DR. ABHANG PRABHU'S TUTORIALS

NEET : 2018 (SOLUTION)

Time: 90 Minutes. **Version EE** **Max. Marks: 360**

Note:

* Every correct answer (+4 Mark)
* Every wrong answer (-1 Mark)

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

92. Pneumatophores occur in:
    1) **Halophytes**
    2) Carnivorous plants.
    3) Free-floating hydrophytes
    4) Submerged hydrophytes.

93. Sweet potato is a modified:
    1) Stem
    2) Tap root
    3) **Adventitious root**
    4) Rhizome

94. Plants having little or no secondary growth are:
    1) **Grasses**
    2) Conifers
    3) Deciduous angiosperms
    4) Cycads

95. Casparian strips occur in:
    1) Epidermis
    2) Cortex
    3) Pericycle
    4) **Endodermis**

96. Secondary xylem and phloem in dicot stem are produced by:
    1) Apical meristems
    2) Phellogen
    3) **Vascular cambium**
    4) Axillary meristems

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

98. The experimental proof for semiconservative replication of DNA was first shown in a:
    1) Fungus
    2) Plant
    3) **Bacterium**
    4) Virus

99. Select the **correct** match:

1)	Alec Jeffreys	Streptococcus pneumonia
2)	Matthew Meselson and F. Stahl	Pisum sativum
3)	Alfred Hershey and Martha Chase	TMV
4)	**Francois Jacob and Jacques Monod**	**Lac operon**

100. Select the **correct** statement:
    1) Franklin Stahl coined the term "linkage".
    2) Spliceosomes take part in translation.
    3) **Punnett square was developed by a British scientist.**
    4) Transduction was discovered by S. Altman.

101. Which of the following pair is **wrongly** matched?

1)	**Starch synthesis in pea**	**Multiple alleles**
2)	XO type sex determination	Grasshopper
3)	ABO blood grouping	Co-dominance
4)	T.H. Morgan	Linkage

102. Offsets are produced by:
    1) Meiotic divisions
    2) Parthenocarpy
    3) **Mitotic divisions**
    4) Parthenogenesis

103. Which of the following flowers only once in its life-time?
    1) **Bamboo species**
    2) Mango
    3) Jackfruit
    4) Papaya

104. Which of the following has proved helpful in preserving pollen as fossils?
    1) Pollenkitt
    2) Oil content
    3) Cellulosic intine
    4) **Sporopollenin**

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

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

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

108. Use of bioresources by multinational companies and organizations without authorisation from the concerned country and its people is called:
    1) Bio-infringement
    2) Biodegradation
    3) **Biopiracy**
    4) Bioexploitation

109. 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) Lerma Rojo
    3) Sharbati Sonora
    4) **Basmati**

110. Select the **correct** match:

1)	**Ribozyme**	**Nucleic acid**
2)	T.H. Morgan	Transduction
3)	F_2 x Recessive parent	Dihybrid cross
4)	G. Mendel	Transformation

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

112. Which of the following is a secondary pollutant?
    1) CO
    2) SO_2
    3) CO_2
    4) **O_3**

113. World Ozone Day is celebrated on:
    1) 5^{th} June
    2) **16^{th} September**
    3) 21^{st} April
    4) 22^{nd} April

114. Natality refers to:
    1) Death rate
    2) Number of individuals leaving the habitat
    3) **Birth rate**
    4) Number of individuals entering a habitat

115. In stratosphere, which of the following elements acts as a catalyst in degradation of ozone and release of molecular oxygen?
    1) Carbon
    2) Fe
    3) **Cl**
    4) Oxygen

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

117. The Golgi complex participates in:
    1) Fatty acid breakdown
    2) Respiration in bacteria
    3) **Formation of secretory**
    4) Activation of amino acid

118. Which of the following is **not** a product of light reaction of photosynthesis?
    1) ATP
    2) NADPH
    3) **NADH**
    4) Oxygen

119. Which among the following is **not** a prokaryote?
    1) **Saccharomyces**
    2) Nostoc
    3) Mycobacterium
    4) Oscillatoria

120. Stomatal movement in **not** affected by:
    1) Temperature
    2) **O_2 concentration**
    3) Light
    4) CO_2 concentration

121. Which of the following is true for nucleolus?
    1) Larger nucleoli are present in dividing cells.
    2) It takes part in spindle formation
    3) It is a membrane-bound structure
    4) **It is a site for active ribosomal RNA synthesis.**

122. The stage during which separation of the paired homologous chromosomes beings is:
    1) Pachytene
    2) Diakinesis
    3) **Diplotene**
    4) Zygotene

123. The two functional groups characteristic of sugars are:
    1) hydroxyl and methyl
    2) carbonyl and phosphate
    3) carbonyl and methyl
    4) **carbonyl and hydroxyl**.

124. Stomata in grass leaf are:
    1) **Dumb-bell shaped**
    2) Rectangular
    3) Kidney shaped
    4) Barrel shaped

125. 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) Banana
    3) **Yucca**
    4) Viola

126. Pollen grains can be stored for several years in liquid nitrogen having a temperature of:
    1) - 120^{o}C
    2) **- 196^{o}C**
    3) - 80^{o}C
    4) - 160^{o}C

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

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

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

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

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

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

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

134. Which one is **wrongly** matched?

1)	**Uniflagellate gametes**	**Polysiphonia**
2)	Gemma cups	Marchantia
3)	Biflagellate zoospores	Brown algae
4)	Unicellular organism	Chlorella

135. 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 plant 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)	(ii)	(iv)	(iii)	(i)
3)	(iii)	(ii)	(i)	(iv)
4)	**(iii)**	**(iv)**	**(i)**	**(ii)**

136. Which of the following is an amino acid derived hormone?

1) **Epinephrine**
2) Estradiol
3) Ecdysone
4) Estriol

137. Which of the following structures or regions is **incorrectly** paired with its function?

1)	Medulla oblongata	Controls respiration and cardiovascular reflexes.
2)	Hypothalamous	Production of releasing hormones and regulation of temperature, hunger and thirst
3)	**Limbic system**	**Consists of fibre tracts that interconnect different regions of brain; controls movement.**
4)	Corpus callosum	Band of fibers connecting left and right cerebral hemispheres.

