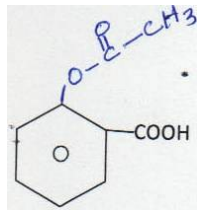


90. The compound is used as



- 1) antiseptic 2) antibiotic 3) analgesics 4) Pesticide

BIOLOGY

91. Name the prothallus is precursor to seed habit which is retained on the parent sporophyte

- 1) Male prothallus - pteridophyte
 2) Female prothallus - pteridophyte
 3) Both male & female prothallus - pteridophyte
 4) Male gametophyte – pteridophyte

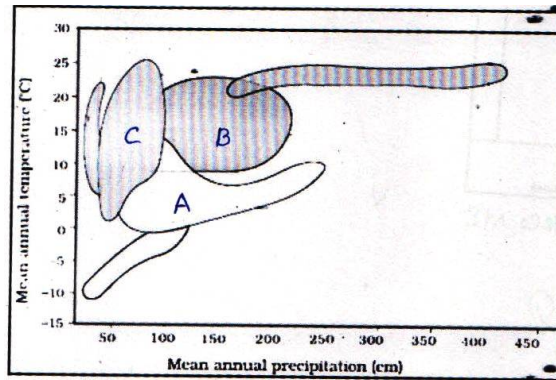
92. Branch of Zoology which deals with heredity and variations

- 1) Genetics 2) Evolution 3) Ecology 4) Ethology

93. How many carbon atoms are present in palmitic acid and Arachidonic acid respectively

- 1) 20 'C' & 16 'C' 2) 20 'C' & 20 'C' 3) 16 'C' & 16 'C' 4) 16 C & 20 C

94.



Identify the A,B,C places after above diagram (biome with respect annual rain fall)

- | | A | B | C |
|---|------------|------------|------------|
| 1 | Temperate | Coniferous | Grass Land |
| 2 | Coniferous | Temperate | Grass Land |
| 3 | Coniferous | Grass Land | Temperate |
| 4 | Temperate | Grass Land | Coniferous |

95. Chromosomal theory of Inheritance is experimentally proved by

- 1) Sutton and Boveri 2) T.H. Morgan 3) Bateson 4) Mendal

96. Match the Following

Syndrome

- 1 Down's Syndrome
 2. Klinefelter's Syndrome
 3. Turner's Syndrome

Symptoms

- a. gynecomastia
 b. Short stature
 c. Furrowed Tongue

- 1) 1-a, 2-c, 3-b 2) 1-a, 2-b, 3-c 3) 1-c, 2-c, 3-a 4) 1-c, 2-a, 3-b

97. Exogenous spores are produced in

- 1) Penicillium 2) mucor 3) Rhizopus 4) Euglena

98. Arrange the following sequentially to for sucked out milk from mammary gland

- a. Alveoli b. Ampulla c. mammary tubules
 d. Lacterious duct e. mammary duct f. Nipple

