NEET(UG)–2018 TEST PAPER WITH ANSWER & SOLUTION (HELD ON SUNDAY 06th MAY, 2018)

BIOLOGY

91. The experimental proof for semiconservative replication of DNA was first shown in a

(1) Fungus (2) Bacterium

(3) Plant (4) Virus

Ans. (2)

92. Select the ***correct*** statement :

(1) Franklin Stahl coined the term "linkage".

(2) Punnett square was developed by a British scientist.

(3) Spliceosomes take part in translation.

(4) Transduction was discovered by S. Altman.

Ans. (2)

93. Offsets are produced by

(1) Meiotic divisions (2) Mitotic divisions

(3) Parthenocarpy (4) Parthenogenesis

Ans. (2)

94. Which of the following pairs in ***wrongly*** matched ?

(1) Starch synthesis in pea : Multiple alleles

(2) ABO blood grouping : Co-dominance

(3) XO type sex determination : Grasshopper

(4) T.H. Morgan : Linkage

Ans. (1)

95. Which of the following flowers only once in its life-time ?

(1) Bamboo species (2) Jackfruit

(3) Mango (4) Papaya

Ans. (1)

96. Select the ***correct*** match :

(1) Alec Jeffreys – *Streptococcus pneumoniae*

(2) Alfred Hershey and Martha Chase – TMV

(3) Matthew Meselson and F. Stahl – *Pisum sativum*

(4) Francois Jacob and Jacques Monod – *Lac* operon

Ans. (4)

97. Which of the following has proved helpful in preserving pollen as fossils ?

(1) Pollenkitt (2) Cellulosic intine

(3) Oil content (4) Sporopollenin

Ans. (4)

98. Stomatal movement is not affected by

(1) Temperature (2) Light

(3) O_2 concentration (4) CO_2 concentration

Ans. (3)

99. The stage during which separation of the paired homologous chromosomes begins is

(1) Pachytene (2) Diplotene

(3) Diakinesis (4) Zygotene

Ans. (2)

100. The two functional groups characteristic of sugars are

(1) hydroxyl and methyl

(2) carbonyl and methyl

(3) carbonyl and phosphate

(4) carbonyl and hydroxyl

Ans. (4)

101. Which of the following is ***not*** a product of light reaction of photosynthesis ?

(1) ATP (2) NADH

(3) NADPH (4) Oxygen

Ans. (2)

102. Stomata in grass leaf are

(1) Dumb-bell shaped (2) Kidney shaped

(3) Rectangular (4) Barrel shaped

Ans. (1)

103. Which among the following is ***not*** a prokaryote ?

(1) *Saccharomyces* (2) *Mycobacterium*

(3) *Nostoc* (4) *Oscillatoria*

Ans. (1)

104. Which of the following is true for nucleolus ?

(1) Larger nucleoli are present in dividing cells.

(2) It is a membrane-bound structure.

(3) It takes part in spindle formation.

(4) It is a site for active ribosomal RNA synthesis.

Ans. (4)

105. The Golgi complex participates in
(1) Fatty acid breakdown
(2) Formation of secretory vesicles
(3) Respiration in bacteria
(4) Activation of amino acid
Ans. (2)

106. In stratosphere, which of the following element acts as a catalyst in degradation of ozone a release of molecular oxygen ?
(1) Carbon (2) Cl
(3) Fe (4) Oxygen
Ans. (2)

107. Which of the following is a secondary pollutant
(1) CO (2) CO_2
(3) SO_2 (4) O_3
Ans. (4)

108. Niche is
(1) all the biological factors in the organism environment
(2) the physical space where an organism live
(3) the range of temperature that the organism needs to live
(4) the functional role played by the organism where it lives
Ans. (4)

109. Natality refers to
(1) Death rate
(2) Birth rate
(3) Number of individuals leaving the habitat
(4) Number of individuals entering a habitat
Ans. (2)

110. What type of ecological pyramid would obtained with the following data ?
Secondary consumer : 120 g
Primary consumer : 60 g
Primary producer : 10 g
(1) Inverted pyramid of biomass
(2) Pyramid of energy
(3) Upright pyramid of numbers
(4) Upright pyramid of biomass
Ans. (1)

111. World Ozone Day is celebrated on
(1) 5th June (2) 21st April
(3) 16th September (4) 22nd April
Ans. (3)

112. Which of the following is commonly used as a vector for introducing a DNA fragment in human lymphocytes ?
(1) Retrovirus (2) Ti plasmid
(3) λ phage (4) pBR 322
Ans. (1)

