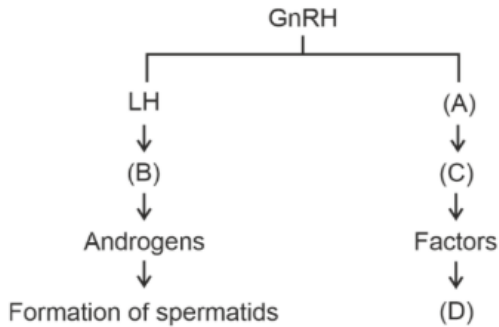


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101. Identify the correct option (A), (B), (C), (D) with respect to spermatogenesis.



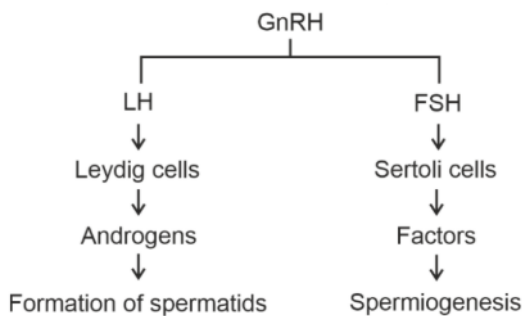
- (A) FSH, Leydig cells, Sertoli cells, spermiogenesis.
 (B) ICSH, Interstitial cells, Leydig cells, spermiogenesis.
 (C) FSH, Sertoli cells, Leydig cells, spermatogenesis.
 (D) ICSH, Leydig cells, Sertoli cells, spermatogenesis.

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Correct Option: A

Solution:

The correct answer is option no. (1) as



- (A) is *FSH* which is a pituitary hormone.
 (B) is Leydig cells which are found in the interstitial space outside of the seminiferous tubules.
 (C) is Sertoli cells are found inside the seminiferous tubules.
 (D) is Spermiogenesis which is a process that helps in transformation of spermatids into spermatozoa.

102. Match List I with List II related to digestive system of cockroach.

	List I		List II
--	--------	--	---------

A.	The structures used for storing of food	I.	Gizzard
B.	Ring of 6-8 blind tubules at junction of foregut and midgut.	II.	Gastric Caec
C.	Ring of 100-150 yellow coloured thin filaments at junction of midgut and hindgut.	III.	Malpighian tubules
D.	The structures used for grinding the food.	IV.	Crop

Choose the correct answer from the options below:

- (A) A-IV, B-II, C-III, D-I (B) A-I, B-II, C-III, I
 (C) A-IV, B-III, C-II, D-I (D) A-III, B-II, C-IV,

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Correct Option: A

Solution:

The correct answer is option no. (1) as

The structure used for griding the food particles	-	Gizzard
The structure used for storing of food	-	Crop
Ring of 6-8 blind tubules at junction of foregut and midgut which assists in secretion of digestive juices	-	Gastric Caeca
Ring of 100-150 yellow coloured thin filaments at junction of midgut and hindgut which assists in elimination of nitrogenous wastes	-	Malpighian tubules

103. In both sexes of cockroach, a pair of jointed filamentous structures called anal cerci are present on

- (A) 5th segment
 (B) 10th segment
 (C) 8th and 9th segment

NEET 2024**Correct Option: B****Solution:**

Correct answer is option (2), because in both sexes of cockroach, 10th segment bears a pair of jointed filamentous structures called anal cerci.

Options (1), (3) and (4) are incorrect because 5th, 8th and 9th segments do not bear such structures. In adult cockroaches only 10th segments are present in abdomen. 11th abdominal segment is absent.

104. Which of the following are Autoimmune disorders?
 A. Myasthenia gravis B. Rheumatoid arthritis C. Gout D. Muscular dystrophy E. Systemic Lupus Erythematosus (SLE)
 Choose the most appropriate answer from the options given below:

- (A) A, B & D only (B) A, B & E only
 (C) B, C & E only (D) C, D & E only

NEET 2024**Correct Option: B****Solution:**

The correct answer is option (2) as Myasthenia gravis, Rheumatoid arthritis and Systemic Lupus

Erythematosus (SLE) are autoimmune disorders.

Muscular dystrophy is a genetic disorder which progressively affects the skeletal muscles.

Gout is the inflammation of joints due to deposition of uric acid crystals.

Option (1), (3) and (4) are not the correct answer because all of them are not autoimmune disorders.

105. Match List I with List II :

List I	List II
A. Pterophyllum	I. Hag fish
B. Myxine	II. Saw fish
C. Pristis	III. Angel fish
D. Exocoetus	IV. Flying fish

Choose the correct answer from the options given below :

- (A) A-II, B-I, C-III, D-IV (B) A-III, B-I, C-II, I
 (C) A-IV, B-I, C-II, D-III (D) A-III, B-II, C-I, I

NEET 2**Correct Option: B****Solution:**

The correct option is option no. (2) as

Pterophyllum is the scientific name for Angel fish.

Myxine is the scientific name for Hag fish.

Pristis is the scientific name for Saw fish.

Exocoetus is the scientific name for Flying fish.

106. Match List I with List II

	List I		List II
A.	Non-mediated IUD	I.	Multiload 375
B.	Copper releasing IUD	II.	Progestogens
C.	Hormone releasing IUD	III.	Lippes loop
D.	Implants	IV.	LNG-20

Choose the correct answer from the option given b

- (A) A-III, B-I, C-II, D-IV (B) A-I, B-III, C-IV, I
 (C) A-IV, B-I, C-II, D-III (D) A-III, B-I, C-IV, I

NEET 2**Correct Option: D****Solution:**

Correct answer is option (4) because

- Lippes loop is a non-medicated IUD.
- Multiload 375 is a copper releasing IUD.
- LNG-20 is a hormone releasing IUD.
- Progestogens are used as implants.

107. Match List I with List II :

	List I		List II
A.	Typhoid	I.	Fungus
B.	Leishmaniasis	II.	Nematode
C.	Ringworm	III.	Protozoa
D.	Filariasis	IV.	Bacteria

Choose the correct answer from the options below:



- (A) A-I, B-III, C-II, D-IV (B) A-IV, B-III, C-I, D-II
(C) A-III, B-I, C-IV, D-II (D) A-II, B-IV, C-III, D-I

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Correct Option: B

Solution:

The correct answer is option (2) as

Typhoid - Caused by *Salmonella typhimurium* (Bacteria)

Leishmaniasis - Caused by protozoan i.e., *Leishmania donovani*

Ringworm - Caused by fungi belonging to the genera *Microsporum*, *Trichophyton* and *Epidermophyton*

Filariasis - Caused by *Wuchereria bancrofti* and *Wuchereria malayi* (Nematode)

- 108.** Given below are two statements : one is labelled as Assertion *A* and the other is labelled as Reason *R* :
Assertion *A* : FSH acts upon ovarian follicles in female and Leydig cells in male.
Reason *R* : Growing ovarian follicles secrete estrogen in female while interstitial cells secrete androgen in male human being.
In the light of the above statements, choose the correct answer from the options given below:

- (A) Both *A* and *R* are true and *R* is the correct explanation of *A*
(B) Both *A* and *R* are true but *R* is NOT the correct explanation of *A*
(C) *A* is true but *R* is false
(D) *A* is false but *R* is true

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Correct Option: D

Solution:

The correct answer is option (4) as FSH is a gonadotropin affects ovarian follicles in females and causes their growth but in males LH affects Leydig cells leading to secretion of androgens.

Growing ovarian follicles secrete estrogen in females while interstitial cells secrete androgen in male human being.

Hence, Assertion is false and Reason is true.

- 109.** Which of the following statements is incorrect?

- (A) A bio-reactor provides optimal growth conditions for achieving the desired product
(B) Most commonly used bio-reactors are of stirred type
(C) Bio-reactors are used to produce small scale bacterial cultures
(D) Bio-reactors have an agitator system, an oxygen delivery system and foam control system

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Correct Option: C

Solution:

Correct answer is option (3)

The statement (3) is incorrect because bioreactors are used for processing of large volumes (100-10000 litres) of culture.