- 1) a-c-e-b-d-f 2) a-c-e-d-b-f 3) a-c-d-b-e-f 4) a-c-d-d-e-f

99. Which of the following is not a monocarpic plant

- 1) Rice 2) Maize 3) Wheat 4) Mango

- 100. Among the following primary Lymphoid organs are**
 1) Thymus and spleen 2) Bone marrow and Thymus
 3) Bone Marrow and Spleen 4) Liver and Spleen
- 101. Fusion that involve motile small male gametes and non – motile male gametes (pollen tube) respectively called**
 1) Zooidogamy, Siphonogamy 2) Siphonogamy, Zooidogamy
 3) isogamy, Zooidogamy 4) Anisogamy, Siphonogamy
- 102. Which drug effects, effectors of gastro intestinal tract and central nervous system**
 1) Cannabinoids 2) Coca alkaloid 3) Opioids 4) All of the above
- 103. Which of the following are characteristics of Hydrophilous flower**
 i) Pollengrain is surrounded by mucillagenous sheath
 ii) Not very colourful
 iii) Nectar and odour absent iv) Stigma wettable
 1) i, ii correct 2) ii, iii correct
 3) i, ii, iv correct 4) i, ii, iii options are correct
- 104. Odd out the incorrect statements of the following related to MOET**
 1) Cow is administered hormones with FSH like activity
 2) Induces superior ovulation in inferior cows
 3) An animal is mated with an elite bull
 4) The fertilized eggs recovered non-surgically
- 105. Which of the following is Rust fungus**
 1) *Puccinia* 2) *Agaricus* 3) *Lycoperdon* 4) *Polyporus*
- 106. The Ratio between Grinding teeth, canines, incisors are (Related to Man)**
 1) 20:4:8 2) 20:8:4 3) 8:4:20 4) 4: 8: 20
- 107. Peroxisomes and glyoxysomes together called as**
 1) Cytoskeleton 2) Microbodies 3) centrosomes 4) Plastids
- 108. Exchange of chloride ions and Bicarbonate ions from Plasma to RBC is called**
 1) Haldane effect 2) hamburger’s phenomenon
 3) Bohr Effect 4) Sewall wright effect
- 109. Types of histone proteins present in histone octamer**
 1) 4 2) 3 3) 5 4) 2
- 110. Match the Following**

A. Pelvic Girdle	1. Radius, ulna
B. Pectoral Girdle	2. Tibia, Fibula
C. Forelimb	3. Ischium pubis
D. Hind Limb	4. Scapula Acromian

 1) A-3,B-4,C-2,D-1 2) A-4, B-3, C-2, D-1 3) A-3, B-4, C-1, D-2 4) A-4, B-3, C-1, D-2
- 111. Polypetalous condition is present in**
 1) Ground nut 2) Bean 3) Red gram 4) All
- 112. Cardiac output increases due to influence of**
 1) Increase the Production of Renin 2) Increase the production of epinephrine
 3) Increase the Production of Thyroxine 4) All of the above
- 113. Bicollateral vascular bundles are present in**
 1) Solanaceae 2) Cucurbitaceae 3) Gloriosa 4) 1 & 2
- 114. Arrange the following sequentially the parts in fallopian tube of female.**
 1) Fimbriae – Infundibulum – Isthmus ampulla
 2) Fimbriae – Isthmus – Ampulla – Infundibulum
 3) Fimbriae – Infundibulum – Ampulla isthmus
 4) Fimbriae - Ampulla – Infundibulum – isthmus
- 115. Arrange the correct order in dicot embryo**
 1) Plumule – Cotyledons – Hypocotyl - Radicle - Rootcap
 2) Cotyledon – Plumule – Radicle – Rootcap - Hypocotyl
 3) Root cap – Radicle – Plumule – Cotyledon - hypocotyl
 4) Plumule – Root cap – Radicle

116. The equation for J-shaped population growth curve is

1) $\frac{dN}{dt} = rN$ 2) $\frac{dn}{dt} = rN \left[\frac{K - N}{K} \right]$ 3) $N_t = N_o(B + I) - (D - G)$ 4) $D = \frac{N}{S}$

117. Exine of pollen grain made up of

- 1) Pectose 2) Cellulose 3) lactose 4) Sporopollenin

118. Match the columns

- | | |
|-----------------|-----------------------------|
| A. Mutualism | 1. Ticks on dogs |
| B. Commensalism | 2. Balanus and Chathamalus |
| C. Parasitism | 3. Sparrow |
| D. Competition | 4. Epiphyte on mango branch |
| E. Predation | 5. Ophrys and bee |

