BIOLOGY

BOOKS - ARIHANT PUBLICATION

HEREDITY AND EVOLUTION

Question Bank

1. All genes located on the same chromosome:-

A. from different groups depending upon their relative distance

B. from one linkage group

C. will not form any linkage groups

D. from interactive groups that affect the phenotype

Answer: A

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2. Phenotype of an organism is the result of

A. mutations and linkages

B. cytoplasmic effects and nutrition

C. environmental changes and sexual dimorphism

D. Genotype and environment interactions

Answer: D

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3. Which of the following is correct ?

A. There will be no independent assortment in the presence of linkage

B. there will be no segregation in the presence of linkage

C. There will be no dominance in the presence of linkage

D. There will be no crossing over in the presence of dominance

Answer: A

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4. Match of the following columns.

Column I	Column II
A. Flower colour	1. Violet/white
B. Pod colour	2. Green/yellow
C. Seed colour	3. Yellow/green

Codes

Codes

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

	A	B	C
(2)	1	3	2
(4)	3	1	2

A.

Codes

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

	A	B	C
(2)	1	3	2
(4)	3	1	2

B.

Codes

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

	A	B	C
(2)	1	3	2
(4)	3	1	2

C.

Codes

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

	A	B	C
(2)	1	3	2
(4)	3	1	2

D.

Answer: A

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5. A cross between two tall plants reseulted in offspring having few dwarf plants. What would be the gentypes of both the parents ?

A. TT and Tt

B. Tt and Tt

C. TT and TT

D. Tt and tt

Answer: B

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6. 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

A. aaBB

B. AaBb

C. AABB

D. aabb

Answer: D

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

A. one-third of the progenies

B. none of the progenies

C. all of the progenies

D. $50\ \%$ of the progenies

Answer: B

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8. Match the following columns.

Column I	Column II
A. Test cross	1. 9 : 3 : 3 : 1
B. Monohybrid cross	2. T t × t t
C. Back cross	3. T t × T T
D. Dihybrid cross	4. 3 : 1

Codes

	A	B	C	D
(1)	2	4	3	1
(3)	3	4	1	2

	A	B	C	D
(2)	2	4	1	3
(4)	1	4	2	3

A.

Codes

	A	B	C	D
(1)	2	4	3	1
(3)	3	4	1	2

	A	B	C	D
(2)	2	4	1	3
(4)	1	4	2	3

B.

Codes

	A	B	C	D
(1)	2	4	3	1
(3)	3	4	1	2

	A	B	C	D
(2)	2	4	1	3
(4)	1	4	2	3

C.

Codes

	A	B	C	D
(1)	2	4	3	1
(3)	3	4	1	2

	A	B	C	D
(2)	2	4	1	3
(4)	1	4	2	3

D.

Answer: A

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9. 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

A. 25% will be tall with red fruit

B. 50% will be tall with red fruit

C. 75% will be tall with red fruit

D. All of the offsprings will be tall with red fruit

Answer: B

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10. Mendel developed his basic principles of heredity by

A. microscopic study of chromosomes and genes

B. mathematical analysis of the offsprings of pea plants

C. breeding experiments with Drosophila

D. ultracentrifugation studies of cell organelles

Answer: B

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11. In a dihybrid crossm if you get $9:3:3:1$ ratio it denotes that

A. the alleles of two each other interacting with each other

B. It is a multigenic inheritance

C. It is a case of multiple allelism

D. the alleles of two genes are segregating Independently

Answer: D

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12. In raccoons, a dark face mask in dominant over a bleached face mask. Several crosses were made between raccoons that were heterozygous for dark face mask and that were homozygous for bleached face mask. What percentage of the offspring would be expected to have a dark face mask?

A. 0%

B. 50%

C. $75\ \%$

D. $100\ \%$

Answer: B

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13. When two heterozygous tall plants are crossed, some short plants appear in the offsprings. The appearance of these short plants illustrates

A. segregation

B. intermediate inheritance

C. crossing over

D. codominant inheritance

Answer: C

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14. Mendel work later formulated into laws of

I. linkage

II. Segregation

III. Incomplete dominance

IV. Independent assortment

Choose the correct option

A. I,III and IV

B. II and IV

C. II,III and IV

D. I, II and III

Answer: B

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15. Inheritance of ABO blood groups is an example of

A. polyploidy

B. incomplete dominance

C. multiple allelism

D. polygeny

Answer: C

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16. A person with blood group-A has

A. antigen-A and antibody -b

B. antigen-B and antibody-a

C. Both antibodies

D. no antibody and no antigen

Answer: A

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17. The advantage of sickle-cell anaemia to the African people is

A. to provide better adaptation in adverse conditions

B. to protect from dengue

C. to provide immunity against malaria

D. All of the above

Answer: C

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18. Match the following columns.