113. In India, the organisation responsible for assessing the safety of introducing genetically modified organisms for public use is
(1) Indian Council of Medical Research (ICMR)
(2) Council for Scientific and Industrial Research (CSIR)
(3) Research Committee on Genetic Manipulation (RCGM)
(4) Genetic Engineering Appraisal Committee (GEAC)
Ans. (4)

114. A 'new variety of rice was patented by a foreign company though such varieties have been present in India for a long time. This is related to
(1) Co-667 (2) Sharbati Sonora
(3) Lerma Rojo (4) Basmati
Ans. (4)

115. Select the ***correct*** Match :
(1) Ribozyme - Nucleic acid
(2) F_2 ×Recessive parent - Dihybrid cross
(3) T.H. Morgan - Transduction
(4) G. Mendel - Transformation
Ans. (1)

116. Use of bioresources by multinational companies and organisations without authorisation from the concerned country and its peoople is called
(1) Bio-infringement (2) Biopiracy
(3) Biodegradation (4) Bioexploitation
Ans. (2)

117. The correct order of steps in Polymerase Chain Reaction (PCR) is
(1) Extension, Denaturation, Annealing
(2) Annealing, Extension, Denaturation
(3) Denaturation, Extension, Annealing
(4) Denaturation, Annealing, Extension
Ans. (4)

118. Secondary xylem and phloem in dicot stem are produced by
(1) Apical meristems (2) Vascular cambium
(3) Phellogen (4) Axillary meristems
Ans. (2)

119. Pneumatophores occur in
(1) Halophytes
(2) Free-floating hydrophytes
(3) Carnivorous plants
(4) Submerged hydrophytes

Ans. (1)

120. Sweet potato is a modified
(1) Stem (2) Adventitious root
(3) Tap root (4) Rhizome

Ans. (2)

121. Which of the following statement is ***correct*** ?
(1) Ovules are not enclosed by ovary wall in gymnosperms
(2) *Selaginella* is *heterosporous*, while *Salvinia* is homosporous
(3) Horsetails are gymnosperms
(4) Stems are usually unbranched in both *Cycas* and *Cedrus*

Ans. (1)

122. Select the ***wrong*** statement :
(1) Cell wall is present in members of Fungi and Plantae
(2) Mushrooms belong to Basidiomycetes
(3) Pseudopodia are locomotory and feeding structures in Sporozoans
(4) Mitochondria are the powerhouse of the cell in all kingdoms except Monera

Ans. (3)

123. Casparian strips occur in
(1) Epidermis (2) Pericycle
(3) Cortex (4) Endodermis

Ans. (4)

124. Plants having little or no secondary growth are
(1) Grasses
(2) Deciduous angiosperms
(3) Conifers
(4) Cycads

Ans. (1)

125. Which one is ***wrongly*** matched ?
(1) Uniflagellate gametes - *Polysiphonia*
(2) Biflagellate zoospores - Brown algae
(3) Gemma cups - *Marchantia*
(4) Unicellular organism - *Chlorella*

Ans. (1)

126. Match the items given in Column I with those in Column II and select the ***correct*** option given below :-

Column-I	*Column-II*
(a) Herbarium	i. It is a place having a collection of preserved plants and animals.
(b) Key	ii. A list that enumerates methodically all the species found in an area with brief description aiding identification.
(c) Museum	iii. Is a place where dried and pressed plant specimens mounted on sheets are kept.
(d) Catalogue	iv. A booklet containing a list of characters and their alternates which are helpful in identification of various taxa.

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

Ans. (4)

127. Winged pollen grains are present in
(1) Mustard (2) *Cycas*
(3) Mango (4) *Pinus*

Ans. (4)

128. After karyogamy followed by meiosis, spores are produced exogenously in
(1) *Neurospora* (2) *Alternaria*
(3) *Agaricus* (4) *Saccharomyces*

Ans. (3)

129. What is the role of NAD^+ in cellular respiration ?
(1) It functions as an enzymes
(2) It functions as an electron carrier
(3) It is a nucleotide source for ATP synthesis
(4) It is the final electron acceptor for anaerobic respiration

Ans. (2)

130. Oxygen is ***not*** produced during photosynthesis by
(1) Green sulphur bacteria
(2) *Nostoc*
(3) *Cycas*
(4) *Chara*

Ans. (1)