Small volume cultures cannot yield appreciable quantities of products. To produce in large quantities the development of bioreactors is required.

- 110.** Match List I with List II

	List-I (Types of Stamens)		List-II (Examples)
A.	Monoadelphous	I.	Citrus
B.	Diadelphous	II.	Pea
C.	Polyadelphous	III.	Lily
D.	Epiphyllous	IV.	China-rose

Choose the correct answer from the options below:

- (A) A-IV, B-II, C-I, D-III (B) A-IV, B-I, C-II, D-III
(C) A-I, B-II, C-IV, D-III (D) A-III, B-I, C-IV, D-II

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Correct Option: A

Solution:

In China rose monoadelphous androecium is present.

Diadelphous androecium is found in pea plant.

Polyadelphous androecium is found in citrus.

Epiphyllous androecium is found in lily.

111. 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:

- (A) A, B and C only
- (B) A, C, D and E only
- (C) B, C and D only
- (D) A, B, C, D and E

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Correct Option: B

Solution:

According to Law of Dominance

- (1) Characters are controlled by discrete units called factors
- (2) Factors occur in pairs
- (3) In a dissimilar pair of factors one member of the pair dominates (dominant) the other recessive

The law of dominance is used to explain the expression of only one of the parental characters in a monohybrid cross.

Law of segregation is based on the fact that the alleles do not show any expression and both the characters are recovered as such in F_2 generation

112. Tropical regions show greatest level of species richness because

- A. Tropical latitudes have remained relatively undisturbed for millions of years, hence more time was available for species diversification.
- B. Tropical environments are more seasonal.
- C. More solar energy is available in tropics.
- D. Constant environments promote niche specialization.
- E. Tropical environments are constant and predictable.

Choose the correct answer from the options given below.

- (A) A,C,D and E only
- (B) A and B only
- (C) A,B, and E only
- (D) A,B, and D only

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Correct Option: A

Solution:

Only statement B is incorrect because tropical environments unlike temperate ones, are less seasonal, relatively more constant and predictable.

Thus statements A, C, D and E are correct.

113. Hind II always cuts DNA molecules at a particular called recognition sequence and it consists of:

- (A) 8 bp
- (B) 6 bp
- (C) 4 bp
- (D) 10 bp

NEET 2

Correct Option: B

Solution:

The correct answer is option (2).

The first restriction endonuclease - Hind II, whose functioning depends on a specific DNA nucleotide sequence was isolated. It was found that Hind II always cuts DNA molecules at a particular point by recognising sequence of six base pairs.

Option (1), (3) and (4) are incorrect because they have either more than 6 or less than 6 bp .

114. The capacity to generate a whole plant from any cell of the plant is called:

- (A) Totipotency
- (B) Micropropagation
- (C) Differentiation
- (D) Somatic hybridization

NEET 2

Correct Option: A

Solution:

Totipotency is defined as the capacity to generate a whole plant from any cell of the plant.

115. Which one of the following factors will not affect Hardy-Weinberg equilibrium?

- (A) Genetic recombination
- (B) Genetic drift
- (C) Gene migration
- (D) Constant gene pool

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Correct Option: D**Solution:****Answer: (D) Constant gene pool**

Hardy-Weinberg equilibrium is disturbed by factors like:

- Genetic drift
- Gene migration
- Genetic recombination

A **constant gene pool** helps maintain the equilibrium, so it does **not** affect it.

116. The flippers of the Penguins and Dolphins are the example of the

- (A) Adaptive radiation (B) Natural selection
(C) Convergent evolution (D) Divergent evolution

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Correct Option: C**Solution:****Answer: (C) Convergent evolution**

Penguins and dolphins belong to different groups but both developed flippers for swimming. This is an example of **convergent evolution** (analogous organs)

117. Which of the following is not a natural/traditional contraceptive method?

- (A) Coitus interruptus (B) Periodic abstinence
(C) Lactational amenorrhea (D) Vaults

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Correct Option: D**Solution:**

118. Which of the following is not a component of Fallopian tube?

- (A) Uterine fundus (B) Isthmus
(C) Infundibulum (D) Ampulla

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Correct Option: A**Solution:**

The **uterine fundus** is a part of the uterus, not the Fallopian tube.

119. Given below are two statements:

Statement I:

The presence or absence of hymen is not a reliable indicator of virginity.

Statement II:

The hymen is torn during the first coitus only. In light of the above statements, choose the correct answer from the options given below :

- (A) Both Statement I and Statement II are true
(B) Both Statement I and Statement II are false
(C) Statement I is true but Statement II is false
(D) Statement I is false but Statement II is true

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Correct Option: C**Solution:**

120. Consider the following statements:

- A. Annelids are true coelomates
B. Poriferans are pseudocoelomates
C. Aschelminthes are acoelomates
D. Platyhelminthes are pseudocoelomates
Choose the correct answer from the options below:

- (A) B only (B) A only (C) C only (D) D only

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Correct Option: B**Solution:**

A. Annelids are true coelomates (Correct): Annelids possess a true body cavity (coelom) that is completely lined by mesodermal tissue.

B. Poriferans are pseudocoelomates (Incorrect):

Poriferans (sponges) are structurally simple and completely **lack a body cavity** (they are acoelomates at the cellular level of organization).

C. Aschelminthes are acoelomates (Incorrect):

Aschelminthes (roundworms) are actually **pseudocoelomates**, meaning their body cavity is present.

but scattered in pouches rather than completely lined by mesoderm.

D. Platyhelminthes are pseudocoelomates (Incorrect):

Platyhelminthes (flatworms) are **acoelomates**, meaning they have no body cavity between the gut and the outer body wall.

121. Match List I with List II:

List I		List II	
(A)	Pleurobrachia	(I)	Mollusca
(B)	Radula	(II)	Ctenophora
(C)	Stomochord	(III)	Osteichthyes
(D)	Air bladder	(IV)	Hemichordata

Choose the correct answer from the options given below:

- (A) A – IV, B – II, C – III, D – I
 (B) A – II, B – I, C – IV, D – III
 (C) A – II, B – IV, C – I, D – III
 (D) A – IV, B – III, C – II, D – I

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Correct Option: B

Solution:

(A) Pleurobrachia → (II) Ctenophora

(Pleurobrachia, commonly known as a comb jelly, belongs to the Phylum Ctenophora).

(B) Radula → (I) Mollusca

(The radula is a file-like rasping organ used for feeding, uniquely found in the mouth of molluscs).

(C) Stomochord → (IV) Hemichordata

(Hemichordates possess a rudimentary, rod-like structure in their collar region called a stomochord).

(D) Air bladder → (III) Osteichthyes

(Bony fishes belong to Osteichthyes and possess a gas-filled air bladder that regulates their buoyancy).

122. Match List I with List II:

List I		List II	
A	Unicellular glandular epithelium	I	Salivary glands

B	Compound epithelium	II	Pancreas
C	Multicellular glandular epithelium	III	Goblet cells of alimentary canal
D	Endocrine glandular epithelium	IV	Moist surface of buccal cavity

Choose the correct answer from the options below:

- (A) A-II, B-I, C-III, D-IV (B) A-IV, B-III, C-I, D-II
 (C) A-III, B-IV, C-I, D-II (D) A-II, B-I, C-IV, D-III

NEET 2

Correct Option: C

Solution:

The correct matching is:

- **A. Unicellular glandular epithelium → III. Goblet cells of alimentary canal**
- **B. Compound epithelium → IV. Moist surface buccal cavity**
- **C. Multicellular glandular epithelium → I. Salivary glands**
- **D. Endocrine glandular epithelium → II. Pancreas**

So, the correct answer is:

A-III, B-IV, C-I, D-II

123. Which of the following is not a steroid hormone?

- (A) Cortisol (B) Testosterone
 (C) Progesterone (D) Glucagon

NEET 2

Correct Option: D

Solution:

124. Match List I with List II :

List I		List II	
(A)	Cocaine	(I)	Effective sedative in surge
(B)	Heroin	(II)	Cannabis sativa
(C)	Morphine	(III)	Erythroxylum

(D)	Marijuana	(IV)	Papaver somniferum
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Choose the correct answer from the options given below:

- (A) A-III, B-IV, C-I, D-II (B) A-IV, B-III, C-I, D-II
(C) A-I, B-III, C-II, D-IV (D) A-II, B-I, C-III, D-IV

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Correct Option: A

Solution:

125. Given below are two statements:

Statement I: The cerebral hemispheres are connected by nerve tract known as corpus callosum.