Column I	Column II
A. Autosomal linked recessive trait	1. Down's syndrome
B. Sex-linked recessive disease	2. Phenylketonuria
C. Metabolic error linked to autosomal recessive trait	3. Haemophilia
D. Additional 21st chromosome	4. Sickle-cell anaemia

Codes

	A	B	C	D
(1)	4	1	2	3
(3)	2	1	4	3

	A	B	C	D
(2)	4	3	2	1
(4)	3	4	1	2

A.

Codes

	A	B	C	D
(1)	4	1	2	3
(3)	2	1	4	3

	A	B	C	D
(2)	4	3	2	1
(4)	3	4	1	2

B.

Codes

	A	B	C	D
(1)	4	1	2	3
(3)	2	1	4	3

	A	B	C	D
(2)	4	3	2	1
(4)	3	4	1	2

C.

Codes

	A	B	C	D
(1)	4	1	2	3
(3)	2	1	4	3

	A	B	C	D
(2)	4	3	2	1
(4)	3	4	1	2

D.

Answer: B

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19. The complex organic compounds that may have first evolved in the direction of origin of life on earth, may have been

A. Urea and amino acids

B. Urea and nucleic acids

C. Proteins and nucleic acids

D. Proteins and amino acids

Answer: A

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20. Which was absent in the atmosphere at the time of origin of life ?

A. Water

B. Hydrogen

C. Oxygen

D. Carbon dioxide

Answer: C

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21. Which of the following statements is correct about the characteristics of protobionts, coacervates and microspheres as

an envisaged in the abiogenic origin of life ?

I. They were able to reproduce.

II. They could separate the combinations of molecules from the surroundings.

III. They were partially isolated from the surroundings .

IV. They could maintain and internal environment absolutely.

Choose the correct option.

A. I and II

B. II and III

C. III and IV

D. I,II and III

Answer: D

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22. The water of primitive ocean during the time of origin of life has been called 'hot dilute soup of oceanic substances' by:

A. Miller

B. Oparin

C. Haldane

D. Sidney Fox

Answer: C

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23. Who was the 17th century scientist to give a recipe for spontaneous generation of mice form dirty, sweat-soaked shirt put in wheat barn in the dark?

A. van Helmont

B. Aristotle

C. William Harvey

D. Spallanzani

Answer: A

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24. Which of the criteria contributed to Mendel's success ?

I. Selection of pea plant.

II. Knowledge of history.

III. One character at one time.

IV. His statistical knowledge

Choose the correct option

A. I,II,III and IV

B. II and III

C. I, III and IV

D. IV , III and II

Answer: C

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25. 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?

A. AaBb

B. AaBB

C. AABb

D. AABB

Answer: A

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26. Mendelism was rediscovered by

I. Morgan

II. De Vries

III. Correns

IV. Tschermak

Choose the correct option

A. I,III and IV

B. I,II, III and IV

C. II, III and IV

D. I, II and III

Answer: C

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27. A common test to find the genotype of a hybrid is by

A. crossing of one F_2 progeny with male parent

B. crossing of one F_2 progeny with female parent

C. studying the sexual behaviour of F_1 progenies

D. crossing of one F_1 progeny with recessive parent

Answer: D

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28. A normal woman whose father was colour blind, is married to a normal man. The sons would be

A. $75\ \%$ colourblind

B. $50\ \%$ colourblind

C. all normal

D. all colorblind

Answer: B

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29. Inheritance of skin colour in humans in an example of :-

A. chromosomal aberration

B. point mutation

C. polygenic inheritance

D. codominance

Answer: C

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30. Drosophila melanogaster is found to be very suitable for genetic studies because

(i) They could be grown in simple synthetic medium in the laboratory

(ii) They complete their life-cycle in about 14 days

(iii) A single mating could produce a large number of progeny

(iv) Male and females are clearly distinguishable

(v) It has few hereditary variations that can be seen with high power microscopes

Select how many are correct statements.