138. The transparent lens in the human eye is held in its place by:

1) **ligaments attached to the ciliary body**
2) smooth muscles attached to the iris
3) ligaments attached to the iris
4) smooth muscles attached to the ciliary body

139. Which of the following hormones can play a significant role in osteoporosis?
1) Aldosterone and Prolactin
2) **Estrogen and Parathyroid hormone**
3) Progesterone and Aldosterone
4) Parathyroid hormone and Prolactin

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

141. Which of the following is not an autoimmune disease?
1) Psoriasis
2) **Alzheimer's disease**
3) Rheumatoid arthritis
4) Vitiligo

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

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

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

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

146. Which one of the following population interaction is widely used in medical science for the production of antibiotics?
1) Commensalism
2) Parasitism
3) Mutualism
4) **Amensalism**

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

148. 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)	**(iii)**	**(iv)**	**(i)**	**(ii)**
3)	(i)	(iii)	(iv)	(ii)
4)	(i)	(ii)	(iv)	(iii)

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

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

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

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

153. The amnion of mammalian embryo is derived from:
    1) **ectoderm and mesoderm**
    2) mesoderm and trophoblast
    3) endoderm and mesoderm
    4) ectoderm and endoderm

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

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

156. 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)	(ii)	(iii)
3)	(i)	(iii)	(ii)
4)	(ii)	(i)	(iii)

157. Match the items given in 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)	100 – 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)	(i)	(iv)	(ii)	(iii)
3)	**(iii)**	**(i)**	**(iv)**	**(ii)**
4)	(iv)	(iii)	(ii)	(i)

158. 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 crystallized 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)	(ii)	(iii)	(i)	(iv)
3)	(i)	(ii)	(iii)	(iv)
4)	**(iv)**	**(i)**	**(ii)**	**(iii)**

159. Match the items given in Column I with those in 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)	(v)	(iv)	(i)	(ii)
3)	**(iv)**	**(i)**	**(ii)**	**(iii)**
4)	(v)	(iv)	(i)	(iii)

160. Which of the following events does **not** occur in rough endoplasmic reticulum?

1) Protein folding
2) Cleavage of signal peptide
3) Protein glycosylation
4) **Phospholipid synthesis**

161. Which of these statements in **incorrect?**

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

162. Nissl bodies are mainly composed of:

1) Proteins and lipids
2) Nucleic acids and SER
3) DNA and RNA
4) **Free ribosomes and RER**

163. Which of the following terms describe human dentition?

1) Thecodont, Diphyodont, Homodont
2) Pleurodont, Monophyodont, Homodont
3) **Thecodont, Diphyodont, Heterodont**
4) Pleurodont, Diphyodont, Heterodont

164. Select the **incorrect** match:

1)	Lampbrush	Diplotene bivalents chromosomes
2)	Submetacentric	L-shaped chromosomes chromosomes
3)	Allosomes	Sex chromosomes
4)	**Polytene**	**Oocytes of amphibians Chromosomes**

165. 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) Plastidome
3) Polyhedral bodies
4) Nucleosome

166. According to Hugo de Vries, the mechanism of evolution is:
1) Multiple step mutation
2) Phenotypic variations
3) **Saltation**
4) Minor mutations

167. 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)	**(ii)**	**(iii)**	**(i)**
3)	(i)	(iii)	(ii)
4)	(iii)	(i)	(ii)

168. All of the following are part of an operon except:
1) an operator
2) **an enhancer**
3) structural genes
4) a promoter

169. AGGTATCGCAT is a sequence from the coding strand of a gene. What will be the corresponding sequence of the transcribed mRNA?
    1) **AGGUAUCGCAU**
    2) ACCUAUGCGAU
    3) UGGTUTCGCAT
    4) UCCAUAGCGUA

170. A woman has an X-linked condition on one of her X chromosomes. This chromosome can be inherited by:
    1) Only daughters
    2) Only grandchildren
    3) Only sons
    4) **Both sons and daughters**

171. Which of the following gastric cells indirectly help in erythropoiesis?
    1) Chief cells
    2) Goblet cells
    3) Mucous cells
    4) **Parietal cells**

172. 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)	(iii)	(ii)
3)	(i)	(ii)	(iii)
4)	**(ii)**	**(iii)**	**(i)**

173. Which of the following is an occupational respiratory disorder?
    1) Anthracis
    2) Botulism
    3) **Silicosis**
    4) Emphysema

174. Calcium is important in skeletal muscle contraction because it:
1) **binds to troponin to remove the masking of active sites on actin for my**osin
2) detaches the myosin head from the actin filament.
3) activates the myosin ATPase by binding to it.
4) prevents the formation of bonds between the myosin cross bridges and the actin filament.

175. Identify the vertebrate group of animals characterized by crop and gizzard in its digestive system.
1) Amphibia
2) **Aves**
3) Reptilia
4) Osteichthyes

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

177. 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) Forewings with darker tegmina
3) **Presence of caudal styles**
4) Presence of anal cerci

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

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

180. Which of the following organism are known as chief producers in the oceans?
1) Dinoflagellates
2) Cyanobacteria
3) **Diatoms**
4) Euglenoids