- 1) A-5, B-4, C-2, D-1, E-3 2) A-4, B-5, C-1, D-2, D-3
 3) A-5, D-4, C-3, D-2, E-1 4) A-5, B-4, C-1, D-2, E-3

119. Number of Centromeres, Chromatids, Kinetochores, DNA molecules in a metaphase chromosome is

- 1) 4, 1, 1, 2 2) 2, 4, 1, 2 3) 1, 2, 2, 2 4) 2, 2, 1, 1

120. Select the mismatch pair

- 1) Erthroxylum coca – Leaves and young twigs – Cocaine
 2) Claviceps purpurea – Fruiting Bodies – Lysergic acid diethylamide (LSD)
 3) Cannabis Sativa – Leaves, resin and inflorescence – Bhang hashish
 4) Papaver somniferum - amphetamines

121. Which of the following is incorrect statement ?

- 1) Auxins are used to induce roots on stem cutting
 2) Gibberelins are used in Bolting process
 3) Cytokinins delay senescence
 4) Ethylene promote opening of stomata

122. The Terms used for ecological age group of a population are

- I. Pre – reproductive II. Reproductive III. Post – reproductive IV. Old age group
 V. adolescent age group VI. Infertile age group

Choose the correct option for given statements

- 1) I, II and III 2) II, IV and V 3) IV, V and VI 4) I, V and VI

123. Which of the following is correct

- 1) True breeding involves self pollination
 2) Chromosomal theory of inheritance proposed by morgan
 3) UUU coded for methionine
 4) During electrophoresis ethidium iodide is used

124. Match the list of items of column-I with column – II and select the correct option from the codes given below

Column – I

- A Electrostatic Precipitator
 B Scrubber
 C Catalytic Converter

Column – II

- 1 Remove gases likes SO₂
 2 Reduces automobile emission of poisonous gases
 3 Remove Particulate Matter

- 1) A-2, B – 3, C -1 2) A-3, B-2, C-1 3) A-1, B-2, C-3 4) A-3, B-1, C-2

125. Which of the following is not a stop codon

- 1) UAA 2) UAG 3) UGA 4) AUC

126. Match the columns

Column – I	Column – II
A Air (prevention and control of pollution) Act	I 1987
B Water (prevention and control of pollution) Act	II 1981
C Noise added as Air pollutant	III 1974
D Environment (Protection) Act	IV 1986
1) A:II, B:III, C:IV, D:I	2) A:II, B:III, C:I, D:IV
3) A:IV, B:II, C:II, D:I	4) A:IV, B:III, C:I, D:II

127. Identify the incorrect statement for Taxonomical Aid key

- 1) It is used for Identification of plants and animals
- 2) Keys are based on the contrasting characters
- 3) Keys are generally in a pairs called Manuals
- 4) Keys are generally analytical in nature.

128. Which of the following is the true description about an animal concerned?

- 1) Cockroach – 10 pairs of spiracles
- 2) Earthworm – the alimentary canal consist of oesophagus, stomach, crop and intestine
- 3) Frog – Body divisible into three regions head neck and trunk
- 4) Man – Renal portal system is well developed

129. Match the following

1. Auxins	i) Charles Darwin
2. Gibberelins	ii) Kurosawa
3. Cytokinins	iii) Skoog and Miller
4. Ethylene	iv) Cousins
1 2 3 4	1 2 3 4
1) i ii iii iv	2) ii i iii iv
3) iv iii i ii	4) i iv iii ii

130. In case of suspected filarial patients blood samples are collected during night time because

- 1) Patients do not feel much pain
- 2) Filarial worms enter blood from lymph during night time
- 3) Micro filariae exhibits nocturnal periodicity
- 4) Adult worms are active in blood circulation during night time

131. Number of ATP's and NADPH + H⁺ are required for one glucose molecule formation during C₃ & C₄ cycles respectively

- 1) 18 ATP & 12NADPH + H⁺, 30ATP & 18 NADPH + H⁺
- 2) 18 ATP & 12NADPH + H⁺, 30ATP & 12 NADPH + H⁺
- 3) 3 ATP & 2NADPH + H⁺, 5ATP & 2 NADPH + H⁺
- 4) 18 ATP & 18NADPH + H⁺, 12ATP & 12 NADPH + H⁺

