



BIOLOGY

BOOKS - NTA MOCK TESTS

NEET MOCK TEST 2

Biology

1. The embryogenesis is the process of the development of an embryo from the zygote.

During this process zygote undergoes

A. Meiosis

B. Cleavage only

C. Cell differentiation only

D. Both cleavage and cell differentiation

Answer: D



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2. Most diverse macromolecules, found in the cell both physically and chemically are

A. Proteins

B. Carbohydrates

C. Nucleic acids

D. Lipids

Answer: A



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3. The element which helps in oxygen evolution in the process of photosynthesis is

A. Zn and Mn

B. Mo and Cl

C. B and Mg

D. Cl and Mn

Answer: D



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4. Although much CO_2 is carried in blood, yet blood does not become acidic, because

- A. CO_2 is continuously diffused through the tissues and is not allowed to accumulate
- B. CO_2 combines with water to form H_2CO_3 , which is neutralized by Na_2CO_3
- C. In CO_2 transport, blood buffers play an important role
- D. CO_2 is absorbed by leucocyte

Answer: C



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5. The science of rearing, feeding, caring, breeding and utilization of animals is called

- A. Poultry
- B. Veterinary science
- C. Animal husbandry
- D. Dairy science

Answer: C



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6. Which one of the following statements is correct regarding blood pressure ?

A. 130/90 mm Hg is considered high and requires treatment

B. 100/55 mm Hg is considered an ideal blood pressure

C. 105/50 mm Hg makes one very active

D. 190/110 mm Hg may harm vital organs like brain and kidney

Answer: D



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7. In the base sequence of one strand of DNA is *GAT, TAG, CAT, GAC* what shall be the sequence of its complementary strand -

A. GCATG

B. CGTAC

C. ATGCG

D. GCATC

Answer: B



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8. Collar cells form the lining of spongocoel in

A. Jelly fish

B. Sycon

C. Taenia

D. Pila

Answer: B



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9. Choose the option that is showing the correct sequence of events occurring in each cycle of polymerase chain reaction (PCR).

A. Denaturation extension primer
annealing.

B. Primer annealing denaturation
extension.

C. Denaturation primer annealing
extension.

D. Extension primer annealing
denaturation.

Answer: C



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10. In which of the following reaction of glycolysis, a molecule of water is removed from the substrate

A. Fructose-6-phosphate \rightarrow Fructose-1, 6-bisphosphate

B. 3-phosphate-glyceraldehyde \rightarrow 1, 3-bisphosphoglyceric acid

C. PEP \rightarrow Pyruvic acid

D. 2-phosphoglycerate \rightarrow PEP

Answer: D



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11. The cell junctions called tight, adhering and gap junctions are found in :

- A. Muscular tissue
- B. Connective tissue
- C. Epithelial tissue
- D. Neural tissue

Answer: C



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12. Which one of the following is not included under In-situ conservation?

- A. Botanical garden
- B. Biosphere reserve
- C. National Park
- D. Sanctuary

Answer: A



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13. A new crop, that is the source of a high-performance lubricants is

- A. *Simmondsia chinensis*
- B. *Parthenium argentatum*
- C. *Psophocarpus tetragonolobus*
- D. *Leucaena leucocephala*

Answer: A



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14. The term test-tube baby implies that

- A. Fertilization of ovum takes place in the uterus but develops in the test-tube
- B. Fertilization of ovum takes place in the test-tube and develops in test-tube itself
- C. Fertilization of ovum takes place in the test-tube but it develops in the uterus
- D. Fertilization of ovum takes place in the fallopian tube and embryo develops in the uterus

Answer: C



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15. With respect to the sodium-potassium pump, what changes will be observed when one molecule of ATP is used during the process?

A. 3 ions of Na^+ are pumped out and $2K^+$ are taken in

B. 3 ions of Na^+ are taken in and $2K^+$ are pumped out

C. 2 ions of Na^+ are thrown out and $3K^+$ are absorbed

D. 3 ions of K^+ are absorbed, $3Na^+$ are pumped out

Answer: A



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16. Which of the following soil bacterium produces a protein/chemical that is toxic to insect pests?

- A. Proteobacteria
- B. *Bacillus thuringiensis*
- C. Spirochaetes
- D. Trichoderma

Answer: B



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17. What is sarcomere ?

