

FINAL NEET(UG)-2021 EXAMINATION**(Held On Sunday 12th SEPTEMBER, 2021)****BOTANY****TEST PAPER WITH ANSWER****Section-A (Bt0109y : Botany)**

101. In spite of interspecific competition in nature, which mechanism the competing species might have evolved for their survival ?

- (1) Resource partitioning (2) Competitive release
(3) Mutualism (4) Predation

Ans. (1)**102.** Match **Ltst - I** with **Ltst - II**.

Ltst - I		Ltst - II	
(a)	Cells with active cell division capacity	(i)	Vascular tissues
(b)	Tissue having all cells similar in structure and function	(ii)	Meristematic tissue
(c)	Tissue having different types of cells	(iii)	Sclereids
(d)	Dead cells with highly thickened walls and narrow lumen	(iv)	Simple tissue

Select the **correct** answer from the options given below.

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

Ans. (1)

103. During the purification process for recombinant DNA technology, addition of chilled ethanol precipitates out:

- (1) RNA (2) DNA
(3) Histones (4) Polysaccharides

Ans. (2)**104.** Match **Ltst - I** with **Ltst - II**.

Ltst - I		Ltst - II	
(a)	Cohesion	(i)	More attraction in liquid phase
(b)	Adhesion	(ii)	Mutual attraction among water molecules
(c)	Surface tension	(iii)	Water loss in liquid phase
(d)	Guttation	(iv)	Attraction towards polar surfaces

Choose the **correct** answer from the options given below.

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

Ans. (1)

105. The term used for transfer of pollen grains from anthers of one plant to stigma of a different plant which, during pollination, brings genetically different types of pollen grains to stigma, is :

- (1) Xenogamy (2) Geitonogamy
(3) Chasmogamy (4) Cleistogamy

Ans. (1)

106. Which of the following stages of meiosis involves division of centromere ?

- (1) Metaphase I (2) Metaphase II
(3) Anaphase II (4) Telophase II

Ans. (3)

107. Which of the following is a **correct** sequence of steps in a PCR (Polymerase Chain Reaction) ?

- (1) Denaturation, Annealing, Extension
(2) Denaturation, Extension, Annealing
(3) Extension, Denaturation, Annealing
(4) Annealing, Denaturation, Extension

Ans. (1)

108. Gemmae are present in :

- (1) Mosses
(2) Pteridophytes
(3) Some Gymnosperms
(4) Some liverworts

Ans. (4)

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

- (1) Bulb square (2) Punnett square
(3) Punnett square (4) Net square

Ans. (3)

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110. The factor that leads to Founder effect in a population is:

- (1) Natural selection
- (2) Genetic recombination
- (3) Mutation
- (4) Genetic drift

Ans. (4)

111. Genera like *Selaginella* and *Salvinia* produce two kinds of spores. Such plants are known as:

- (1) Homosporous
- (2) Heterosporous
- (3) Homosporous
- (4) Heterosporous

Ans. (4)

112. Plants follow different pathways in response to environment for phases of life to form different kinds of structures. This ability is called:

- (1) Elasticity
- (2) Flexibility
- (3) Plasticity
- (4) Maturity

Ans. (3)

113. Which of the following are **not** secondary metabolites in plants?

- (1) Morphine, codeine
- (2) Amino acids, glucose
- (3) Vinblastin, curcumin
- (4) Rubber, gums

Ans. (2)

114. Complete the flow chart on central dogma.

(a) DNA (b) mRNA (c) (d)

- (1) (a)-Replication; (b)-Transcription; (c)-Translation; (d)-Protein
- (2) (a)-Translation; (b)-Replication; (c)-Transcription; (d)-Translation
- (3) (a)-Replication; (b)-Transcription; (c)-Translation; (d)-Protein
- (4) (a)-Translation; (b)-Translation; (c)-Replication; (d)-Protein

Ans. (3)

115. When the centromere is situated in the middle of two equal arms of chromosomes, the chromosome is referred as:

- (1) Metacentric
- (2) Telocentric
- (3) Sub-metacentric
- (4) Acrocentric

Ans. (1)

