of organisms from a single type.*

Q38: ***Write the name of Darwin's book.***

Ans: *On the origin of species by means of natural selection.*

Q39: ***What is Difference between Natural selection and Artificial selection?***

Ans: *The difference between Natural selection and Artificial selection is:*

Natural selection	Artificial selection
It is a process by which genetic variation is successively transmitted in generations of a population. These are more common in generations.	*Artificial selection means intentional breeding between individuals for certain traits or combination of traits.*

Q40: ***Which scientist introduced artificial selection?***

Ans: *Artificial selection was introduced by Persian scientist Abu Rayhan Biruni in the 11th century.*

Q41: ***What are breeds and cultivars?***

Ans: *In artificial selection, breed animals are known as breed while breed plants are known as cultivars.*

Q42: ***What is the important of selective breeding?***

Ans: ***Continuous fermentation:***

It has revolutionized agricultural and livestock production throughout the world. Animals or plants having desirable characteristics are selected for breeding.

Q43: ***What are advantages of artificial selection?***

Ans: *Advantages of artificial selection are:*

Numerous breeds of sheep, goat, cow, hen etc have been produced by artificial selection to increase the production of wood, meat, milk eggs etc.

Q44: ***Define mutation.***

Ans: ***Mutation:***

Mutations mean changes in DNA. It is also important source of variations, Mutations also happen during gametes formation through meiosis.

Q45: ***What is the relation of favourable variations with natural selection?***

Ans: *The organisms with favourable variations are able to reproduce and pass these variations to their next generations.*

Q46: ***What is the effect of dominant allele on recessive allele?***

Ans: *A dominant allele only suppresses the expression of recessive allele. It does not affect its nature.*

Q47: ***Write down the bonding between nitrogenous bases in DNA model.***

Ans: *Adenine of one Nucleotide forms two hydrogen bonds with thymine. Guanine of Nucleotides forms three hydrogen bonds with cytosine of other, Nucleotides.*

Q48: ***What is Nucleotide? Write the name of three components?***

Ans: ***Nucleotide:***

DNA is made up of compounds called Nucleotides. A DNA molecule consists of two polynucleotide strands.

Nucleotides have three Components:

- *Nitrogenous base*
- *Phophate group*
- *Sugar*

Q49: ***Write down contributions of Charles Darwin for evolution.***

Ans: *Charles Darwin proposed the theory mechanism of organic evolution in 1838. It was called as "The theory of Natural Selection" He also published a book "On the origin of Species by mean of Natural Selection" in 1859.*

Q50: ***Genotype of plants produced as a result of cross between two plants having Genotype Rr?***

Ans: When two heterozygous plants with pink flower (R) are crossed F2 generation shows phenotypes of Red, pink and white flowers in the ratio of 1:2:1

Q51: ***Write all possible Genotypes of Blood group A and" Blood group B.***

Ans: All possible Genotypes of Blood group A and" Blood group B is:

- *Genotype of blood group A. I^AI^A or I^A i.*
- *Genotype for blood group B. I^BI^B or I^B i.*

This diagram is just for information.

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Genotype	Antigen produced	Phenotype	Relationship Between Alleles
I^AI^A or I^Ai	Antigen A	Blood Group A	Allele I^A is dominant over i
I^BI^B or I^Bi	Antigen B	Blood Group B	Allele I^B is dominant over i
ii	No Antigen	Blood Group O	Allele i is recessive
I^AI^B	Antigen A & Antigen B	Blood Group AB	Alleles I^A and I^B are co-dominant

Q52: ***How do variations bring about evolution? Describe briefly.***

Ans: Organic evolution is change in the characteristics of a population or species of organisms over the course of generation. The evolutionary changes are always inheritable. The changes in an individual are not considered as evolution, because evolution leads to population and not to individuals.

Q53: ***How biotechnology has helped us in improving the environment?***

Ans: Biotechnology is also being used for dealing with environmental issues like pollution control, development of renewable sources of energy, restoration of degraded lands and biodiversity conservation. Bacterial enzymes are used to treat sewage water to purify.

Q54: ***What you know about central dogma?***

Ans: The central dogma explains the flow of genetic information from DNA to RNA, to make a functional product, a protein. Working of DNA also called the central dogma.

$$DNA \rightarrow RNA \rightarrow Protein$$

Q55: ***For which purpose checker board is used? What is Test Cross? Why is it needed?***

Ans: A checker board is used to cross all the possible gametes of one parent with all the gametes of other parent. It this way, a biologist can find all possible genotypes of offspring.

Q56: ***What you know about gene flow?***

Ans: Gene flow means movement of genes from one population to another. It is an important source of variation.

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Imp.Long Questions

Q.1: ***Write a note on Replication of DNA OR Explain Watson-Crick Model of DNA. OR How does DNA of Chromosome Works? Explain. (V.imp)***

Q.2: ***Who was Mendel? Why Mendel selected pea plant for his experiments?***

Q.3: ***Describe Mendel's Law of segregation.***

Q.4: ***State Mendel's Law of Independent Assortment. Explain it with help of example.***

Q.5: ***Describe Co-dominance and Incomplete Dominance and give examples.***

Q.6: ***Differentiate between continuous and discontinuous variations.***

Q.7: ***Prove that variations lead to evolution.***

Q.8: ***What do you mean by natural selection? Explain it. OR Explain "Mechanism of Evolution - Natural Selection".***

Q.9: ***What is artificial selection? Give its scope and importance with examples.***