131. Pollen grains can be stored for several years in liquid nitrogen having a temperature of
(1) –120°C (2) –80°C
(3) –196°C (4) –160°C

Ans. (3)

132. In which of the following forms is iron absorbed by plants ?
(1) Ferric
(2) Ferrous
(3) Free element
(4) Both ferric and ferrous

Ans. (1)

133. Double fertilization is
(1) Fusion of two male gametes of a pollen tube with two different eggs
(2) Fusion of one male gamete with two polar nuclei
(3) Fusion of two male gametes with one egg
(4) Syngamy and triple fusion

Ans. (4)

134. Which of the following elements is responsible for maintaining turgor in cells ?
(1) Magnesium (2) Sodium
(3) Potassium (4) Calcium

Ans. (3)

135. Which one of the following plants shows a very close relationship with a species of moth, where none of the two can complete its life cycle without the other?
(1) *Hydrilla* (2) *Yucca*
(3) Banana (4) *Viola*

Ans. (2)

136. Hormones secreted by the placenta to maintain pregnancy are
(1) hCG, hPL, progestogens, prolactin
(2) hCG, hPL, estrogens, relaxin, oxytocin
(3) hCG, hPL, progestogens, estrogens
(4) hCG, progestogens, estrogens, glucocorticoids

Ans. (3)

137. The contraceptive 'SAHELI'
(1) blocks estrogen receptors in the uterus, preventing eggs from getting implanted.
(2) increases the concentration of estrogen and prevents ovulation in females.
(3) is an lUD.
(4) is a post-coital contraceptive.

Ans. (1)

138. The difference between spermiogenesis and spermiation is
(1) In spermiogenesis spermatids are formed, while in spermiation spermatozoa are formed.
(2) In spermiogenesis spermatozoa are formed, while in spermiation spermatids are formed.
(3) In spermiogenesis spermatozoa from Sertoli cells are released into the cavity of seminiferous tubules, while in spermiation spermatozoa are formed.
(4) In spermiogenesis spermatozoa are formed, while in spermiation spermatozoa are released from Sertoli cells into the cavity of seminiferous tubules.

Ans. (4)

139. The amnion of mammalian embryo is derived from
(1) ectoderm and mesoderm
(2) endoderm and mesoderm
(3) mesoderm and trophoblast
(4) ectoderm and endoderm

Ans. (1)

140. In a growing population of a country
(1) pre-reproductive individuals are more than the reproductive individuals.
(1) reproductive individuals are less than the post-reproductive individuals.
(3) reproductive and pre-reproductive individuals are equal in number.
(4) pre-reproductive individuals are less than the reproductive individuals.

Ans. (1)

141. All of the following are included in 'Ex-situ conservation' *except*
(1) Wildlife safari parks (2) Sacred groves
(3) Botanical gardens (4) Seed banks

Ans. (2)

142. Which part of poppy plant is used to obtain the drug. "Smack" ?
(1) Flowers (2) Latex
(3) Roots (4) Leaves

Ans. (2)

143. Match the items given in Column I with those in Column II and select the ***correct*** option given below:

	Column I		*Column II*
a.	Eutrophication	i.	UV-B radiation
b.	Sanitary landfill	ii.	Deforestation
c.	Snow blindness	iii.	Nutrient enrichment
d.	Jhum cultivation	iv.	Waste disposal

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

Ans. (3)

144. Which one of the following population interactions is widely used in medical science for the production of antibiotics ?
(1) Commensalism (2) Mutualism
(3) Parasitism (4) Amensalism
Ans. (4)

145. Which of the following events does ***not*** occur in rough endoplasmic reticulum ?
(1) Protein folding
(2) Protein glycosylation
(3) Cleavage of signal peptide
(4) Phospholipid synthesis
Ans. (4)

146. Which of these statements is ***incorrect*** ?
(1) Enzymes of TCA cycle are present in mitochondrial matrix.
(2) Glycolysis occurs in cytosol.
(3) Glycolysis operates as long as it is supplied with NAD that can pick up hydrogen atoms.
(4) Oxidative phosphorylation takes place in outer mitochondrial membrane.
Ans. (4)

147. Many ribosomes may associate with a single mRNA to form multiple copies of a polypeptide simultaneously. Such strings of ribosomes are termed as
(1) Polysome
(2) Polyhedral bodies
(3) Plastidome
(4) Nucleosome
Ans. (1)