- A. Part between two H-lines
- B. Part between two A-lines
- C. Part between two I-bands
- D. Part between two Z-lines

Answer: D



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18. The site of ADA production in the body is

- A. Neutrophils
- B. Lymphocytes
- C. Blood plasma
- D. Monocytes

Answer: B



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19. Which of the following can utilize molecular nitrogen (N_2) as nutrient for growth ?

A. Rhizobium

B. Spirogyra

C. Mucor

D. Methanococcus

Answer: A



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20. Tobacco and Petunia belong to the family

A. Poaceae

B. Fabaceae

C. Solanaceae

D. Brassicaceae

Answer: C



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21. In lichens, sexual reproduction belongs to

A. Fungal partner only

B. Algal partner only

C. Both Fungal and algal partners

D. Neither fungal or algal partner

Answer: A



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22. If Cowper's glands are removed, it will affect

A. Erection of penis

B. Sperms

C. Sex recognition

D. Sexual behaviour

Answer: B



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23. In Pteridophytes, meiosis occurs in

A. Egg

B. Zygote

C. Antherozoids

D. Spore mother cells

Answer: D



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24. Which one of the following pairs is wrongly matched

A. Yeast - ethanol

B. Streptomyces - Antibiotic

C. Coliforms - vinegar

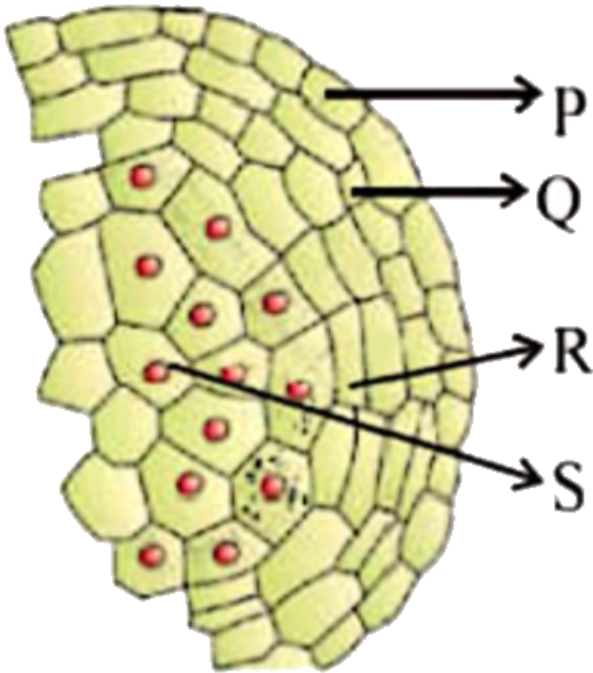
D. Methanogens - gobar gas.

Answer: C



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25. Identify the parts labelled P, Q, R, and S, and select the right option about them.



	Part-[P]	Part-[Q]	Part-[R]	Part-[S]
(A)	Epidermis	Endothecium	Microspore mother cells	Middle layer
(B)	Epidermis	Endothecium	Middle layer	Microspore mother cells
(C)	Endothecium	Epidermis	Microspore mother cells	Middle layer
(D)	Endothecium	Epidermis	Middle layer	Microspore mother cells

A. A

B. B

C. C

D. D

Answer: B



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26. Which one of the following is the product of the dark reaction of photosynthesis?

A. CO_2

B. ATP

C. Pyruvic acid

D. Phosphoglyceraldehyde

Answer: D



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27. Which one of the following would occur during bolting?

A. Uptake of water

B. Elongation of internodes

C. Uptake of mineral salts

D. Extension of lamina

Answer: B



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28. Which of the following is not a component of saliva?

A. Saliva contains electrolytes

Na^+ , K^+ , Cl^- and HCO_3^- ions.