Statement II: The brain stem consists of the medulla oblongata, pons and cerebrum.

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

- (A) Both Statement I and Statement II are correct.
(B) Both Statement I and Statement II are incorrect.
(C) Statement I is correct but Statement II is incorrect.
(D) Statement I is incorrect but Statement II is correct.

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Correct Option: C

Solution:

126. List I	List II
A. Pons	I. Provides additional space for Neurons, regulates posture and balance.
B. Hypothalamus	II. Controls respiration and gastric secretions.
C. Medulla	III. Connects different regions of the brain.
D. Cerebellum	IV. Neuro secretory cells

Choose the correct answer from the options given below:

- (A) A-III, B-IV, C-II, D-I (B) A-II, B-III, C-I, D-IV
(C) A-I, B-III, C-II, D-IV (D) A-III, B-I, C-III, D-IV

NEET 2

Correct Option: A

Solution:

127. Match List I with List II:

	List I		List II
A.	Expiratory capacity	I.	Expiratory reserve volume + Tidal volume
B.	Functional residual capacity	II.	Tidal volume + Expiratory reserve volume
C.	Vital capacity	III.	Tidal volume + Inspiratory reserve volume
D.	Inspiratory capacity	IV.	Expiratory reserve volume + Residual volume

Choose the correct answer from the options below:

- (A) A-II, B-IV, C-I, D-III (B) A-III, B-II, C-IV,
(C) A-II, B-I, C-IV, D-III (D) A-I, B-III, C-II, I

NEET 2

Correct Option: A

Solution:

128. List of endangered species was released by

- (A) GEAC (B) WWF (C) FOAM (D) IUCN

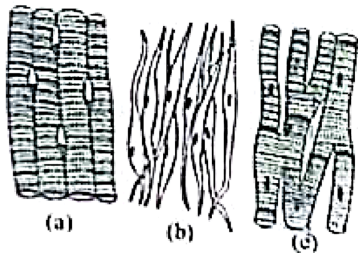
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Correct Option: D

Solution:

List of endangered species was released by - IUCN.

129. Three types of muscles are given as *a*, *b* and *c*. Identify the correct matching pair along with their location in human body:



Name of muscle/location:

- (A) (a) Smooth - Toes (b) Skeletal - Legs (c) Cardiac - Heart
- (B) (a) Skeletal - Triceps (b) Smooth - Stomach (c) Cardiac - Heart
- (C) (a) Skeletal - Biceps (b) Involuntary - Intestine (c) Smooth - Heart
- (D) (a) Involuntary - Nose tip (b) Skeletal - Bone (c) Cardiac - Heart

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Correct Option: B

Solution:

130. The equation of Verhulst-Pearl logistic growth is $\frac{dN}{dt} = rN \left[\frac{K-N}{K} \right]$.

From this equation, K indicates:

- (A) Intrinsic rate of natural increase
- (B) Biotic potential
- (C) Carrying capacity
- (D) Population density

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Correct Option: C

Solution:

In the equation $\frac{dN}{dt} = rN \left(\frac{K-N}{K} \right)$, K represents carrying capacity.

131. In an ecosystem if the Net Primary Productivity (NPP) of first trophic level is $100 \times (\text{kcal m}^{-2}) \text{ yr}^{-1}$, what would be the GPP (Gross Primary Productivity) of the third trophic level of the same ecosystem?

- (A) $\frac{x}{10} (\text{kcal m}^{-2}) \text{ yr}^{-1}$
- (B) $x (\text{kcal m}^{-2}) \text{ yr}^{-1}$
- (C) $10x (\text{kcal m}^{-2}) \text{ yr}^{-1}$
- (D) $\frac{100x}{3x} (\text{kcal m}^{-2}) \text{ yr}^{-1}$

NEET 2

Correct Option: C

Solution:

NPP at first trophic level would be the GPP for second trophic level. NPP at second trophic level would be GI for third trophic level. Therefore, $100x (\text{kcal/m}^2/\text{yr})$ would be GPP at second trophic level and $100x \times 10\% (\text{kcal/m}^2/\text{yr})$ i.e., $10x (\text{kcal/m}^2/\text{yr})$ energy would be GPP at third trophic level.

132. Given below are two statements :

Statement I: In the nephron, the descending loop of Henle is impermeable to water and permeable to electrolytes.

Statement II : The proximal convoluted tubule is lined by simple columnar brush border epithelium and it increases the surface area for reabsorption.

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

- (A) Both Statement I and Statement II are true
- (B) Both Statement I and Statement II are false
- (C) Statement I is true but Statement II is false
- (D) Statement I is false but Statement II is true

NEET 2

Correct Option: B

Solution:

133. Match the following lists:

List I		List II	
(A)	Frederick Griffith	(I)	Genetic code
(B)	Francois Jacob & Jacques Monod	(II)	Semi-conservative mode of DNA replication
(C)	Har Gobind Khorana	(III)	Transformation
(D)	Meselson & Stahl	(IV)	Lac operon

Choose the correct answer from the options given below:

- (A) A – III, B – II, C – I, D – IV
- (B) A – IV, B – III, C – I, D – II
- (C) A – II, B – III, C – IV, D – I
- (D) A – IV, B – I, C – III, D – II

NEET 2

Correct Option: B

Solution:

Frederick Griffith series of experiment witness miraculous transformation in the bacteria.

The elucidation of Lac operon was a result of a close association between geneticist, Francois Jacob and a biochemist, Jacques Monod.

Meselson and Stahl gave semi-conservative mode of DNA replication.

Har Gobind Khorana developed chemical method to define combination of bases in genetic code.

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

Choose the most appropriate answer from the options given below:

- (A) A only
- (B) B only
- (C) C & B only
- (D) D & E only

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Correct Option: A

Solution:

Genotype of father with blood group $B^+ = I^B i / II^B$

Genotype of mother with blood group $A^+ = I^A i / iI^A$

Genotype of child with blood group $O^+ = ii$

Hence only 'A' is correct.

135. 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 below:

- (A) A – I, B – II, C – III, ~~D – IV~~
- (B) ~~IV~~ – II, B – I, C – III
- (C) A – III, B – IV, C – I, ~~D – II~~
- (D) ~~A~~ – IV, B – III, C – II, D – I

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Correct Option: C

Solution:

- A. Two or more alternative forms of gene are called alleles.
- B. Cross of F_1 progeny with homozygous recessive parent is a test cross.
- C. Cross of F_1 progeny with any of the parents is a back cross.
- D. Number of chromosome sets in plant is called ploidy.

136. Identify the set of correct statements:

- A. The flowers of Vallisneria are colourful and produce nectar.
- B. The flowers of water lily are not pollinated by water.
- C. In most of water-pollinated species, the pollen grains are protected from wetting.
- D. Pollen grains of some hydrophytes are long and boat-like.
- E. In some hydrophytes, the pollen grains are released passively inside water.

Choose the correct answer from the options below.