116. DNA bands on a gel stained with ethidium bromide when viewed under UV radiation, appear as:

- (1) Yellow bands
- (2) Bright orange bands
- (3) Dark red bands
- (4) Bright blue bands

Ans. (2)

117. The site of perception of light in plants during photoperiodism is:

- (1) Shoot apex
- (2) Stem
- (3) Axillary bud
- (4) Leaf

Ans. (4)

118. When gene targeting involving gene amplification is attempted in an individual's tissue to treat disease, it is known as:

- (1) Biopiracy
- (2) Gene therapy
- (3) Molecular diagnosis
- (4) Safety testing

Ans. (2)

119. Which of the following plants is monoecious?

- (1) *Carica papaya*
- (2) *Chara*
- (3) *Marchantia polymorpha*
- (4) *Cycas circinalis*

Ans. (2)

120. Which of the following is **not** an application of PCR (Polymerase Chain Reaction)?

- (1) Molecular diagnosis
- (2) Gene amplification
- (3) Purification of isolated protein
- (4) Detection of gene mutation

Ans. (3)

121. Match **Ltst -I** with **Ltst -II**.

Ltst -I		Ltst -II	
(a)	Cristae	(i)	Primary constriction in chromosome
(b)	Thylakoids	(ii)	Disc-shaped sacs in Golgi apparatus
(c)	Centromere	(iii)	Infoldings in mitochondria
(d)	Cisternae	(iv)	Flattened membranous sacs in stroma of plastids

Choose the **correct** answer from the options given below.

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

Ans. (3)

- 122.** Diadelphous stamens are found in:
 (1) China rose (2) Citrus
 (3) Pea (4) China rose and citrus

Ans. (3)

- 123.** Match Ltst - I with Ltst - II.

Ltst - I		Ltst - II	
(a)	Protoplast fusion	(i)	Yoprogency
(b)	Plant tissue culture	(ii)	Pomafo
(c)	Meristem culture	(iii)	Somaclones
(d)	Micropropagation	(iv)	Virus free plants

Choose the **correct** answer from the options given below.

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

Ans. (2)

- 124.** Amensalism can be represented as :

- (1) Species A (-); Species B (0)
- (2) Species A (+); Species B (+)
- (3) Species A (-); Species B (-)
- (4) Species A (+); Species B (0)

Ans. (1)

- 125.** Which of the following is an **incorrect** statement?

- (1) Mature sieve tube elements possess a conspicuous nucleus and usual cytoplasmic organelles.
- (2) Microbodies are present both in plant and animal cells.
- (3) The perinuclear space forms a barrier between the materials present inside the nucleus and that of the cytoplasm.
- (4) Nuclear pores act as passages for proteins and RNA molecules in both directions between nucleus and cytoplasm.

Ans. (1)

- 126.** A typical angiosperm embryo sac at maturity is :

- (1) 8-nucleate and 7-celled
- (2) 7-nucleate and 8-celled
- (3) 7-nucleate and 7-celled
- (4) 8-nucleate and 8-celled

Ans. (1)

- 127.** Which of the following algae contains mannitol as reserve food material?

- (1) *Ectocarpus*
- (2) *Gracilaria*
- (3) *Volvox*
- (4) *Ulothrix*

Ans. (1)

- 128.** The plant hormone used to destroy weeds in a field is :

- (1) IAA
- (2) NAA
- (3) 2,4-D
- (4) IBA

Ans. (3)

- 129.** The amount of nutrients, such as carbon, nitrogen, phosphorus and calcium present in the soil at any given time, is referred as :

- (1) Climax
- (2) Climax community
- (3) Stand in space
- (4) Stand in crop

Ans. (3)

- 130.** Mutations in plant cells can be induced by:

- (1) Kinetin
- (2) Infrared rays
- (3) Gamma rays
- (4) Zeatin

Ans. (3)

- 131.** Which of the following statements is **not** correct?