B. Ptyalin salivary amylase

C. Mucin, lysozyme and thiocyanate ions

D. Antibody IgM

Answer: D



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29. Cell wall consists of

A. Lignin, hemicellulose, protein and lipid

B. Hemicellulose, cellulose, tubulin and
lignin

C. Lignin, hemicellulose, pectin and lipid
cellulose

D. Lignin, hemicellulose, pectin and
cellulose

Answer: D



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30. In a Mendelian dihybrid cross, the probability of getting seeds with genotype Rryy, RrYy, rrYy and RrYY in F_2 generation is respectively

A. $\frac{2}{16} : \frac{4}{16} : \frac{1}{8} : \frac{1}{8}$

B. $\frac{2}{16} : \frac{2}{16} : \frac{2}{16} : \frac{2}{16}$

C. $\frac{4}{16} : \frac{4}{16} : \frac{2}{16} : \frac{2}{16}$

D. $\frac{1}{8} : \frac{1}{4} : \frac{2}{8} : \frac{1}{16}$

Answer: A



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31. Which one of the following elements is not an essential micronutrient for plant growth?

A. Zn

B. Cu

C. Ca

D. Mn

Answer: C



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32. If birth and death rates were equal, a zero population growth rate would result. It is known as

- A. Replacement level
- B. Rate of natural increase
- C. Stable population
- D. Doubling time

Answer: C



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33. Menstruation cycle occurs

- A. In all mammals
- B. In eutherian animals
- C. In metatherian animals
- D. In all primates

Answer: D



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34. Eutrophication is caused by

A. Phosphate rocks only

B. Agricultural

C. fertilizers only Sewage and phosphate
rocks

D. Sewage and agricultural fertilizers

Answer: D



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35. Which type of ovary is found in the Liliaceae family?

A. Superior & monocarpellary

B. Superior & tricarpellary

C. Inferior & monocarpellary

D. Inferior & bicarpellary

Answer: B



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36. Somaclonal variations appear in plants:

A. Growing in polluted soil or water

B. Exposed to gamma rays

C. Raised in tissue culture

D. Transformed by recombinant DNA
technology

Answer: C



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37. In honeybees, the drones are produced from :

- A. Unfertilized eggs
- B. Fertilized eggs
- C. Larvae fed by royal jelly
- D. Fasting larvae

Answer: A



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38. Active transport of ions by the cell requires

A. High temperature

B. ATP

C. Alkaline pH

D. Salt

Answer: B



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39. The kind of epithelium which forms inner walls of blood vessels is

A. Cuboidal epithelium

B. Columnar epithelium

C. Ciliated columnar epithelium

D. Squamous epithelium

Answer: D



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40. Which of the following is not an insectivorous plant

A. Drosera

B. Nepenthes

C. Monotropa

D. Utricularia

Answer: C



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41. Pregnancy begins with implantation of

A. Embryo

B. Fertilised ovum

C. Blastopore

D. Blastocyst

Answer: D



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42. The application of biotechnology includes all, except

- A. Biofortified crops
- B. Gene therapy
- C. Molecular diagnostics
- D. Conventional hybridisation

Answer: D



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43. In an organism, if the normal diploid number of chromosomes is 8, how many chromatids are present in each daughter cell at the end of meiosis I

A. 2

B. 4

C. 8

D. 16

Answer: C



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44. Diaphragms are contraceptive devices used by the females. Choose the correct option from the statements given below :

(i) They are introduced into the uterus

(ii) They are placed to cover the cervical region

(iii) They act as physical barriers for sperm entry

(iv) They act as spermicidal agents

A. I and II

B. I and III

C. I, II and III

D. III and IV

Answer: C



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45. ABA is involved in

A. Dormancy of seeds

B. Root elongation

C. Shoot elongation

D. Increased cell division

Answer: A



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46. Calcitonin

A. Lowers calcium level in blood

B. Elevates calcium level in blood

C. Has no effect on calcium levels

D. Elevates potassium level in blood

Answer: A



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47. Pollination occurring in closed flowers is

A. Allogamy

B. Cleistogamy

C. Dicliny

D. Pritogyny

Answer: B



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48. Cork cambium is developed from

- A. Apical meristem
- B. Intercalary meristem
- C. Primitive meristem
- D. Lateral meristem

Answer: D



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49. Which of the following statements regarding coenzymes and prosthetic groups of enzymes is not true?

A. Both are required for enzyme action

B. Both can be separated from enzyme by dialysis

C. Both are organic compounds

D. Both are not polypeptides

Answer: B



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50. Which is not an opiate narcotic?