A. I,II and III

B. III, IV and V

C. I,IV and V

D. All of these

Answer: D

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31. The father has blood group AB and mother 'O'. The child is supposed to have which of the following bloodgroups.

A. B only

B. A only

C. B or O

D. A or B

Answer: D

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32. Which one pair of parents out of the following is most likely get a child who would

suffer from hemolytic dissease fo the newborn

?

A. Rh^+ mother and Rh^- father

B. Rh^- mother and Rh^- father

C. Rh^+ mother and Rh^+ father

D. Rh^- mother and Rh^+ father

Answer: D

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33. Which of the following gametes are produced by individual with genotype AaBb?

A. Aa, Bb

B. AB, ab

C. AB, Ab , Ab, ab

D. AB, Aa, Bb, ab

Answer: C

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34. Match the following columns.

Column I	Column II
A. Segment DNA coding for polypeptide	1. Recon
B. Segment of DNA goes for recombination	2. Muton
C. Segment of DNA goes for mutation	3. Cistron

Codes

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

	A	B	C
(2)	3	2	1
(4)	1	3	2

A.

Codes

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

	A	B	C
(2)	3	2	1
(4)	1	3	2

B.

Codes

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

	A	B	C
(2)	3	2	1
(4)	1	3	2

C.

Codes

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

	A	B	C
(2)	3	2	1
(4)	1	3	2

D.

Answer: C

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35. grain clour in wheat isdetermined by three pairs if polygenes. Following the cross AABBCC (dark colour) $\times$ aabbcc (light colour), in F_2 generation what proportion of the progeny likely to resemble either parent

A. Half

B. Less than 5%

C. One -third

D. None of these

Answer: A

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36. Which of the following statements about Hershey and chase experiment are correct ?

I. Sulphur is present in proteins but not in DNA.

II. Phosphorus is present in DNA but not in

protein.

III. ^{32}P will end up in the supernatant after centrifugation.

IV. Progeny generation of T_2-bacteriophage contain ^{35}S.

A. I and II

B. II and III

C. IV and V

D. I,II and IV

Answer: A

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37. Human skin colour is the example of

I.multiple gene inheritance.

II. Three or more genes controlling this trait.

III. single gene controlling this trait.

IV. Two gene controlling this trait.

V. environment plays a significant role in this trait.

Choose the correct option.

A. I,II and III

B. II, III and IV

C. III , IV and V

D. I, II and V

Answer: D

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38. 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 arm of chromosome 5

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

D. trisomy of 21st chromosome

Answer: B

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

A. all normal visioned

B. one-half colourblind and one -half normal

C. three-fourths colourblind and one - fourth normal

D. all colourblind

Answer: D

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40. Match the following columns.

Column I	Column II
A. ABO blood groups	1. Dihybrid cross
B. Law of segregation	2. Monohybrid cross
C. Law of independent assortment	3. Base pairs substitution
D. Gene mutation	4. Multiple allelism

Codes

	A	B	C	D
(1)	4	2	1	3
(3)	4	1	2	3

	A	B	C	D
(2)	2	1	4	3
(4)	2	3	4	1

A.

Codes

	A	B	C	D
(1)	4	2	1	3
(3)	4	1	2	3

	A	B	C	D
(2)	2	1	4	3
(4)	2	3	4	1

B.

Codes

	A	B	C	D
(1)	4	2	1	3
(3)	4	1	2	3

	A	B	C	D
(2)	2	1	4	3
(4)	2	3	4	1

C.

Codes

	A	B	C	D
(1)	4	2	1	3
(3)	4	1	2	3

	A	B	C	D
(2)	2	1	4	3
(4)	2	3	4	1

D.

Answer: A

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41. In which mode of inheritance do you expect more maternal influence among the offspring?

A. Autosomal

B. Cytoplasmic

C. Y-linked

D. X-linked

Answer: B

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42. When normal and mutant alleles are present on opposite chromosomes of

homologous pair, the heterozygotes are called as

A. cis heterozygote

B. homologous heterozygote

C. trans heterozygote

D. None of the above

Answer: C

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43. Two genes situated very close on the chromosome show

A. hardly any crossing over

B. high crossing over

C. no crossing over

D. only double crossing over

Answer: A

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44. Match the following columns.