- (1) Pyramid of biomass in sea is generally inverted.
- (2) Pyramid of biomass in sea is generally upright.
- (3) Pyramid of energy is always upright.
- (4) Pyramid of numbers in a grassland ecosystem is upright.

Ans. (2)

- 132.** In the equation $GPP - R = NPP$

R represents :

- (1) Radiation energy
- (2) Refraction factor
- (3) Environment factor
- (4) Respiration losses

Ans. (4)

- 133.** Which of the following algae produce Carotene?

- (1) Green algae
- (2) Brown algae
- (3) Red algae
- (4) Blue-green algae

Ans. (3)

- 134.** The first stable product of CO_2 fixation in sorghum is :

- (1) Pyruvic acid
- (2) Oxaloacetic acid
- (3) Succinic acid
- (4) Phosphoglyceric acid

Ans. (2)

- 135.** Match Ltst - I with Ltst - II.

Ltst - I		Ltst - II	
(a)	Thin cells	(i)	Phelllogen
(b)	Cork cambium	(ii)	Suberin deposition
(c)	Secondary cortex	(iii)	Exchange of gases
(d)	Cork	(iv)	Phelloderm

Choose the **correct** answer from the options given below.

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

Ans. (2)

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Section-B (Biology : Botany)

136. Which of the following statements is **incorrect**?

- (1) During aerobic respiration, role of oxygen is limited to the terminal stage.
- (2) In ETC (Electron Transport Chain), one molecule of $\text{NADH} + \text{H}^+$ gives rise to 2 ATP molecules, and one FADH_2 gives rise to 3 ATP molecules.
- (3) ATP is synthesized through complex V.
- (4) Oxidation-reduction reactions produce proton gradient in respiration.

Ans. (2)

137. Match **Column-I** with **Column-II**.

- | Column-I | Column-II |
|--|------------------|
| (a) $\frac{1}{2} \text{K}_2\text{C}_2\text{O}_4 \cdot \text{H}_2\text{C}_2\text{O}_4$ (i) Brassicaceae | |
| (b) $\frac{1}{2} \text{K}_2\text{C}_2\text{O}_4 \cdot \text{H}_2\text{C}_2\text{O}_4$ (ii) Liliaceae | |
| (c) $\frac{1}{2} \text{K}_2\text{C}_2\text{O}_4 \cdot \text{H}_2\text{C}_2\text{O}_4$ (iii) Fabaceae | |
| (d) $\frac{1}{2} \text{K}_2\text{C}_2\text{O}_4 \cdot \text{H}_2\text{C}_2\text{O}_4$ (iv) Solanaceae | |

Select the **correct** answer from the options given below.

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

Ans. (1)

138. Match **Column-I** with **Column-II**.

Column-I		Column-II	
(a)	S phase	(i)	Proteins are synthesized
(b)	G ₂ phase	(ii)	Inactive phase
(c)	Quiescent stage	(iii)	Interval between mitosis and initiation of DNA replication
(d)	G ₁ phase	(iv)	DNA replication

Choose the **correct** answer from the options given below.

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

Ans. (3)

139. Plasmid $\mu\text{BR}322$ has PstI restriction enzyme site within gene amp^R that confers ampicillin resistance. If this enzyme is used for inserting a gene for β -galactoside production and the recombinant plasmid is inserted in an *E. coli* strain

- (1) it will not be able to confer ampicillin resistance to the host cell.
- (2) the transformed cells will have the ability to resist ampicillin as well as produce β -galactoside.
- (3) it will lead to lysis of host cell.
- (4) it will be able to produce a novel protein with dual ability.

Ans. (1)

140. Identify the **correct** statement.

- (1) In capping, methyl guanosine triphosphate is added to the 3' end of hnRNA.
- (2) RNA polymerase binds with Rho factor for termination of the process of transcription in bacteria.
- (3) The coding strand in a transcription unit is copied to an mRNA.
- (4) Sulfolobus genome arrangement is characteristic of prokaryotes.