A. Amphetamine

B. Morphine

C. Heroin

D. Pethidine

Answer: A



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51. Chloroplast of Chlamydomonas is

A. Collar-shaped

B. Spiral

C. Cup-shaped

D. Stellate

Answer: C



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52. Viral infection is usually absent in

A. Phloem cells

B. Xylem cells

C. Pith cells

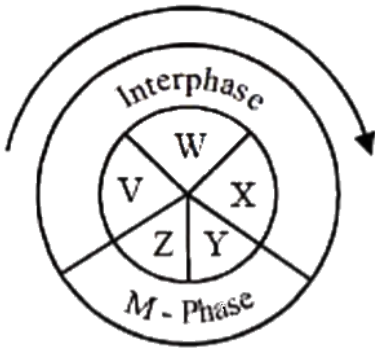
D. Apical meristem

Answer: D



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53. The diagram below shows a cell cycle.



Which of the following process occur during V?

- A. Replication of DNA
- B. Replication of centrioles

C. Chromosomes condense and become shorter and thicker

D. High metabolic rate and synthesis of proteins and cellular organelles

Answer: D



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54. Two friends are eating together on a dining table. One of them suddenly starts coughing while swallowing some food. This

coughing would have been due to improper movement of

A. Epiglottis

B. Diaphragm

C. Neck

D. Tongue

Answer: A



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55. Which one of the following is the first step of glycolysis

- A. Breakdown of glucose
- B. Phosphorylation of glucose
- C. Conversion of glucose into fructose
- D. Dehydrogenation of glucose

Answer: B



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56. In mitochondrial electron transport system

A. Number of ATP molecules synthesised

does not depend on nature of electron

donor

B. Ubiquinone receives reducing

equivalents via $FADH_2$ also

C. Cytochrome c is a large protein attached

to outer surface of inner mitochondrial

membrane

D. Complex IV has cyt. a and cyt. a_3 but no copper centres

Answer: B



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57. Which of the following branches of biology applies to both plants and animals?

A. Entomology

B. Zoology

C. Bacteriology

D. Taxonomy

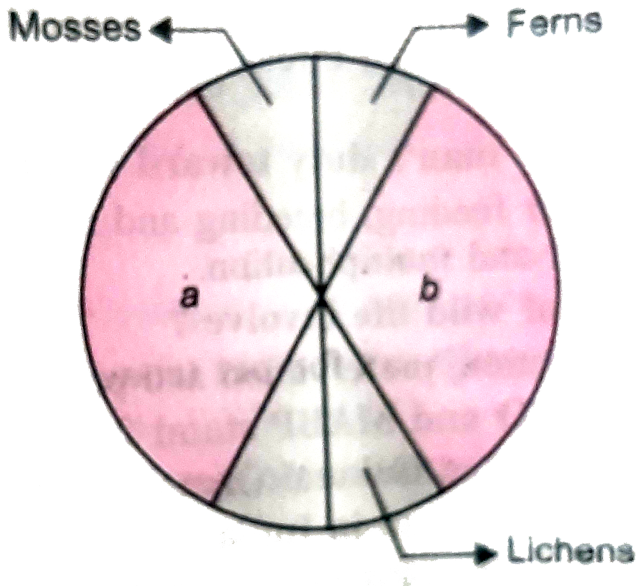
Answer: D



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58. Name the unlabelled areas 'A' and 'B' of the pie chart representing the biodiversity of plants showing their proportionate number of

species of major taxa.



A. A=Bryophytes

B= Gymnosperms

B. A=Fungi

B= Gymnosperms

C. A= Pteriophytes

B= Angiosperms.

D. A= Fungi

B= Angiosperms

Answer: D



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59. The Montreal Protocol refers to:

A. Persistent organic pollutants

B. Global warming and climate change

C. Substances that deplete the ozone layer

D. Biosafety of genetically modified organisms

Answer: C



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60. DNA or RNA segment tagged with a radioactive molecule is called :

A. Vector

B. Probe

C. Clone

D. Plasmid

Answer: B



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61. Valium' is an example of

A. Benzodiazepines

B. Barbiturates

C. Stimulants

D. Hallucinogens

Answer: A



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62. If a colour-blind man marries a woman who is homozygous for normal colour vision, the probability of their son being colour-blind is

A. 0 %

B. 50 %

C. 75 %

D. 100 %

Answer: A



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63. The net pressure gradient that causes the fluid to filter out of the glomeruli into the capsule is -

A. 50 mm Hg

B. 75 mm Hg.

C. 10 mm Hg

D. 30 mm Hg

Answer: C



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64. Find the incorrect pair.