Column I	Column II
A. RNA digesting enzymes	1. Lipase
B. Protein digesting enzymes	2. DNase
C. DNA digesting enzymes	3. Protease
D. Fat digesting enzymes	4. RNase

Codes

Codes

	A	B	C	D
(1)	3	4	2	1
(3)	4	3	2	1

	A	B	C	D
(2)	1	2	4	3
(4)	1	2	3	4

A.

Codes

	A	B	C	D
(1)	3	4	2	1
(3)	4	3	2	1

	A	B	C	D
(2)	1	2	4	3
(4)	1	2	3	4

B.

Codes

	A	B	C	D
(1)	3	4	2	1
(3)	4	3	2	1

	A	B	C	D
(2)	1	2	4	3
(4)	1	2	3	4

C.

Codes

	A	B	C	D
(1)	3	4	2	1
(3)	4	3	2	1

	A	B	C	D
(2)	1	2	4	3
(4)	1	2	3	4

D.

Answer: C

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45. Wobble hypothesis establishes :

A. peptide chain formation

B. Initiation of peptide chain

C. termination of peptide chain

D. economy in tRNA molecules

Answer: D

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46. First code of every mRNA is

A. either AUG or GUG

B. elther AUG OR UAG

C. either GUG or UAA

D. elther UGA or UAA

Answer: A

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47. The genetic code is called a degenerate code because

A. codons degenerate very quickly

B. one amino acid is coded by more than one codon

C. one codon codes for more than one amino acids

D. None of the above

Answer: B

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48. In silent mutation , there is

A. no change in base sequence

B. no change in protein type

C. change in chromosomal segment

D. change in amino acid sequence of protein

Answer: B

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49. In the AOB system of blood,group,if both antigens are present but no antibody,the blood group of the individual would be :

A. B

B. O

C. AB

D. A

Answer: C

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50. Which of the following statement (S) is /are true about linkage ?

I. It is a phenomenon in which more recombinants are produced in F_2-generation.

II. More parental combination are produced in F_2-generation.

III. Genotype which are present in F_1 Hybrid, reappear in high frequency in F_2-generation.

IV. It is a phenomenon in which two chromosomes are linked.

A. Only I

B. Only II

C. I and III

D. III and IV

Answer: A

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51. Match the following columns.

Column I	Column II
A. Sickle-cell anaemia	1. Sex-linked
B. Colour blindness	2. Autosomal chromosome-7
C. Phenylketonuria	3. Autosomal chromosome-11
D. Cystic fibrosis	4. Autosomal chromosome-4
E. Huntington's disease	5. Autosomal chromosome-12

Codes

	A	B	C	D	E		A	B	C	D	E
(1)	3	5	1	2	4	(2)	5	1	2	3	4
(3)	4	1	5	2	3	(4)	3	1	5	2	4

A.

Codes

	A	B	C	D	E		A	B	C	D	E
(1)	3	5	1	2	4	(2)	5	1	2	3	4
(3)	4	1	5	2	3	(4)	3	1	5	2	4

B.

Codes

	A	B	C	D	E		A	B	C	D	E
(1)	3	5	1	2	4	(2)	5	1	2	3	4
(3)	4	1	5	2	3	(4)	3	1	5	2	4

C.

Codes

	A	B	C	D	E		A	B	C	D	E
(1)	3	5	1	2	4	(2)	5	1	2	3	4
(3)	4	1	5	2	3	(4)	3	1	5	2	4

D.

Answer: D

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52. Interaction of epistatic genes shows the ratio

A. $9:6:1$

B. $13:3$

C. $12:3:1$

D. $15:1$

Answer: C

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53. Who proved that life on present earth can originate only from pre-existing life?

A. Louis Pasteur

B. Charles Darwin

C. Boxmann

D. Weissman

Answer: A

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54. Abiogenesis means

A. spontaneous generation

B. germplasm theory

C. origin of panspermia

D. physicochemical origin of life

Answer: A

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55. Match the following columns.

Column I	Column II
A. *Dryopithecus*	1. 2.5 million years ago
B. *Ramapithecus*	2. 4 million years ago
C. *Australopithecus*	3. 15 million years ago
D. *A. africanses*	4. 25 million years ago

Codes

	A	B	C	D
(1)	1	2	3	4
(2)	1	2	4	3
(3)	1	4	2	3
(4)	4	3	2	1

A.