Ans. (2)

141. Now a days it is possible to detect the mutated gene causing cancer by allowing radioactive probe to hybridise with complementary DNA in a clone of cells, followed by its detection using autoradiography because:

- (1) mutated gene partially appears on a photographic film.
- (2) mutated gene completely and clearly appears on a photographic film.
- (3) mutated gene does not appear on a photographic film as the probe has no complementarity with it.
- (4) mutated gene does not appear on a photographic film as the probe has complementarity with it.

Ans. (3)

142. In the exponential growth equation

$N_t = N_0 e^{rt}$, e represents:

- (1) The base of natural logarithms
- (2) The base of exponential logarithms
- (3) The base of natural logarithms
- (4) The base of geometric logarithms

Ans. (3)

143. Select the **correct** pair.

- (1) Large colorless empty cells in the epidermis of grass leaves - Subsidiary cells
- (2) In dicot leaves, vascular bundles are surrounded by large thick-walled cells - Conjunctive tissue
- (3) Cells of medullary rays that form part of cambial ring - Interfascicular cambium
- (4) Loose parenchyma cells rupturing the epidermis and forming a lens-shaped opening in bark - Spongy parenchyma

Ans. (3)

144. In some members of which of the following pairs of families, pollen grains retain their viability for months after release ?

- (1) Poaceae ; Rosaceae
- (2) Poaceae; Leguminosae
- (3) Poaceae; Solanaceae
- (4) Rosaceae ; Leguminosae

Ans. (4)

145. What is the role of RNA polymerase III in the process of transcription in eukaryotes ?

- (1) Transcribes rRNAs (28S, 18S and 5.8S)
- (2) Transcribes tRNA, 5s rRNA and snRNA
- (3) Transcribes precursor of mRNA
- (4) Transcribes only snRNAs

Ans. (2)

146. Which of the following statements is **incorrect** ?

- (1) Both ATP and NADPH + H^+ are synthesized during non-cyclic photophosphorylation.
- (2) Stroma lamellae have PS I only and lack NADP reductase.
- (3) Grana lamellae have both PS I and PS II.
- (4) Cyclic photophosphorylation involves both PS I and PS II.

Ans. (4)

147. Which of the following statements is **correct** ?

- (1) Fusion of two cells is called karyogamy.
- (2) Fusion of protoplasts between two mobile non-mobile gametes is called plasmogamy.
- (3) Organisms that depend on living plants are called saprophytes.
- (4) Some of the organisms can fix atmospheric nitrogen in specialized cells called sheath cells.

Ans. (2)

148. Match **List-I** with **List-II**.

List-I		List-II	
(a)	Protein	(i)	C = C double bonds
(b)	Unsaturated fatty acid	(ii)	Phosphodiester bonds
(c)	Nucleic acid	(iii)	Glycosidic bonds
(d)	Polysaccharide	(iv)	Peptide bonds

Choose the **correct** answer from the options given below.

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

Ans. (1)

149. DNA fingerprinting involves identifying differences in some specific regions in DNA sequence, called as :

- (1) Satellite DNA
- (2) Repetitive DNA
- (3) Single nucleotides
- (4) Polymorphic DNA

Ans. (2)

150. Match **Column-I** with **Column-II**.

Column-I		Column-II	
(a)	<i>Nitrococcus</i>	(t)	Nitrification
(b)	<i>Rhizobium</i>	(tt)	Conversion of ammonia to nitrite
(c)	<i>Thiobacillus</i>	(ttt)	Conversion of nitrite to nitrate
(d)	<i>Nitrobacter</i>	(tv)	Conversion of atmospheric nitrogen to ammonia

Choose the **correct** answer from options given below.

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

Ans. (1)

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164. If Adenine makes 30% of the DNA molecule, what will be the percentage of Thymine, Guanine and Cytosine in it?