132. The drug cocaine produces a sense of euphoria and increased energy levels as it

- 1) Act as barbiturate
- 2) Stimulate supra renal gland to produce steroids
- 3) Causes the inhibition of adrenergic nerves
- 4) Interferes with the transport of Dopamine

133. Which cell organell functions are co-ordinating

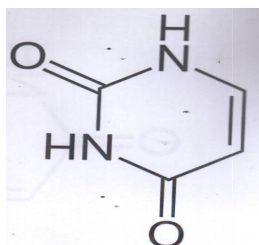
- i) Endoplasmicreticulum ii) Golgicomplexes iii) Vacuoles iv) Lysosomes
- Identify the correct one**
- 1) i, ii only
 - 2) i, ii, iii only
 - 3) i, iv only
 - 4) i, ii, iii, iv

134. Iter or Aqueduct sylvius or Inter ventricular foramnina are connecting the

- 1) 1 and 2 ventricles of Brain
- 2) 2 and 3 ventricles of Brain
- 3) 3 and 4 ventricle of Brain
- 4) Right and Left artia of heart

135. How many radial spokes are present in centriole structure.
 1) 7 2) 9 3) 8 4) 6
136. Montreal protocol is related to
 1) Ozone depletion 2) Global warming
 3) Climatic changes 4) Biodiversity hot spots
137. In griffth experiment Genetic material Transfer to
 1) 'S' strain to 'R' strain 2) Heated 'S' strain to 'R' strain
 3) 'R' strain to 'S' strain 4) Heated 'R' strain to 'S' strain
138. The hind brain in frog consists of
 1) Cerebellum 2) Medulla Oblongata
 3) Diencephalon 4) Both 1 and 2
139. In phaeophyceae members cellwall is madeup of
 1) Only cellulose 2) Cellulose and algin
 3) only pectin 4) Cellulose and pectin
140. Which one of the following diploblastic
 1) Pennatula 2) Paramecium 3) schistosoma 4) Entamoeba
141. The plant anatomy and the anatomy of seed plants book was written by
 1) Stephan Hales 2) Camerarius 3) Johansen 4) Catherine esau
142. Match the items of both columns correctly
- | <u>Column – I</u> | <u>Column – II</u> |
|-------------------|--------------------|
| A Scoliodon | i Saw fish |
| B Pristis | ii Hammer headed |
| C Trygon | iii Dog fish |
| D Sphyrna | iv. Electric ray |
| | v. Sting ray |
- 1) A-ii, B-v, C-i, D-iii 2) A-iii, B-i, C-v, D-ii
 3) A-ii, B-i, C-v, D-ii 4) A-v, B-i, C-iii, D-ii

143.



Above nitrogen base is

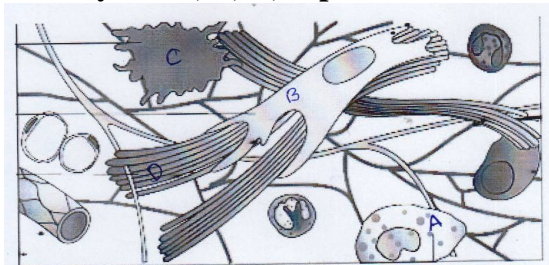
- 1) Uracil 2) Thyamine 3) Adenine 4) Guanine
144. The term ecology is coined by
 1) Reiter 2) Haeckel 3) Von Bear 4) Mendel
145. Which of the following is Bacterial disease ?
 1) Breaking of flowers 2) Tobaccomosoic 3) Chlorosis 4) Citrus canker
146. Occurrence of non-beneficial alleles in heterozygous genotype is
 1) Genetic load 2) Genetic drift
 3) Gene flow 4) Selection
147. Number of possible gametes for the genotype AaBbCcDD
 1) 7 2) 8 3) 3 4) 5
148. The minimum percentage of impurities by domestic sewage in water that makes it polluted is
 1) 1% 2) 5.2% 3) 0.1% 4) 0.5%