A. Humans - Ureotelic

B. Birds - Uricotelic

C. Lizards - Uricotelic

D. Whale - Ammonotelic

Answer: D



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65. When environmental conditions are favourable, then population growth curve will be

A. Hyperbola

B. J' Shaped

C. S' shaped

D. None of these

Answer: B



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66. Which bacteria is utilized in Gobar gas plant?

A. Methanogens

B. Nitrifying

C. Ammonifying

D. Denitrifying

Answer: A



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67. Erythropoiesis may be stimulated by the deficiency of

A. Iron

B. Oxygen

C. Protein

D. None of the above

Answer: B



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68. Apomixis is a type of reproduction that results in the development of a/an

- A. New seed with fusion of gametes
- B. Embryo from nucleolus
- C. New seed without fusion of gametes
- D. Embryo from endosperm

Answer: C



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69. Which of the following statement is correct?

- A. Paramecium and Plasmodium belong to the same kingdom as that of Penicillium
- B. Lichen is a composite organism formed from the symbiotic association of an algae and a protozoan
- C. Yeast used in making bread and beer is a fungus
- D. Nostoc and Anabaena are examples of protists

Answer: C



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70. The largest number of neurons are found in

A. Brain

B. Retina

C. Spinal cord

D. Tongue

Answer: A



71. The adsorption of water by hydrophilic compounds like cellulose and pectin in root hair cell wall is called _____.

- A. Diffusion
- B. Imbibition
- C. Guttation
- D. Osmosis

Answer: B



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72. Plasmodesmata are cytoplasmic bridges between adjacent plant cells, lined by__ and often have desmotubules.

- A. Apoplasm
- B. Plasma membrane
- C. Desmosomes
- D. ER tubule

Answer: B



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73. Which one of the following phenomena supports Darwin's concept of natural selection in organic evolution?

A. Development of transgenic animals

B. Production of 'Dolly', the sheep by cloning

C. Prevalence of pesticide resistant insects

D. Development of organs from 'stem cells'
for organ transplantation

Answer: C



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74. One of the most important functions of botanical gardens is that

A. One can observe tropical plants there

B. They allow Ex-situ conservation of
germplasm

C. They Provide the natural habitat for
wildlife

D. They Provide a beautiful area re-creation

Answer: B



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75. Haemocoel is found in

A. Hydra and Aurelia

B. Taenia and Ascaris

C. Cockroach and scorpion

D. Balanoglossus and Herdmania

Answer: C



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76. With the disintegration of corpus luteum, a decrease in the secretion of ___ hormone occurs.

A. LH

B. Progesterone

C. LTH

D. FSH

Answer: B



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77. Find the odd one out with respect to the functions of an ecosystem.

A. Nutrient cycling

B. Energy flow

C. Decomposition

D. Stratification

Answer: D



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78. The DNA molecule to which the gene of interest is integrated for cloning is called

A. Vector

B. REN

C. Competent cell

D. Transformer

Answer: A



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79. In the tissues, high concentration of carbon dioxide

A. Increases the affinity of haemoglobin to both oxygen and hydrogen

B. Increases the affinity of haemoglobin to oxygen but decreases its affinity to hydrogen

C. Decreases the affinity of haemoglobin to oxygen but increases its affinity to hydrogen

D. Decreases the affinity of haemoglobin to both oxygen and hydrogen

Answer: C



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80. In the C_4 pathway.

A. Chloroplasts are of same type

B. Kranz anatomy occurs where mesophyll

have large chloroplasts whereas bundle

sheath have granular chloroplasts

- C. Kranz anatomy occurs where mesophyll have small chloroplasts whereas bundle sheath have larger granular chloroplasts
- D. Kranz anatomy where mesophyll cells are diffused

Answer: C



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81. Chlorophyll is

A. Soluble in organic solvent

B. Soluble in water

C. Soluble in both organic and water

D. None of these

Answer: A



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82. Cut-pieces of a Bryophyllum leaf, when put into wet soil, produce new plants. This phenomenon is called as