148. Select the ***incorrect*** match :
(1) Lampbrush chromosomes – Diplotene bivalents
(2) Allosomes – Sex chromosomes
(3) Submetacentric chromosomes – L-shaped chromososmes
(4) Polytene chromosomes – Oocytes of amphibians
Ans. (4)

149. Nissl bodies are mainly composed of
(1) Proteins and lipids
(2) DNA and RNA
(3) Nucleic acids and SER
(4) Free ribosomes and RER
Ans. (4)

150. Which of the following terms describe human dentition ?
(1) Thecodont, Diphyodont, Homodont
(2) Thecodont, Diphyodont, Heterodont
(3) Pleurodont, Monophyodont, Homodont
(4) Pleurodont, Diphyodont, Heterodont
Ans. (2)

151. Match the items given in Column I with those in Column II and select the ***correct*** option given below:

	Column I		*Column II*
a.	Glycosuria	i.	Accumulation of uric acid in joints
b.	Gout	ii.	Mass of crystallised salts within the kidney
c.	Renal calculi	iii.	Inflammation in glomeruli
d.	Glomerular nephritis	iv.	Presence of glucose in urine

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

Ans. (4)

152. Match the items given in Column I with those Column II and select the ***correct*** option given below:

	Column I (Function)		*Column II* (Part of Excretory System)
a.	Ultrafiltration	i.	Henle's loop
b.	Concentration of urine	ii.	Ureter
c.	Transport of urine	iii.	Urinary bladder
d.	Storage of urine	iv.	Malpighian corpuscle
		v.	Proximal convoluted tubule

	a	**b**	**c**	**d**
(1)	iv	v	ii	iii
(2)	iv	i	ii	iii
(3)	v	iv	i	ii
(4)	v	iv	i	iii

Ans. (2)

153. The similarity of bone structure in the forelimbs of many vertebrates is an example of
(1) Homology (2) Analogy
(3) Convergent evolution (4) Adaptive radiation
Ans. (1)

154. Which of the following is ***not*** at autoimmune disease?
(1) Psoriasis (2) Rheumatoid arthritis
(3) Alzheimer's disease (4) Vitiligo
Ans. (3)

155. Among the following sets of examples for divergent evolution, select the ***incorrect*** option :
(1) Forelimbs of man, bat and cheetah
(2) Heart of bat, man and cheetah
(3) Brain of bat, man and cheetah
(4) Eye of octopus, bat and man
Ans. (4)

156. Which of the following characteristics represent 'Inheritance of blood groups' in humans ?
a. Dominance
b. Co-dominance
c. Multiple dominance
d. Incomplete dominance
e. Polygenic inheritance
(1) b, c and e (2) a, b and c
(3) b, d and e (4) a, c and e
Ans. (2)

157. In which disease does mosquito transmitted pathogen cause chronic inflammation of lymphatic vessels?
(1) Elephantiasis (2) Ascariasis
(3) Ringworm disease (4) Amoebiasis
Ans. (1)

158. Conversion of milk to curd improves its nutritional value by increasing the amount of
(1) Vitamin D (2) Vitamin A
(3) Vitamin B_{12} (4) Vitamin E
Ans. (3)

159. Which of the following is an amino acid derived hormone ?
(1) Epinephrine (2) Ecdysone
(3) Estradiol (4) Estriol
Ans. (1)

160. Which of the following structures or regions is ***incorrectly*** paired with its function ?
(1) Medulla oblongata : controls respiration and cardiovascular reflexes.
(2) Limbic system : consists of fibre tracts that interconnect different regions of brain; controls movement.
(3) Hypothalamus : production of releasing hormones and regulation of temperature, hunger and thirst.
(4) Corpus callosum : band of fibers connecting left and right cerebral hemispheres.
Ans. (2)

161. Which of the following hormones can play a significant role in osteoporesis ?
(1) Aldosterone and Prolactin
(2) Progesterone and Aldosterone
(3) Estrogen and Parathyroid hormone
(4) Parathyroid hormone and Prolactin
Ans. (3)

162. The transparent lens in the human eye is held in its place by
(1) ligaments attached to the ciliary body
(2) ligaments attached to the iris
(3) smooth muscles attached to the iris
(4) smooth muscles attached to the ciliary body
Ans. (1)

163. Which of the following animals does ***not*** undergo metamorphosis ?
(1) Earthworm (2) Tunicate
(3) Moth (4) Starfish
Ans. (1)