- (A) C, D and E only
- (B) A, B, C and D only
- (C) A, C, D and E only
- (D) B, C, D and E only

NEET 2

Correct Option: D

Solution:

Flowers of *Vallisneria* are not colourful and do not produce nectar. Waterlily is pollinated by insect or wind. In water-pollinated species, pollen grains are protected from wetting by a mucilaginous covering. In some hydrophytes such as *Vallisneria* pollen grains are carried passively by water current.

137. Spraying sugarcane crop with which of the following plant growth regulators increases the length of stem, thus increasing the yield?

- (A) Auxin (B) Gibberellin
(C) Cytokinin (D) Absciscic acid

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Correct Option: B

Solution:

Sugarcanes store carbohydrate as sugar in their stems. Spraying sugarcane crop with gibberellins increases the length of the stem, thus increasing the yield.

138. Auxin is used by gardeners to prepare weedfree lawns. But no damage is caused to grass as auxin

- (A) promotes apical dominance.
(B) promotes abscission of mature leaves only.
(C) does not affect mature monocotyledonous plants.
(D) can help in cell division in grasses, to produce growth.

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Correct Option: C

Solution:

Auxin does not affect mature monocot plants. In monocots, especially grasses show limited translocation and cause rapid degradation of external auxin.

139. How many molecules of ATP and NADPH are required for every molecule of CO_2 fixed in the Calvin cycle?

- (A) 2 molecules of ATP and 3 molecules of NADPH
(B) 2 molecules of ATP and 2 molecules of NADPH
(C) 3 molecules of ATP and 3 molecules of NADPH
(D) 3 molecules of ATP and 2 molecules of NADPH

NEET 2

Correct Option: D

Solution:

For fixation of 1 molecule of CO_2 in Calvin cycle 3 ATP molecules and 2 NADPH molecules are required.

140. Bulliform cells are responsible for

- (A) Inward curling of leaves in monocots.
(B) Protecting the plant from salt stress.
(C) Increased photosynthesis in monocots.
(D) Providing large spaces for storage of sugars.

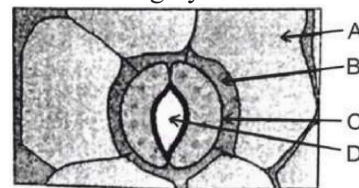
NEET 2

Correct Option: A

Solution:

In grasses, certain adaxial epidermal cells along the vein modify themselves into large, empty, colourless cells. These are called bulliform cells. When the bulliform cells in the leaves have absorbed water and are turgid, the leaf surface is exposed. When they are flaccid due to water stress, they make the leaves curl inwards to minimise water loss.

141. In the given figure, which component has thin walls and highly thickened inner walls?



- (A) C (B) D (C) A (D) B

NEET 2

Correct Option: A

Solution:

Guard cells of stomata have thin outer wall and highly thickened inner walls.

142. Formation of interfascicular cambium from fully developed parenchyma cells is an example for

- (A) Differentiation (B) Redifferentiation
(C) Dedifferentiation (D) Maturation

NEET 2

Correct Option: C

Solution:

The phenomenon of formation of interfascicular cambium from fully differentiated parenchyma cells is called dedifferentiation.

143. Given below are two statements:

Statement I : Parenchyma is living but collenchyma is dead tissue.

Statement II: Gymnosperms lack xylem vessels but presence of xylem vessels is the characteristic of angiosperms.

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

- (A) Both Statement I and Statement II are true
(B) Both Statement I and Statement II are false
(C) Statement I is true but Statement II is false
(D) Statement I is false but Statement II is true

NEET 2024

Correct Option: D

Solution:

Collenchyma is also living tissue.

Gymnosperms lack xylem vessels but presence of xylem vessels is the characteristic of angiosperm.

144. Match List I with List II.

List I		List II	
(A)	Rose	(I)	Twisted aestivation
(B)	Pea	(II)	Perigynous flower
(C)	Cotton	(III)	Drupe
(D)	Mango	(IV)	Marginal placentation

Choose the correct answer from the options given below:

- (A) A-II, B-IV, C-I, D-III (B) A-I, B-II, C-III, D-IV
(C) A-IV, B-III, C-II, D-I (D) A-II, B-III, C-IV, D-I

NEET 2024

Correct Option: A

Solution:

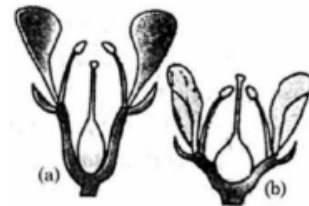
Rose has a half-inferior ovary, thus it is known as a Perigynous flower.

In Pea, the placenta forms a ridge along the ventral sut of the ovary and ovules are borne on this ridge forming two rows .

In Cotton, twisted aestivation is present.

In Mango, the fruit is a drupe.

145. Identify the type of flowers based on the position of the ovary, corolla and androecium with respect to the ovary from the given figures (a) and (b).



- (A) (a) Epigynous; (b) Hypogynous (B) (a) Hypogynous; (b) Epigynous
(C) (a) Perigynous; (b) Epigynous (D) (a) Perigynous; (b) Perigynous

NEET 2024

Correct Option: D

Solution:

If gynoecium is situated in the centre and other parts of the flower are located on the rim of the thalamus almost at the same level, it is called perigynous.

Both diagrams show the perigynous condition.

146. Which of the following is an example of actinomorphic flower?

- (A) Datura (B) Cassia (C) Pisum (D) Sesbania

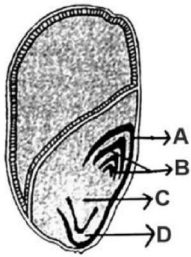
NEET 2024

Correct Option: A

Solution:

Datura shows actinomorphic flower. In Cassia, Pisum, and Sesbania, zygomorphic flowers are seen.

147. Identify the part of the seed from the given figure which is destined to form root when the seed germinates.



- (A) A (B) B (C) C (D) D

NEET 2024

Correct Option: C

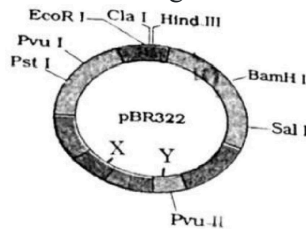
Solution:

Radicle is destined to form root.

In the given diagram 'C' represent radicle

148. The following diagram showing restriction sites in *E. coli* cloning vector pBR322.

Find the role of 'X' and 'Y' genes:



- (A) The gene 'X' is responsible for resistance to antibiotics and 'Y' for protein involved in the replication of Plasmid.
- (B) The gene 'X' is responsible for controlling the copy number of the linked DNA and 'Y' for protein involved in the replication of Plasmid.
- (C) The gene 'X' is for protein involved in replication of Plasmid and 'Y' for resistance to antibiotics.
- (D) Gene 'X' is responsible for recognitions sites and 'Y' is responsible for antibiotic resistance.

NEET 2024

Correct Option: B

Solution:

149. The "Ti plasmid" of *Agrobacterium tumefaciens* stands for

- (A) Tumour inhibiting plasmid
- (B) Tumor independent plasmid
- (C) Tumor inducing plasmid

(D) Temperature independent plasmid

NEET 2

Correct Option: C

Solution:

Tumor inducing plasmid

150. Inhibition of Succinic dehydrogenase enzyme by malonate is a classical example of :

- (A) Competitive inhibition (B) Enzyme activation
- (C) Cofactor inhibition (D) Feedback inhibition

NEET 2

Correct Option: A

Solution:

Inhibition of succinic dehydrogenase by malonate is an example of competitive inhibition. Malonate resembles substrate succinate and competes with the substrate for the substrate-binding site of the enzyme. Consequently, the substrate cannot bind and as a result, the enzyme activity declines.