- (1) Y : 20 ; G : 30 ; C : 20
- (2) Y : 20 ; G : 20 ; C : 30
- (3) Y : 30 ; G : 20 ; C : 20
- (4) Y : 20 ; G : 25 ; C : 25

Ans. (3)

165. Match Ltst - I with Ltst - II.

Ltst-I		Ltst-II	
(a)	<i>Aspergillus niger</i>	(i)	Acetic Acid
(b)	<i>Acetobacter aceti</i>	(ii)	Lactic Acid
(c)	<i>Clostridium butylicum</i>	(iii)	Citric Acid
(d)	<i>Lactobacillus</i>	(iv)	Butyric Acid

Choose the **correct** answer from the options given below.

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

Ans. (1)

166. Read the following statements.

- (a) Metagenesis is observed in Helminths.
- (b) Echinoderms are triploblastic and coelomate animals.
- (c) Round worms have organ-system level of body organization.
- (d) Comb plates present in ctenophores help in digestion.
- (e) Water vascular system is characteristic of Echinoderms.

Choose the **correct** answer from the options given below.

- (1) (c), (d) and (e) are correct
- (2) (a), (b) and (c) are correct
- (3) (a), (d) and (e) are correct
- (4) (b), (c) and (e) are correct

Ans. (4)

167. Receptors for sperm binding in mammals are present on:

- (1) Corona radiata
- (2) Vitelline membrane
- (3) Perivitelline space
- (4) Zona pellucida

Ans. (4)

168. Match Ltst - I with Ltst - II.

Ltst-I		Ltst-II	
(a)	Mefamerism	(i)	Coelenterata
(b)	Canal system	(ii)	Ctenophora
(c)	Comb plates	(iii)	Annelida
(d)	Cnidoblasts	(iv)	Porifera

Choose the **correct** answer from the options given below.

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

Ans. (3)

169. Erythropoietin hormone which stimulates R.B.C. formation is produced by :

- (1) Alpha cells of pancreas
- (2) The cells of renal adenohypophysis
- (3) The cells of bone marrow
- (4) Juxtaglomerular cells of the kidney

Ans. (4)

170. Venereal diseases can spread through :

- (a) Using sterile needles
- (b) Transfusion of blood from infected person
- (c) Infected mother to foetus
- (d) Kissin
- (e) Inheritance

Choose the **correct** answer from the options given below.

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

Ans. (3)

171. Which of the following characteristics is **incorrect** with respect to cockroach?

- (1) A pair of gasric caeca is present at the junction of midgut and hind gut.
- (2) Hypopharynx lies within the cavity enclosed by the mouth parts.
- (3) In females, 7th - 9th sternite together form a genital pouch.
- (4) 10th abdominal segment in both sexes, bears a pair of anal cerci.

Ans. (1)

1£2. Match the following:

Ltst-I		Ltst-II	
(a)	<i>Physalia</i>	(i)	Pearl oyster
(b)	<i>Limulus</i>	(ii)	Portuguese Man of War
(c)	<i>Ancylosfoma</i>	(iii)	Living fossil
(d)	<i>Pinctada</i>	(iv)	Hookworm

Choose the **correct** answer from the options given below.

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

Ans. (3)

1£3. Which one of the following organisms bears hollow and pneumatic long bones?

- | | |
|---------------------|----------------------------|
| (1) <i>Neophron</i> | (2) <i>Hemidactylus</i> |
| (3) <i>Macropus</i> | (4) <i>Ornithorhynchus</i> |

Ans. (1)

1£4. The centriole undergoes duplication during :

- | | |
|---------------|--------------------------|
| (1) S-phase | (2) Prophase |
| (3) Metaphase | (4) G ₂ phase |

Ans. (1)

1£5. During the process of gene amplification using PCR, if very high temperature is not maintained in the beginning, then which of the following steps of PCR will be affected first?

- | | |
|------------------|----------------|
| (1) Annealing | (2) Extension |
| (3) Denaturation | (4) Initiation |

Ans. (3)

1£6. Which of the following is **not** an objective of Biofortification in crops?