Codes

	A	B	C	D
(1)	1	2	3	4
(2)	1	2	4	3
(3)	1	4	2	3
(4)	4	3	2	1

B.

Codes

	A	B	C	D
(1)	1	2	3	4
(2)	1	2	4	3
(3)	1	4	2	3
(4)	4	3	2	1

C.

Codes

	A	B	C	D
(1)	1	2	3	4
(2)	1	2	4	3
(3)	1	4	2	3
(4)	4	3	2	1

D.

Answer: D

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56. Which one of the following experiments suggests that simplest living organisms could not have originated spontaneously from non-living matter

A. Microbes did not appear in stored meat

B. Larvae could appear in decaying organic matter

C. Microbes appeared from unsterilised organic matter

D. Meat was not spoiled, when heated and kept sealed in a vessel

Answer: C

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57. Conacervates containing nucleprotein, surrounded by several nutritive substance and covered by a surface membrane represent :

A. pre-cell

B. post-cell

C. microsphere

D. liposome

Answer: C

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58. The concept of chemical evolution is based on

A. crystallisation of chemicals

B. interaction of water, air and clay under intense heat

C. effect of microorganisms

D. possible origin of life by combination of chemicals under suitable environmental conditions

Answer: D

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59. Match the following columns.

Column I	Column II
A. Wallace	1. Natural selection
B. Malthus	2. Essay of population
C. Hardy-Weinberg law	3. *Biston betularia*
D. Industrial melanism	4. $(p+q)^2 = 1$

A. Codes

	A	B	C	D
(1)	1	2	4	3
(3)	1	3	4	2

	A	B	C	D
(2)	1	2	3	4
(4)	2	3	4	1

B.

Codes

	A	B	C	D
(1)	1	2	4	3
(3)	1	3	4	2

	A	B	C	D
(2)	1	2	3	4
(4)	2	3	4	1

C.

Codes

	A	B	C	D
(1)	1	2	4	3
(3)	1	3	4	2

	A	B	C	D
(2)	1	2	3	4
(4)	2	3	4	1

D.

Codes

	A	B	C	D
(1)	1	2	4	3
(3)	1	3	4	2

	A	B	C	D
(2)	1	2	3	4
(4)	2	3	4	1

Answer: A

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60. Under certain conditions, scientists have got cell-like structures but without its true organisation. They are called

A. coacervates

B. microbes

C. eobionts

D. protists

Answer: A

61. Coacervates are certain complex inorganic and organic compounds in the hot sea water

aggregated in different combinations. Who called them microsphere ?

A. Haldane

B. Oparin

C. Sydney Fox

D. Richter

Answer: C

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62. Which of the following is not evidence for the role of endosymbiosis in the origin of eukaryotes ?

A. Chloroplasts have their own DNA

B. The inner membrane of a chloroplast is similar to prokaryotic membranes

C. Mitochondria reproduced by binary fission

D. The DNA in the eukaryotic nucleus codes for some enzymes in mitochondria

Answer: D

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63. Which of the following is an atavistic character ?

I. Body hairs

II. Enlarged canines

III. Presence of six fingers

IV. Presence of tail in some babies

The correct combination is

A. I and IV

B. I and II

C. II and IV

D. I,II and IV

Answer: C

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64. Synthesis of amino acids is to prove that amino acids were formed in primitive ocean was experimentally proved by :

A. Sidney Fox

B. Oparin

C. Haldane

D. Stanley Miller

Answer: D

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65. Which animal provides the evidence for evolution of birds from reptiles ?

A. Dodo

B. Archaeopteryx

C. Struthio

D. Arcjeprnis

Answer: B

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66. Convergent evolution is shown by :

A. homologous organs

B. analogous organs

C. vestigial organs

D. All of the above

Answer: B

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67. Which era could be called the "age of mammals and birds " ?