151. Read the following statements and choose the set of correct statements:

In the members of Phaeophyceae,

- A. Asexual reproduction occurs usually by biflagellate zoospores.
- B. Sexual reproduction is by oogamous method.
- C. Stored food is in the form of carbohydrates like either mannitol or laminarin.
- D. The major pigments found are chlorophyll a, carotenoids and xanthophyll.
- E. Vegetative cells have a cellulosic wall, usually covered on the outside by gelatinous coating of algin.
- Choose the correct answer from the options below:

- (A) A, B, C and D only (B) B, C, D and E only
- (C) A, C, D and E only (D) A, B, C and E only

NEET 2

Correct Option: C

Solution:

In members of Phaeophyceae, sexual reproduction is by oogamous, isogamous or anisogamous methods. The correct set of statements are A, C, D and E.

152. Match List I with List II

	List-I		List-II
A.	Rhizopus	I.	Mushroom
B.	Ustilago	II.	Smut fungus
C.	Puccinia	III.	Bread mould
D.	Agaricus	IV.	Rust fungus

Choose the correct answer from the options given below:

(A) A-III, B-II, C-IV, D-I (B) A-I, B-III, C-II, D-IV

(C) A-III, B-II, C-I, D-IV (D) A-IV, B-III, C-II, D-I

NEET 2024

Correct Option: A

Solution:

Rhizopus is a bread mould fungus. Ustilago is a smut fungi. Puccinia is known as rust fungi. Agaricus is commonly called mushroom.

153. Match List I with List II :

List-I (Sub Phases of Prophase I)		List-II (Specific Characters)	
A.	Diakinesis	I.	Synaptonemal complex formation
B.	Pachytene	II.	Completion of terminalisation of chiasmata
C.	Zygotene	III.	Chromosomes look like thin threads
D.	Leptotene	IV.	Appearance of recombination nodules

Choose the correct answer from the options given below

(A) A – II, B – IV, C – I, D – III (B) A – IV, B – II, C – III, D – I

(C) A – I, B – II, C – IV, D – III (D) A – IV, B – III, C – II, D – I

NEET 2024

Correct Option: A

Solution:

(A) Diakinesis - Completion of terminalisation of chiasmata

(B) Pachytene-Appearance of recombination nodules

(C) Zygotene - Synaptonemal complex formation

(D) Leptotene-Chromosomes look like thin threads

A – II, B – IV, C – I, D – III

154. Given below are two statements:

Statement I: Chromosomes become gradually visible under light microscope during leptotene stage.

Statement II: The beginning of diplotene stage is recognized by dissolution of synaptonemal complex. In the light of the above statements, choose the correct answer from the options given below:

(A) Both Statement I and Statement II are true

(B) Both Statement I and Statement II are false

(C) Statement I is true but Statement II is false

(D) Statement I is false but Statement II is true

NEET 2024

Correct Option: A

Solution:

- During leptotene stage the chromosomes become gradually visible under the light microscope.

- The beginning of diplotene is recognised by the dissolution of the synaptonemal complex and the tendency of the recombined homologous chromosomes of the bivalents to separate from each other except at the site of crossover.

Thus both statement I and II are correct.

155. Spindle fibers attach to kinetochores of chromosomes during

(A) Prophase (B) Metaphase (C) Anaphase (D) Telophase

NEET 2024

Correct Option: B

Solution:

Spindle fibers attach to kinetochores of chromosomes in metaphase stage.

156. Given below are two statements:

Statement I: Mitochondria and chloroplasts both have double membranes bound organelles.

Statement II: Inner membrane of mitochondria is relatively less permeable, as compared chloroplast.

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

- (A) Both Statement I and Statement II are correct.
 (B) Both Statement I and Statement II are incorrect.
 (C) Statement I is correct but Statement II is incorrect.
 (D) Statement I is incorrect but Statement II is correct.

NEET 2024

Correct Option: C

Solution:

Both mitochondria and chloroplasts are double membrane bound cell organelles.

Transport of ions occurs across the inner membrane of mitochondria. The inner membrane of chloroplast is impermeable to ions and metabolites. Therefore, it is said that inner membrane of mitochondria is relatively more permeable to that of chloroplast.

157. Match List I with List II:

List-I		List-II	
(A)	Axoneme	(I)	Centriole
(B)	Cartwheel pattern	(II)	Cilia and flagella
(C)	Crista	(III)	Chromosome
(D)	Satellite	(IV)	Mitochondria

Choose the correct answer from the options given below:

- (A) A-IV, B-III, C-II, D-I (B) A-IV, B-II, C-III, D-I
 (C) A-II, B-IV, C-I, D-III (D) A-II, B-I, C-IV, D-III

NEET 2024

Correct Option: D

Solution:

- Axoneme is seen in cilia and flagella
- Centriole shows cartwheel appearance
- Crista is found in mitochondria
- Satellite is present in chromosomes.

158. The DNA present in chloroplast is:

- (A) Linear, double stranded (B) Circular, double stranded

- (C) Linear, single stranded (D) Circular, single stranded

NEET 2

Correct Option: B

Solution:

The DNA present in chloroplast is circular double stranded.

159. Match List-I with List-II

List-I		List-II	
A.	Nucleolus	I.	Site of formation glycolipid
B.	Centriole	II.	Organization like cartwheel
C.	Leucoplasts	III.	Site for active ribosomal RNA synthesis
D.	Golgi apparatus	IV.	For storage of nutrients

Choose the correct answer from the options below:

- (A) A-III, B-II, C-IV, D-I (B) A-II, B-III, C-I, I
 (C) A-III, B-IV, C-II, D-I (D) A-I, B-II, C-III, I

NEET 2

Correct Option: A

Solution:

- Nucleolus is a site for active ribosomal RNA synthesis
- Both the centrioles in a centrosome lie perpendicular each other in which each has an organisation like the cartwheel.
- Leucoplasts are the colourless plastids of varied shape and sizes with stored nutrients.
- Golgi apparatus is the important site for formation of glycoproteins and glycolipids.

160. Given below are two statements: One is labelled Assertion (A) and the other is labelled as Reason (R).

Assertion (A) : Breast-feeding during initial period of infant growth is recommended by doctors for bringing a healthy baby.

Reason (R) : Colostrum contains several antibodies absolutely essential to develop resistance for the new born baby.

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

- (A) (A) is correct but (R) is not correct.
- (B) (A) is not correct but (R) is correct.
- (C) Both (A) and (R) are correct and (R) is the correct explanation of (A).
- (D) Both (A) and (R) are correct but (R) is NOT the correct explanation of (A).

NEET 2024

Correct Option: C

Solution:

Breast feeding during initial periods of infants growth is recommended by doctors for bringing a healthy baby because colostrum contains several antibodies absolutely essential for develop resistance for new born.

161. Match List I with List II :

	List I		List II
A.	Fibrous joints	I.	Adjacent vertebrae, limited movement
B.	Cartilaginous joints	II.	Humerus and pectoral girdle, rotational movement
C.	Hinge joints	III.	Skull, don't allow any movement
D.	Ball and socket joints	IV.	Knee, help in locomotion

Choose the correct answer from the options given below :

- (A) A-II, B-III, C-I, D-IV (B) A-III, B-I, C-IV, D-II
- (C) A-IV, B-II, C-III, D-I (D) A-I, B-III, C-II, D-IV

NEET 2024

Correct Option: B

Solution:

Fibrous joints - Seen in flat skull bones and do not allow any movement.

Cartilaginous joints - Present between adjacent vertebrae and allow limited movements.

Hinge joints - Present in knees and help in locomotion

Ball and socket joints - Present between humerus and pectoral girdle and allow rotational movement.

162. Given below are some stages of human evolution. Arrange them in correct sequence. (Past to Recent)

- A. Homo habilis
B. Homo sapiens
C. Homo neanderthalensis
D. Homo erectus

Choose the correct sequence of human evolution from the options given below :

- (A) C-B-D-A (B) A-D-C-B (C) D-A-C-B (D) B-A-C-D

NEET 2

Correct Option: B

Solution:

Homo habilis (A) → Homo erectus (D) → Homo neanderthalensis (C) → Homo sapiens (B).