- | |
|---|
| (1) Improve protein content |
| (2) Improve resistance to diseases |
| (3) Improve vitamin content |
| (4) Improve micronutrient and mineral content |

Ans. (2)

1££. Dobson units are used to measure thickness of:

- | | |
|-----------|------------------|
| (1) CFCs | (2) Stratosphere |
| (3) Ozone | (4) Troposphere |

Ans. (3)

1£8. Sphincter of Oddi is present at:

- | |
|--|
| (1) Ileocaecal junction |
| (2) Junction of hepatopancreatic duct and duodenum |
| (3) Gastro-oesophageal junction |
| (4) Junction of jejunum and duodenum |

Ans. (2)

1£9. Select the favourable conditions required for the formation of oxyhaemoglobin at the alveoli.

- | |
|---|
| (1) High μO_2 , low μCO_2 , less H^+ , lower temperature |
| (2) Low μO_2 , high μCO_2 , more H^+ , higher temperature |
| (3) High μO_2 , high μCO_2 , less H^+ , higher temperature |
| (4) Low μO_2 , low μCO_2 , more H^+ , higher temperature |

Ans. (1)

180. Identify the **incorrect** pair.

- | |
|------------------------------|
| (1) Alkaloids - Codeine |
| (2) Yoxin - Abrin |
| (3) Lectins - Concanavalin A |
| (4) Drugs - Ricin |

Ans. (4)

181. Which of the following statements wrongly represents the nature of smooth muscle?

- | |
|--|
| (1) These muscles have no striations |
| (2) They are involuntary muscles |
| (3) Communication among the cells is performed by intercalated discs |
| (4) These muscles are present in the wall of blood vessels |

Ans. (3)

182. For effective treatment of the disease, early diagnosis and understanding its pathophysiology is very important. Which of the following molecular diagnostic techniques is very useful for early detection?

- | |
|---------------------------------|
| (1) Western Blotting technique |
| (2) Southern Blotting technique |
| (3) ELISA technique |
| (4) Hybridization technique |

Ans. (3)

183. Match Ltst-I with Ltst-II.

Ltst-I		Ltst-II	
(a)	Vaults	(i)	Entry of sperm through Cervix is blocked
(b)	IUDs	(ii)	Removal of Vas deferens
(c)	Vasectomy	(iii)	Phagocytosis of sperms within the Uterus
(d)	Tubectomy	(iv)	Removal of fallopian tube

Choose the **correct** answer from the options given below.

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

Ans. (2)

Final NEET(UG)-2021 Exam/12-09-2021

- 184.** The organelles that are included in the endomembrane system are:
- (1) Endoplasmic reticulum, Mitochondria, Ribosomes and Lysosomes
 - (2) Endoplasmic reticulum, Golgi complex, Lysosomes and Vacuoles
 - (3) Golgi complex, Mitochondria, Ribosomes and Lysosomes
 - (4) Golgi complex, Endoplasmic reticulum, Mitochondria and Lysosomes

Ans. (2)

- 185.** Which stage of meiotic prophase shows terminalisation of chiasmata as its distinctive feature?
- (1) Leptonema
 - (2) Zygonema
 - (3) Diakinesis
 - (4) Pachynema

Ans. (3)

Section - B (Bt0109y : Zoo109y)

- 186.** Which of these is not an important component of initiation of parturition in humans?
- (1) Increase in estrone and progesterone ratio
 - (2) Synthesis of prostaglandins
 - (3) Release of Oxytocin
 - (4) Release of Prolactin

Ans. (4)

- 187.** Which of the following is **not** a step in Multiple Ovulation Embryo Transfer Technology (MOET)?
- (1) Cow is administered hormone having LH like activity for super ovulation
 - (2) Cow yields about 6-8 eggs at a time
 - (3) Cow is fertilized by artificial insemination
 - (4) Fertilized eggs are transferred to surrogate mothers at 8-32 cell stage

Ans. (1)

- 188.** Match Ltst - I with Ltst - II.

Ltst-I		Ltst-II	
(a)	Allen's Rule	(i)	Kangaroo rat
(b)	Physiological adaptation	(ii)	Desert lizard
(c)	Behavioural adaptation	(iii)	Marine fish at depth
(d)	Biochemical Adaptation	(iv)	Polar seal

Choose the **correct** answer from the options given below.