A. Vegetative propagation

B. Tissue culture

C. Leaf primordial culture

D. Meristem culture

Answer: A



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83. Innominate is a

A. Nerve

B. Muscle

C. Animal

D. Part of skeleton

Answer: D



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84. Examples of areas where secondary succession occurs are

A. Abandoned farmlands, newly cooled lava,
bare rock

B. Burned or cut forests, lands that have
been flooded

C. Bare rock, newly created pond or
reservoir

D. Newly created pond, lands that have
been flooded

Answer: B



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85. In negative operon

A. Inducer binds with repressor

B. Co-repressor does not bind with repressor

C. Co-repressor binds with inducer cAMP have negative effect on lac operon

D. cAMP have negative effect on lac operon

Answer: A



86. Choose the correct match w.r.t. the drug, its source, and its action.

A.

Drug	Source	Action
Morphine	Latex of <i>Papaver somniferum</i>	Depress brain activity and is very effective stimulant

B.

Drug	Source	Action
Cocaine	<i>Erythroxylum coca</i>	High levels don't cause hallucinations.

C.

Drug	Source	Action
Heroin	Acetylation of morphine	Used to reduce pain

D.

Drug	Source	Action
Barbiturates	Derivative of opium	Depressed brain activity and produces feelings of calmness, relaxation and drowsiness

Answer: C



87. Which one of the following represents a palindromic sequence in DNA?

A. 5'- GAATTC - 3'

5' - CCAATG - 3'

3' - GAATCC - 5'

B. 5' - CATTAG - 3'

3' - GATAAC - 5'

C. 5' - CATTAG - 3'

3' - GATAAC - 5'

D. 5' - GATACC - 3'

3' - CCTAAG - 5'

Answer: A



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88. Wings of locusts, pigeon, and bat are example of :

A. Vestigial organs

B. Exoskeletal structures

C. Homologous organs

D. Analogous organs

Answer: D



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89. Differentiation of shoot is controlled by

A. High gibberellin: cytokinin ratio

B. High auxin: cytokinin ratio

C. High cytokinin: auxin ratio

D. High gibberellin: auxin ratio

Answer: C



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90. The method of sterilization is

A. Lippes Loop

B. IUD

C. Implants

D. Tubectomy

Answer: D



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91. Which one of the following is not an essential mineral element for plants while the remaining three are?

A. Iron

B. Manganese

C. Cadmiun

D. Phosphorus

Answer: C



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92. In the forest ecosystem, yeasts, molds, and mushrooms are grouped as

A. Producer

B. Consumer

C. Secondary consumer

D. Decomposer

Answer: D



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93. Placentation in Brassicaceae (mustard)

family is

A. Parietal

B. Marginal

C. Axile

D. Basal

Answer: A



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94. In Down syndrome , karyotyping has shown that the disorder is associated with trisomy of chromosome number 21 usually due to:

- A. Non-disjunction during egg-cell formation
- B. Non-disjunction during sperm-cell formation
- C. Non-disjunction during formation of egg-cell or sperm-cells
- D. Addition of extra chromosome during mitosis of the zygote

Answer: C



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95. In flowering plants archesporium gives rise to

- A. Only the wall of the sporangium
- B. Both wall and the sporogenous cells
- C. Wall and the tapetum
- D. Only tapetum and sporogenous cells

Answer: B



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96. Microbes like bacteria and many fungi can be grown on nutritive media to form colonies

A. That can be seen with the naked eyes.

B. That cannot be seen with the naked eyes

C. They are observed only by electron microscope

D. They are very difficult to be viewed

Answer: A



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97. The petioles that are green and synthesise food is observed in

A. Asparagus

B. Euphorbia

C. Australian Acacia

D. Opuntia

Answer: C



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98. Plasmid are used as carried because

- A. It has antibiotic resistance genes
- B. Its both ends are replicating points
- C. It can go between eukaryotic and prokaryotic cells
- D. None of these

Answer: A



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99. The actual 3D structure of tRNA molecule appears are

A. L - shaped

B. E - shaped

C. Y - shaped

D. S - shaped

Answer: A



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100. The outer and inner pleural membrane is in close contact with

- A. Pericardium of heart
- B. Thoracic lining and lung surface
- C. Liver hepatocytes
- D. All of these

Answer: B



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101. A coprophillous fungus belongs to

A. Ascomycetes

B. Phycomycetes

C. Both (a) and (b)

D. None of these

Answer: C



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102. Which one of the following is true during ageing?