149. Match the following

- | | |
|----------------------------|------------------------|
| 1) Bryophyllum | a) <i>Bombax ceiba</i> |
| 2) Nepenthes | b) Reproductive leaves |
| 3) Whorled phyllotaxy | c) Trap leaves |
| 4) Palmetely compound leaf | d) <i>Alstonia</i> |

- 1) 1b 2c 3d 4a 2) 1c 2d 3a 4b 3) 1c 2b 3d 4a 4) 1c 2d 3b 4a

150. Identify the A, B, C, D places of the below diagram



	A	B	C	D
1	Mastcell	Fibroblast	Macrophage	Collagen fibres
2	Mastcell	Collagen fibres	Fibroblast	Macrophage
3	Macrophage	Fibroblast	Collagen fibres	Mastcell
4	Collagen fibres	Fibroblast	Mastcell	Macrophage

151. Elaters are present in

- 1) Marchantia 2) Salvinia 3) Selaginella 4) Funaria

152. Which of the following had the smallest brain capacity?

- 1) Homo neanderthalensis 2) Homo habilis
3) Homo erectus 4) Homo sapiens

153. Find out the correct statements among the following based on the advantages of transpiration

- 1) Creates transpiration pull for absorption of water and minerals
- 2) Supplies water for photo synthesis
- 3) Creates cool leaf surface some times 10 to 15⁰C
- 4) Maintains the shape of the plant by keeping cells turgid

- 1) 1 only correct 2) All are correct except 1
3) 3 & 4 are correct only 4) All are correct

154. Which one of the following disease in non-communicable?

- 1) Diphtheria 2) Hepatitis 3) cancer 4) Malaria

155. When diploid male crossed with a diploid female, what is the ploidy of its zygote and PEN after fertilization is

- 1) Zygote (2n), PEN –(3n) 2) Zygote (2n), PEN –(n)
3) Zygote (3n), PEN (2n) 4) Zygote (2n), PEN (2n)

156. Desert lizards exhibit

- 1) Anatomical adaptations 2) Physiological adaptations
3) Morphological adaptations 4) Behavioural adaptations

157. Arrange the following parts in the structure of T.S. of anther from periphery to inner side

- 1) Tepetum 2) Middle layers
3) Epidermis 4) sporogenous tissue 5) Endothecium

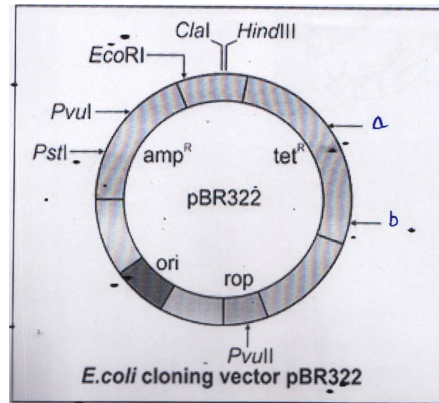
- 1) 1-2-3-4-5 2) 3-5-2-1-4 3) 2-3-4-5-1 4) 4-5-1-2-3

158. The receptors for opioids are present in

- 1) Cenral nervous system 2) gastrointestinaltract
3) respiratory tract 4) both 1 & 2