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

Ans. (3)

- 189. Assertion (A) :**

A person goes to high altitude and experiences 'altitude sickness' with symptoms like breathing difficulty and heart palpitations.

Reason (R) :

Due to low atmospheric pressure at high altitude, the body does not get sufficient oxygen.

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

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

Ans. (1)

- 190.** Following are the statements with reference to 'lipids'.

- (a) Lipids having only single bonds are called unsaturated fatty acids.
- (b) Lecithin is a phospholipid.
- (c) Trihydroxy propane is glycerol.
- (d) Palmitic acid has 20 carbon atoms including carboxyl carbon.
- (e) Arachidonic acid has 16 carbon atoms.

Choose the **correct** answer from the options given below.

- (1) (a) and (b) only
- (2) (c) and (d) only
- (3) (b) and (c) only
- (4) (b) and (e) only

Ans. (3)

- 191.** Match Ltst - I with Ltst - II.

Ltst-I		Ltst-II	
(a)	Scapula	(i)	Cartilaginous joints
(b)	Cranium	(ii)	Flat bone
(c)	Sternum	(iii)	Fibrous joints
(d)	Vertebral column	(iv)	Irregular flat bone

Choose the **correct** answer from the options given below.

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

Ans. (4)

- 192.** Identify the types of cell junctions that help to stop the leakage of the substances across a tissue and facilitation of communication with neighbouring cells via rapid transfer of ions and molecules.

193. Statement I :

The codon 'AUG' codes for methionine and phenylalanine.

Statement II :

'AAA' and 'AAG' both codons code for the amino acid lysine.

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

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

Ans. (4)**194.** Which of the following secretes the hormone, relaxin, during the later phase of pregnancy?

- (1) Graafian follicle
- (2) Corpus luteum
- (3) Foetus
- (4) Uterus

Ans. (2)**195.** Following are the statements about prostomium of earthworm.

- (a) It serves as a covering for mouth.
- (b) It helps to open cracks in the soil into which it can crawl.
- (c) It is one of the sensory structures.
- (d) It is the first body segment.

Choose the **correct** answer from the options given below.

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

Ans. (1)**196.** Which one of the following statements about Histones is **wrong**?

- (1) Histones are organized to form a unit of 8 molecules.
- (2) The pH of histones is slightly acidic.
- (3) Histones are rich in amino acids - lysine and Arginine.
- (4) Histones carry positive charge in the side chain.

Ans. (2)**197.** During muscular contraction which of the following events occur?

- (a) 'H' zone disappears
 - (b) 'A' band widens
 - (c) 'I' band reduces in width
 - (d) Myosin hydrolyzes ATP, releasing the ADP and Pi
 - (e) Z-lines attached to actins are pulled inwards
- Choose the **correct** answer from the options given below.

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

Ans. (1)**198.** The Adenosine deaminase deficiency results into:

- (1) Dysfunction of Immune system
- (2) Parkinson's disease
- (3) Digestive disorder
- (4) Addison's disease

Ans. (1)**199.** Match **Ltst - I** with **Ltst - II**.

Ltst - I		Ltst - II	
(a)	Adaptive radiation	(i)	Selection of resistant varieties due to excessive use of herbicides and pesticides
(b)	Convergent evolution	(ii)	Bones of forelimbs in Man and Whale
(c)	Divergent evolution	(iii)	Wings of Butterfly and Bird
(d)	Evolution by anthropogenic action	(iv)	Darwin Finches

Choose the **correct** answer from the options given below.

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

Ans. (1)**200.** Match **Ltst - I** with **Ltst - II**.

Ltst-I		Ltst-II	
(a)	Filariasis	(i)	<i>Haemophilus influenzae</i>
(b)	Amoebiasis	(ii)	<i>Yersinia enterocolitica</i>
(c)	Pneumonia	(iii)	<i>Wuchereria bancrofti</i>
(d)	Ringworm	(iv)	<i>Entamoeba histolytica</i>

Choose the **correct** answer from the options given below.

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

Ans. (2)