163. Match List I with List II:

	List-I		List-II
A.	Mesozoic Era	(I)	Lower invertebrates
B.	Proterozoic Era	(II)	Fish and Amphibia
C.	Cenozoic Era	(III)	Birds and Reptiles
D.	Paleozoic Era	(IV)	Mammals

Choose the correct answer from the options given below :

- (A) A-I, B-II, C-IV, D-III (B) A-III, B-I, C-IV, D-II
- (C) A-II, B-I, C-III, D-IV (D) A-III, B-I, C-II, D-I

NEET 2

Correct Option: B

Solution:

Mesozoic Era - Birds and reptiles Proterozoic Era - Lower invertebrates Coenozoic Era - Mammals Paleozoic Era - Fish and amphibians

164. Match List I with List II

	List I		List II
A	Citric acid cycle	I	Cytoplasm
B	Glycolysis	II	Mitochondrial matrix
C	Electron transport system	III	Intermembrane space of mitochondria
D	Proton gradient	IV	Inner mitochondrial membrane

Choose the correct answer from the options given below:

- (A) A-III, B-IV, C-I, D-II (B) A-IV, B-III, C-II, D-I
(C) A-I, B-II, C-III, D-IV (D) A-II, B-I, C-IV, D-III

NEET 2024

Correct Option: D

Solution:

Citric acid cycle	Mitochondrial matrix
Glycolysis	
Glycolysis	Cytoplasm
Electron transport system	Inner mitochondrial Membrane
Proton gradient	Intermembrane space of Mitochondria

165. The following are the statements about nonchordates :

- A. Pharynx is perforated by gill slits.
B. Notochord is absent
C. Central nervous system is dorsal
D. Heart is dorsal if present
E. Post anal tail is absent

Choose the most appropriate answer from the options given below

- (A) A, B & D only (B) B, D & E only
(C) B, C & D only (D) A & C only

NEET 2024

Correct Option: B

Solution:

Non-chordates

Notochord absent.

Central nervous system is ventral, solid and double.

Gill slits are absent.

Heart is dorsal (if present).

Post-anal tail is absent.

166. In a plant, black seed colour (BB/Bb) is dominant white seed colour (bb). In order to find out the genotype of the black seed plant, with which of the following genotype will you cross it?

- (A) bb (B) Bb (C) BB/Bb (D) BB

NEET 2

Correct Option: A

Solution:

In a plant, black seed colour (BB/Bb) is dominant over white seed colour (bb). In order to find out the genotype of the black seed plant we cross with bb genotype.

167. Lecithin, a small molecular weight organic compound found in living tissues, is an example of:

- (A) Amino acids (B) Phospholipids
(C) Glycerides (D) Carbohydrates

NEET 2

Correct Option: B

Solution:

Lecithin is a specific type of phospholipid (specifically phosphoglyceride) that contains a phosphate group, glycerol, two fatty acids, and a choline group. It is a vital component of cell membranes in all living organisms and is commonly found in high concentrations in tissues like egg yolks and soybeans.

168. Given below are two statements:

Statement I: Bt toxins are insect group specifically coded by a gene cry IAc.

Statement II: Bt toxin exists as inactive protoxin in *thuringiensis*. However, after ingestion by the insect, the inactive protoxin gets converted into active form at the acidic pH of the insect gut.

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

- (A) Both Statement I and Statement II are true
(B) Both Statement I and Statement II are false



(C) Statement I is true but Statement II is false

(D) Statement I is false but Statement II is true

NEET 2024

Correct Option: C

Solution:

169. Match List I with List II:

List I	List II
A. <i>Clostridium butylicum</i>	I. Ethanol
B. <i>Saccharomyces cerevisiae</i>	II. Streptokinase
C. <i>Trichoderma polysporum</i>	III. Butyric acid
D. <i>Streptococcus</i> sp.	IV. Cyclosporin-A

Choose the correct answer from the options given below:

(A) A-III, B-I, C-II, D-IV (B) A-II, B-IV, C-III, D-I

(C) A-III, B-I, C-IV, D-II (D) A-IV, B-I, C-III, D-II

NEET 2024

Correct Option: C

Solution:

Clostridium butylicum → Butyric acid (III)

Saccharomyces cerevisiae → Ethanol (I)

Trichoderma polysporum → Cyclosporin-A (IV)

Streptococcus sp. → Streptokinase (II)

170. The lactose present in the growth medium of bacteria is transported to the cell by the action of:

(A) Beta-galactosidase (B) Acetylase

(C) Permease (D) Polymerase

NEET 2024

Correct Option: C

Solution:

In the Lac operon of bacteria:

Permease helps in the transport of lactose into the bacterial cell.

It is encoded by the lac Y gene.

171. A transcription unit in DNA is defined primarily three regions in DNA and these are with respect stream and downstream end;

(A) Repressor, Operator gene, Structural gene

(B) Structural gene, Transposons, Operator gene

(C) Inducer, Repressor, Structural gene

(D) Promotor, Structural gene, Terminator

NEET 2

Correct Option: D

Solution:

A transcription unit in DNA consists of three main reg

Promoter → Located at the upstream (5') end; RNA polymerase binds here to start transcription.

Structural gene → The region that is transcribed into R

Terminator → Located at the downstream (3') end; sig the end of transcription.

172. The cofactor of the enzyme carboxypeptidase is:

(A) Zinc (B) Niacin (C) Flavin (D) Ha

NEET 2

Correct Option: A

Solution:

Carboxypeptidase is a zinc-dependent metalloenzyme helps digest proteins by removing amino acids one by from the C-terminal end of a polypeptide chain.

173. Given below are two statements:

Statement I: In C_3 plants, some O_2 binds to RuE hence CO_2 fixation is decreased.

Statement II: In C_4 plants, mesophyll cells show little photorespiration while bundle sheath cells show photorespiration.

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

(A) Both Statement I and Statement II are true

(B) Both Statement I and Statement II are false

(C) Statement I is true but Statement II is false

(D) Statement I is false but Statement II is true

NEET 2024

Correct Option: C

Solution:

174. Match List I with List II:

List I	List II
A. Common cold	I. Plasmodium
B. Haemozoin	II. Typhoid
C. Widal test	III. Rhinoviruses
D. Allergy	IV. Dust mites

Choose the correct answer from the options given below:

- (A) A-II, B-IV, C-III, D-I (B) A-I, B-III, C-II, D-IV
(C) A-III, B-I, C-II, D-IV (D) A-IV, B-II, C-III, D-I

NEET 2024

Correct Option: C

Solution:

- A. Common cold → III. Rhinoviruses
- B. Haemozoin → I. Plasmodium
- C. Widal test → II. Typhoid
- D. Allergy → IV. Dust mites

175. Which one is the correct product of DNA dependent RNA polymerase to the given template?

3' TACATGGCAAATATCCATTCA 5'

- | | |
|-------------------------|-------------------------|
| (A) 5' | (B) 5' |
| AUGUACCGUUUAUAGGUAAGGUA | AUGUACCGUUUAUAGGUAAGGUA |
| 3' | 3' |
| (C) 5' | (D) 5' |
| AUGUACCGUUUAUAGGUAAGGUA | AUGUACCGUUUAUAGGUAAGGUA |
| 3' | T 3' |

NEET 2024

Correct Option: A

Solution:

176. Match List I with List II:

List I	List II
A. Exophthalmic goiter	I. Excess secretion of cortisol, moon face & hyperglycemia

B. Acromegaly	II. Hypo-secretion of thyroid hormone & stunt growth.
C. Cushing's syndrome	III. Hyper secretion of thyroid hormone & protruding eye balls.
D. Cretinism	IV. Excessive secretion of growth hormone.