- 159. Protein and Lipids percentage in a typical RBC cells respectively.**
 1) 52% and 40% 2) 40% and 52% 3) 50% and 50% 4) 60% and 40%
- 160. Bidder's canal in frog is present in**
 1) Testes 2) Kidney 3) ovary 4) brain
- 161. Brown spots surrounded by chlorotic veins caused by the deficiency of**
 1) Manganese 2) Iron 3) Magnesium 4) Calcium
- 162. Hind wings of in cockroach arises from**
 1) prothorax 2) mesothorax 3) Metathorax 4) pronotum
- 163. Calvin cycle occurs in C₄ cycle is**
 1) Mesophyll cell
 2) Bundle sheath cells
 3) Cytoplasm
 4) Either mesophyll cell (or) Bundle sheath cells
- 164. Elephantiasis is caused by a member of**
 1) Platyhelminthes 2) Aschelminthes 3) Protozoa 4) Annelida
- 165. Eustele is present in**
 1) Algae & Bryophytes 2) Gymnosperms & Angiosperms
 3) Gymnosperms & Algae 4) Angiosperms & Pteridophytes
- 166. Which of the following is correctly matched**
 1) Typhoid – Haemophilus influenzae 2) Common cold – Plasmodium
 3) Malaria – Rhinoviruses 4) Filariasis – Wuchereria
- 167. Match the following**
- | | |
|--|--|
| <u>Column – A</u> | <u>Column – B</u> |
| 1) Statin | A) Immunosuppressive agent |
| 2) Cyclosporin – A | B) Clot buster |
| 3) Lipases | C) Removes oily strains |
| 4) Sterptokinase | D) Lowers the blood cholesterol levels |
| 1) 1A 2D 3C 4B 2) 1D 2A 3B 4C 3) 1C 2A 3B 4D 4) 1D 2A 3C 4B | |
- 168. Urea, lactic acid and some salts are eliminated by**
 1) sebaceous glands 2) sweat glands 3) liver 4) intestine
- 169. Find out wrong statement among the following**
 1) Solid stem in wheat do not prefer by stem sawfly
 2) Rape seed (Pusa Gaurav) is the variety resistance to insects & pests
 3) 840 million people are suffering from hunger
 4) Fe & Ca enriched spinach & Bathua released as biofortified crops
- 170. In human heart the non functional valve in right atrium is present at the opening of**
 1) coronary sinus 2) superior venacava
 3) inferior venacava 4) right atrioventricular aperture
- 171. Find out correct statement among the following related to SCP**
 1) Spirulina is a filamentous blue green Algae – kingdom monera
 2) Spirulina maxima is a filamentous Algae – kingdom plantae
 3) Torula yeast & Baker's yeast are unicellular – kingdom monera
 4) Brevibacterium ketoglutamicum is a Bacterium – kingdom protista
- 172. Arrange the following sequentially by basing on low pH to high pH**
A. Salivary juice B. Gastric juice C) Pancreatic Juice
 1) B-A-C 2) A-B-C 3) B-C-A 4) A-C-B
- 173. Find out the ratio of number of stamens in liliaceae, number of stamens in Brassicaceae, and number of tepals in liliaceae**
 1) 1:2:2 2) 1:1:1 3) 1:1:2 4) 1:2:1
- 174. Tidal Volume of human being per minute is**
 1) 4000 ml to 6000 ml 2) 6000 ml to 8000 ml 3) 4000ml to 5000ml 4) 7000ml to 9000ml

175. Identify the a, b in the following



- 1) a. BamHI, b. sal I 2) a. sal I, b. Pvu I 3) a. PvuI, b. EcoRI 4) a. Pvu II, b. Pvu I

176. Among the following which set of hormones are coworkers

- 1) insulin & glucogan 2) Gastrin & enterogastrin
3) Epinephrine & norepinephrine 4) Somatotrophin & somatostatin

177. Recombination percentage in body color and eye color in Drosophila?

- 1) 37.8% 2) 1.3% 3) 98.7% 4) 62.4%

178. In which of the following area cones are absent

- 1) photoreceptor area 2) fovea centralis 3) Macula leutea 4) Blind spot

179. How many parental types are formed in Monohybrid of F₂ generation

- 1) 3 2) 2 3) 4 4) 1

180. Number of bones in man

- 1) 206 2) 207 3) 208 4) 209