164. Identify the vertebrate group of animals characterized by crop and gizzard in its digestive sytstem.
(1) Amphibia (2) Reptilia
(3) Aves (4) Osteichthyes
Ans. (3)

165. Which of the following organisms are known as chief producers in the oceans ?
(1) Dinoflagellates (2) Diatoms
(3) Cyanobacteria (4) Euglenoids
Ans. (2)

166. Which one of these animals is ***not*** a homeotherm?
(1) *Macropus* (2) *Chelone*
(3) *Camelus* (4) *Psittacula*
Ans. (2)

167. Ciliates differ from all other protozoans in
(1) using flagella for locomotion
(2) having a contractile vacuole for removing excess water
(3) using pseudopodia for capturing prey
(4) having two types of nuclei
Ans. (4)

168. Which of the following features is used to identify a male cockroach from a female cockroach ?
(1) Presence of a boat shaped sternum on the 9^{th} abdominal segment
(2) Presence of caudal styles
(3) Forewings with darker tegmina
(4) Presence of anal cerci
Ans. (2)

169. Which of the following options correctly represents the lung conditions in asthma and emphysema, respectively ?
(1) Inflammation of bronchioles; Decreased respiratory surface
(2) Increased number of bronchioles; Increased respiratory surface
(3) Increased respiratory surface; Inflammation of bronchioles
(4) Decreased respiratory surface; Inflammation of bronchioles
Ans. (1)

170. Match the items given in Column I with those in Column II and select the ***correct*** option given below:

Column I	*Column II*
a. Tricuspid valve	i. Between left atrium and left ventricle
b. Bicuspid valve	ii. Between right ventricle and pulmonary artery
c. Semilunar valve	iii. Between right atrium and right ventricle

	a	**b**	**c**
(1)	iii	i	ii
(2)	i	iii	ii
(3)	i	ii	iii
(4)	ii	i	iii

Ans. (1)

171. Match the items given Column I with those in Column II and select the ***correct*** option given below :

Column I	*Column II*
a. Tidal volume	i. 2500-3000 mL
b. Inspiratory Reserve volume	ii. 1100-1200 mL
c. Expiratory Reserve volume	iii. 500-550 mL
d. Residual volume	iv. 1000-1100 mL

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

Ans. (2)

172. AGGTATCGCAT is a sequence from the coding strand of a gene. What will be the corresponding sequence of the transcribed mRNA ?

(1) AGGUAUCGCAU (2) UGGTUTCGCAT
(3) ACCUAUGCGAU (4) UCCAUAGCGUA

Ans. (1)

173. According to Hugo de Vries, the mechanism of evolution is :-

(1) Multiple step mutations
(2) Saltation
(3) Phenotypic variations
(4) Minor mutations

Ans. (2)

174. Match the items given in Column I with those in Column II and select the ***correct*** option given below :-

Column I	*Column II*
a. Proliferative Phase	i. Breakdown of endometrial lining
b. Secretory Phase	ii. Follicular Phase
c. Menstruation	iii. Luteal Phase

	a	**b**	**c**
(1)	iii	ii	i
(2)	i	iii	ii
(3)	ii	iii	i
(4)	iii	i	ii

Ans. (3)

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

(1) Only daughters
(2) Only sons
(3) Only grandchildren
(4) Both sons and daughters

Ans. (4)

176. All of the following are part of an operon *except* :-

(1) an operator (2) structural genes
(3) an enhancer (4) a promoter

Ans. (3)

177. Which of the following gastric cells indirectly help in erythropoiesis ?

(1) Chief cells (2) Mucous cells
(3) Goblet cells (4) Parietal cells

Ans. (4)

178. Match the items given in Column I with those in Column II and select the ***correct*** option given below :-

Column I	*Column II*
a. Fibrinogen	i. Osmotic balance
b. Globulin	ii. Blood clotting
c. Albumin	iii. Defence mechanism

	a	**b**	**c**
(1)	iii	ii	i
(2)	i	ii	iii
(3)	i	iii	ii
(4)	ii	iii	i

Ans. (4)

179. Calcium is important in skeletal muscle contraction because it :-

(1) binds to troponin to remove the masking of active sites on actin for myosin.
(2) activates the myosin ATPase by binding to it.
(3) detaches the myosin head from the actin filament.
(4) prevents the formation of bonds between the myosin cross bridges and the actin filament.

Ans. (1)

180. Which of the following is an occupational respiratory disorder ? :

(1) Anthracis (2) Silicosis
(3) Botulism (4) Emphysema

Ans. (2)