Choose the correct answer from the options below:

- (A) A-I, B-III, C-II, D-IV (B) A-IV, B-II, C-I, D-III
(C) A-III, B-IV, C-II, D-I (D) A-III, B-IV, C-I, D-II

NEET 2

Correct Option: D

Solution:

- Exophthalmic goiter → hyperthyroidism with protruding eyeballs
- Acromegaly → excess growth hormone
- Cushing's syndrome → excess cortisol
- Cretinism → low thyroid hormone in childhood causing stunted growth.

177. Match List I with List II

	List-I		List-II
AUG	RNA Polymerase III	(I)	snRNPs
	Termination of transcription	(II)	Promotor
	Splicing of Exons	(III)	Rho factor
	TATA box	(IV)	SnRNAs, tRNA

Choose the correct answer from the options given

- (A) A-III, B-II, C-IV, D-I (B) A-III, B-IV, C-I, D-II
(C) A-IV, B-III, C-I, D-II (D) A-I, B-III, C-IV, D-II

NEET 2

Correct Option: C

Solution:



- A. RNA polymerase III - IV. SnRNAs, tRNA
- B. Termination of transcription - III. Rho factor
- C. Splicing of Exons - I. snRNPs
- D. TATA box - II. Promoter

178. What is the fate of a piece of DNA carrying only gene of interest which is transferred into an alien organism?

- A. The piece of DNA would be able to multiply itself independently in the progeny cells of the organism.
- B. It may get integrated into the genome of the recipient.
- C. It may multiply and be inherited along with the host DNA.
- D. The alien piece of DNA is not an integral part of chromosome.
- E. It shows ability to replicate

- (A) D and E only (B) B and C only
- (C) A and E only (D) A and B only

NEET 2024

Correct Option: B

Solution:

- A. The piece of DNA would be able to multiply itself independently → False
- B. It may get integrated into the genome of the recipient → True
- C. It may multiply and be inherited along with the host DNA (after integration into the host genome) → True
- D. The alien piece of DNA is not an integral part of chromosome → Not necessarily true; if integrated, it becomes part of the chromosome.
- E. It shows ability to replicate → False, because the gene alone lacks replication machinery.

179. Match List I with List II

	List-I		List-II
(A)	P-wave	(I)	Heart muscles are electrically silent
(B)	QRS complex	(II)	Depolarization of ventricles
(C)	T-wave	(III)	Depolarisation of atria

(D)	T-p gap	(IV)	Re polarization ventricles
-----	---------	------	----------------------------

Choose the correct answer from the options given :

- (A) A-III, B-II, C-IV, D-I (B) A-II, B-III, C-I, I
- (C) A-IV, B-II, C-I, D-III (D) A-I, B-III, C-IV, I

NEET 2

Correct Option: A

Solution:

- A. Pwave III. Depolarisation of atria
- B. QRS complex II. Depolarisation of ventricles
- C. Twave IV. Repolarisation of ventricles.
- D. T-P gap I. Heart muscles are electrically silent

180. Match List I with List II:

List I	List II
A. Robert May	I. Species - area relationship
B. Alexander von Humboldt	II. Long term ecosystem experiment using outplots
C. Paul Ehrlich	III. Global species diversity at about 7 million
D. David Tilman	IV. Rivet popper hypothesis

Choose the correct answer from the options below:

- (A) A-III, B-I, C-IV, D-II (B) A-I, B-III, C-II, I
- (C) A-III, B-IV, C-II, D-I (D) A-II, B-III, C-I, I

NEET 2

Correct Option: A

Solution:

Robert May

Estimated global species diversity (about 7 million)→

B. Alexander von Humboldt

Species–area relationship→ I

C. Paul Ehrlich

Rivet popper hypothesis (loss of species affects ecosystem stability)→ IV

David Tilman

Long-term ecosystem experiments using outdoor plots→ II

181. The type of conservation in which the threatened species are taken out from their natural habitat and placed in special setting where they can be protected and given special care is called;

- (A) in-situ conservation (B) Semi-conservative method
(C) Sustainable development (D) ex-situ conservation

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Correct Option: D

Solution:

conservation where threatened species are removed from their natural habitat and protected in special settings is actually **ex-situ conservation**.

182. Following are the stages of cell division :

- A. Gap 2 phase
B. Cytokinesis
C. Synthesis phase
D. Karyokinesis
E. Gap 1 phase

Choose the correct sequence of stages from the options given below

- (A) E – B – (B) B – D – (C) E – C – (D) C –
D – E – A – A – D – E –
A – C C B D –
A – B

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Correct Option: C

Solution:

E – C – A – D – B

183. Following are the stages of pathway for conduction of an action potential through the heart:

- A. AV bundle
B. Purkinje fibres
C. AV node

D. Bundle branches

E. SA node

Choose the correct sequence of pathway from the options given below:

- (A) A – E – (B) B – D – (C) E – A – (D) E –
C – E – C – D – B – C –
B – D A C A –
D –

NEET 2

Correct Option: D

Solution:

E – C – A – D – B

184. Match List I with List II:

List-I		List-II	
(A)	α -1 antitrypsin	(I)	Cotton bollworm
(B)	Cry IAb	(II)	ADA deficiency
(C)	Cry IAc	(III)	Emphysema
(D)	Enzyme replacement therapy	(IV)	Corn borer

- (A) A-III, B-I, C-II, D-IV (B) A-III, B-IV, C-I, D-II
(C) A-II, B-IV, C-I, D-III (D) A-II, B-I, C-IV, D-III

NEET 2

Correct Option: B

Solution:

List-I			
(A)	α -1 antitrypsin	(III)	E
(B)	Cry IAb	(IV)	C
(C)	Cry IAc	(I)	C
(D)	Enzyme replacement therapy	(II)	A

185. Identify the step in tricarboxylic acid cycle, which does not involve oxidation of substrate.

- (A) Succinic acid → Malic acid
(B) Succinyl-CoA → Succinic acid
(C) Isocitrate → α -ketoglutaric acid
(D) Malic acid → Oxaloacetic acid

NEET 2

Correct Option: B

**Solution:**

The step in tricarboxylic acid cycle, which does not involve oxidation of substrate.

Succinyl-CoA → Succinic acid

186. Which of the following are required for the dark reaction of photosynthesis?

- A. Light
- B. Chlorophyll
- C. CO₂
- D. ATP
- E. NADPH

Choose the correct answer from the options given below:

- (A) B, C and D only
- (B) C, D and E only
- (C) D and E only
- (D) A, B and C only

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Correct Option: B

Solution:

The following are required for the dark reaction of photosynthesis:

- C. CO₂
- D. ATP
- E. NADPH

187. Which of the following are fused in somatic hybridization involving two varieties of plants?

- (A) Somatic embryos (B) Protoplasts
- (C) Pollens (D) Callus

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Correct Option: B

Solution:

Protoplasts are fused in somatic hybridization involving two varieties of plants

188. These are regarded as major causes of biodiversity loss:

- A. Over exploitation
- B. Co-extinction

- C. Mutation
- D. Habitat loss and fragmentation
- E. Migration

Choose the correct option

- (A) A, B, C and D only (B) A, B and E only
- (C) A, B and D only (D) A, C and D only

NEET 2

Correct Option: C

Solution:

The major causes of biodiversity loss:

- A. Over exploitation
- B. Co-extinction
- D. Habitat loss and fragmentation

189. Given below are two statements :

Statement-I: Gause's competitive exclusion principle states that two closely related species competing for different resources can not exist indefinitely.

Statement-II: According to Gause's principle, during competition, the inferior will be eliminated. This may be true if resources are limiting.

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

- (A) Both Statement I and Statement II are false
- (B) Statement I is true but Statement II is false
- (C) Statement I is false but Statement II is true
- (D) Both Statement I and Statement II are true

NEET 2

Correct Option: C

Solution:

Statement-I: Gause's competitive exclusion principle states that two closely related species competing for same resources can not exist indefinitely.