A. Mesozoic

B. Cenozoic

C. Palaeozoic

D. Cretaceous

Answer: B

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68. Connecting link between ape and man is:

A. Neanderthal man

B. Cro-magnon man

C. Australopithecus

D. Lemur

Answer: C

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69. When two species of different genealogy come to resemble each other as a result of adaptation, the phenomenon is termed

A. divergent evolution

B. microevolution

C. coevolution

D. convergent evolution

Answer: D

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70. Peripatus is a connecting link between

A. annelids and helminths

B. annelids and molluscs

C. annelids and arthropods

D. reptiles and mammals

Answer: C

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71. Rule of embryonic development was given by

A. von Baer

B. Haeckel

C. Mendel

D. Darwin

Answer: A

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72. Which of the following is not a vestigial organ in humans

A. Coccyx

B. Finger nails

C. Third molar of each side in each law

D. Segmental muscles of abdomen

Answer: B

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73. Which of the following statements are false ?

I. Aa dominant allele determines the phenotype when paired with a recessive allele.

II.A recessive allele is always weaker than a

dominant allele.

III. A recessive allele does not show its effect when paired with a dominant allele.

IV. A dominant allele is always better for an organism

A. II , I and IV

B. II and IV

C. I,II and III

D. III and IV

Answer: B

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74. Haeckel's theory of recapitulation means that

A. ontogeny repeats phylogeny

B. all organisms begin their life with a single call

C. progeny of an organism resembles its parents

D. regeneration

Answer: A

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75. As per geological time scale, hominids evolved during:

A. Miocene

B. Pliocene

C. Pleistocene

D. Oligocene

Answer: B

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76. Study of fossils is called

A. Organic evolution

B. Herpetology

C. Cytology

D. Paleontology

Answer: D

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77. An important evidence in favour of organic evolution is the occurrence of :

A. vestigial organs

B. analogous organs

C. homologous organs

D. homologous and analogous organs

Answer: D

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78. Reappearance of certain ancestral characters is called

A. vestigial organ

B. fossil

C. atavism

D. paleontology

Answer: C

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79. Select the incorrect statements.

I. Natural selection is essential for evolution.

II. Natural selection do not include variations.

III. Concept of natural selection was given by Hugo de Vries.

IV. Mutation is the sudden inheritable change.

V. Synthetic theory is also called Neo-Darwinism theory of evolution.

The correct combination is a

A. I, II and III

B. II, III and IV

C. III, IV and V

D. II and III

Answer: D

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80. Match the following columns.

Column I	Column II
A. Darwin	1. Abiogenesis
B. von Helmont	2. Use and disuse of organs
C. Lamarck	3. Continental drift theory
D. Wagner	4. Evolution by natural selection

A.

Codes

	A	B	C	D
(1)	1	4	2	3
(3)	2	4	3	1

	A	B	C	D
(2)	4	1	2	3
(4)	4	3	2	1

B.

Codes

	A	B	C	D
(1)	1	4	2	3
(3)	2	4	3	1

	A	B	C	D
(2)	4	1	2	3
(4)	4	3	2	1

C.

Codes

	A	B	C	D
(1)	1	4	2	3
(3)	2	4	3	1

	A	B	C	D
(2)	4	1	2	3
(4)	4	3	2	1

D.

Codes

	A	B	C	D
(1)	1	4	2	3
(3)	2	4	3	1

	A	B	C	D
(2)	4	1	2	3
(4)	4	3	2	1

Answer: B

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81. Assertion (A) The duplicate genes are also called pseudoalleles.

Reason (R) Duplicate genes although present on different locus but have the ability to produce same or almost same trait of a character.

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

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

C. Assertion is true, but Reason is false

D. The Assertion and Reason both are false

Answer: A

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82. Assertion (a) :- An organism with lethal mutation may not even develop beyond the zygote stage.

Reason (R) :- All types of gene mutations are lethal .

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

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

C. Assertion is true, but Reason is false

D. The Assertion and Reason both are false

Answer: D

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

Reason Male sex is determined by XY-chromosome

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

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

C. Assertion is true, but Reason is false

D. The Assertion and Reason both are false

Answer: B

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84. Assertion : In humans, the gamete contributed by the male determines whether the child produced will be male or female

Reason : Sex in human is a polygenic trait depending upon a cumulative efffect of some

genes on X-chromosome and some on Y-chromosome .

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

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

C. Assertion is true, but Reason is false

D. The Assertion and Reason both are false

Answer: C

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85. Assertion : The genetic complement of an organism is called genotype

Reason : Genotype is the type of hereditary propeties of an organism.

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

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

C. Assertion is true, but Reason is false

D. The Assertion and Reason both are false

Answer: B

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