Statement - II : According to Gause's principle, during competition, the inferior will be eliminated. This may be true if resources are limiting.

190. Choose the correct statement given below regarding juxta medullary nephron.

- (A) Renal corpuscle of juxta medullary nephron lies in the outer portion of the medulla.

- (B) Loop of henle of juxta medullary nephron runs deep into medulla.
- (C) Juxta medullary nephrons out number the cortical nephrons.
- (D) Juxta medullary nephrons are located in the columns of Bertini.

NEET 2024**Correct Option: B****Solution:**

Loop of henle of juxta medullary nephron runs deep into medulla.

191. Match List I with List II

List-I		List-II	
(A)	GLUT-4	(I)	Hormone
(B)	Insulin	(II)	Enzyme
(C)	Trypsin	(III)	Intercellular ground substance
(D)	Collagen	(IV)	Enables glucose transport into cells

Choose the correct answer from the options given below.

- (A) A-II, B-III, C-IV, D-I (B) A-III, B-IV, C-I, D-II
- (C) A-IV, B-I, C-II, D-III (D) A-I, B-II, C-III, D-IV

NEET 2024**Correct Option: C****Solution:**

GLUT-4 enables glucose transport into cells. Insulin is a hormone secreted by pancreas. Trypsin is an example of enzyme. Collagen is the most abundant protein in animal world, which is an intercellular ground substances.

192. Regarding catalytic cycle of an enzyme action, select the correct sequential steps :

- A. Substrate enzyme complex formation.
- B. Free enzyme ready to bind with another substrate.
- C. Release of products.
- D. Chemical bonds of the substrate broken.
- E. Substrate binding to active site.

Choose the correct answer from the options given below :

- (A) B, A, C, D, E (B) E, D, C, B, A
- (C) E, A, D, C, B (D) A, E, B, D, C

NEET 2**Correct Option: C****Solution:**

The correct sequential steps in the enzyme action is as follows:

- A. Substrate binding to active site.
- B. Substrate enzyme complex formation.
- C. Chemical bonds of the substrate broken.
- D. Release of products.
- E. Free enzyme ready to bind with another substrate.

193. Match List I with List II :

List-I		List-II	
(A)	Lipase	(I)	Peptide bond
(B)	Nuclease	(II)	Ester bond
(C)	Protease	(III)	Glycosidic bond
(D)	Amylase	(IV)	Phosphodiester bond

Choose the correct answer from the options given :

- (A) A-II, B-IV, C-I, D-III (B) A-IV, B-I, C-III, D-II
- (C) A-IV, B-II, C-III, D-I (D) A-III, B-II, C-I, D-IV

NEET 2**Correct Option: A****Solution:**

List-I		List-II	
(A)	Lipase	(II)	Ester bond
(B)	Nuclease	(IV)	Phosphodiester bond
(C)	Protease	(I)	Peptide bond
(D)	Amylase	(III)	Glycosidic bond

194. Which one of the following is not a criterion for classification of fungi?

- (A) Mode of spore formation (B) Type of fruiting body of
- (C) Morphology of mycelium (D) Mode of nutrition

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Correct Option: D**Solution:**

According to NCERT Biology, fungi are classified mainly on the basis of:

1. Morphology of mycelium — the structure and appearance of the fungal hyphae.
2. Mode of spore formation — the method by which reproductive spores are produced.
3. Type of fruiting body — the structure formed during reproduction.

195. Which of the following statement is correct regarding the process of replication in *E. coli*?

- (A) The DNA dependent DNA polymerase catalyses polymerization in $5' \rightarrow 3'$ as well as $3' \rightarrow 5'$ direction.
- (B) The DNA dependent DNA polymerase catalyses polymerization in $5' \rightarrow 3'$ direction.
- (C) The DNA dependent DNA polymerase catalyses polymerization in one direction that is $3' \rightarrow 5'$.
- (D) The DNA dependent RNA polymerase catalyses polymerization in one direction that is $5' \rightarrow 3'$.

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Correct Option: B**Solution:**

In Prokaryotes, like *E. coli* during replication, the DNA dependent DNA polymerase catalyse polymerization only in one direction, that is $5' \rightarrow 3'$.

196. Identify the correct description about the given figure:



- (A) Cleistogamous flowers showing autogamy.
- (B) Compact inflorescence showing complete autogamy.
- (C) Wind pollinated plant inflorescence showing stamens with well exposed anthers.
- (D) Water pollinated flowers showing stamens with a mucilaginous covering.

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Correct Option: C**Solution:**

The given diagram shows a wind pollinated plant showing compact inflorescence and well exposed stamens. Stamens are exposed so complete autogamy does not occur.

197. A pink flowered Snapdragon plant was crossed with a white flowered Snapdragon plant. What type of phenotype is/are expected in the progeny?

- (A) Only pink flowered plants
- (B) Red, Pink as well as white flowered plant
- (C) Only red flowered plants
- (D) Red flowered as well as pink flowered plant

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Correct Option: D**Solution:**

Red flowered as well as pink flowered plant.

198. 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

- (A) A-IV, B-I, C-II, D-III (B) A-I, B-II, C-III, D-IV



(C) A-III,B-IV,C-I,D-II

(D) A-II,B-III,C-IV,D-I

NEET 2024**Correct Option: C****Solution:**

199. Which of the following factors are favourable for the formation of oxyhaemoglobin in alveoli?

(A) Low $p\text{CO}_2$ and High H^+ concentration(B) Low $p\text{CO}_2$ and High temperature(C) High $p\text{O}_2$ and High $p\text{CO}_2$ (D) High $p\text{O}_2$ and Lesser H^+ concentration**NEET 2024****Correct Option: D****Solution:**

In alveoli, hemoglobin binds oxygen easily when:

- Oxygen ($p\text{O}_2$) is high

- Acidity (H^+) is low

200. Given below are two statements.

Statement I: Bone marrow is the main lymphoid where all blood cells including lymphocyte produced.

Statement II: Both bone marrow and thymus provide micro environments for the development and maturation of T-lymphocytes.

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

(A) Both Statement I and Statement II are correct.

(B) Both Statement I and Statement II are incorrect.

(C) Statement I is correct but Statement II is incorrect.

(D) Statement I is incorrect but Statement II is correct.

NEET 2024**Correct Option: A****Solution:**

Bone marrow is the main lymphoid organ where all blood cells including lymphocytes are produced. Both bone marrow and thymus provide micro-environments for the development and maturation of T-lymphocytes. After maturation the lymphocytes migrate to secondary lymphoid organs like spleen, lymph nodes, tonsils, Peyer's patches of small intestine and appendix.

NEET 2024 Paper - ANSWER KEY

Que.	101	102	103	104	105	106	107	108	109	110
Ans.	A	A	B	B	B	D	B	D	C	A
Que.	111	112	113	114	115	116	117	118	119	120
Ans.	B	A	B	A	D	C	D	A	C	B
Que.	121	122	123	124	125	126	127	128	129	130
Ans.	B	C	D	A	C	A	A	D	B	C
Que.	131	132	133	134	135	136	137	138	139	140
Ans.	C	B	B	A	C	D	B	C	D	A
Que.	141	142	143	144	145	146	147	148	149	150
Ans.	A	C	D	A	D	A	C	B	C	A
Que.	151	152	153	154	155	156	157	158	159	160
Ans.	C	A	A	A	B	C	D	B	A	C
Que.	161	162	163	164	165	166	167	168	169	170
Ans.	B	B	B	D	B	A	B	C	C	C
Que.	171	172	173	174	175	176	177	178	179	180
Ans.	D	A	C	C	A	D	C	B	A	A
Que.	181	182	183	184	185	186	187	188	189	190
Ans.	D	C	D	B	B	B	B	C	C	B
Que.	191	192	193	194	195	196	197	198	199	200
Ans.	C	C	A	D	B	C	D	C	D	A