- A. The decreased bone mass and increased chances of fractures
- B. Decrease in blood urea and GFR
- C. Decrease in cholesterol content of cornea and lens
- D. Decrease in calcium content of arteries and cartilage

Answer: A



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103. Cell division or mitosis is normal process in a living cell, but sudden and abnormal mitosis in an will frequently result in:

A. Zygote

B. Gastrula

C. New organ

D. Cancer

Answer: D



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104. The controlled aerobic combustion of wastes inside chambers at temperature of $900-1300^{\circ}\text{C}$ is known as

- A. Incineration
- B. Recycling
- C. Pyrolysis
- D. Sanitary dumping

Answer: A



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105. Match the following and select the correct combination.

	Column I		Column II
A.	Red algae	(i)	Marchantia
B.	Liver wort	(ii)	Pinus
C.	Walking fern	(iii)	Polysiphonia
D.	Gymnosperm	(iv)	Adiantum

A. A-(i), B-(ii), C-(iv), D-(iii)

B. A-(ii), B-(iv), C-(iii), D-(i)

C. A-(ii), B-(iii), C-(i), D-(iv)

D. A-(iii), B-(i), C-(iv), D-(ii)

Answer: D



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106. Which part of human brain is concerned with the regulation of body temperature?

A. Cerebellum

B. Cerebrum

C. Hypothalamus

D. Medulla oblongata

Answer: C



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107. "Relationships are visualized as evolutionary trees". This statement is related to

A. Identification

B. Classification

C. Systematics

D. All the three

Answer: C



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108. Sycon belongs to a group of animals which are best described as

A. Unicellular or acellular organisms

B. Multicellular organisms without any tissue organization

C. Multicellular organisms with a gastrovascular system

D. Multicellular organisms having tissue organization, but no body cavity

Answer: B



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109. The female children of a haemophilic man and a carrier woman are likely to be

A. All haemophilic

B. Half haemophilic, half carrier

C. All normal

D. All carrier

Answer: B



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110. There are _____ pairs of ribs. Ribs is a _____ bone connected dorsally to the _____ and ventrally to the _____

A. 22 pairs, thin flat bone, vertebral column

and clavicle.

B. 12 pairs, thin flat bone, clavicle and

diaphragm.

C. 22 pairs, thin circular bone, sternum and

vertebral column.

D. 12 pairs, thin flat bone, vertebral column
and sternum.

Answer: D



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111. Antibiotics are usually not given for an
_____ infection, as they may worsen
the disease process.

A. Escherichia coli

B. Streptococcus

C. Pseudomonas aeruginosa

D. Salmonella typhi

Answer: A



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112. Polyethylene glycol method is used for

A. Gene transfer without a vector

B. Biodiesel production

C. Seedless fruit production

D. Energy production from sewage

Answer: A



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113. The _____ theory attempts to explain to us the origin of the universe.

A. Universal theory

B. Cosmozoic theory

C. Big Bang theory

D. None of these

Answer: C



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114. The spindle fibres are made up of _____ protein.

A. Myoglobin

B. Tubulin

C. Albumin

D. Myosin

Answer: B



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115. Which of the following phylum possess multicellular, organ grade level of organisation?

1. Platyhelminthes

2. Porifera

3. Nematode

4. Protozoa

A. 1,2 and 3 are correct

B. 1 and 2 are correct

C. 2 and 4 are correct

D. 1 and 3 are correct

Answer: D



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116. Choose the incorrect pair

A. Sericulture-rearing silkworms for
obtaining silk

B. Dairy farm management- management
of animals for milk and its products for
human consumption

C. Poultry farm management-
domestication of fowl (birds)

D. Pisciculture-catching, processing, or selling of fish, shellfish, or other aquatic animals.

Answer: C



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117. Difference between systolic and diastolic blood pressure is

A. 120 mm Hg

B. 80 mm Hg

C. 40 mm Hg

D. 200 mm Hg

Answer: C



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118. Which one of the following has maximum genetic diversity in India

A. Mango

B. Rice

C. Tea

D. Teak

Answer: B



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119. The main cause of the population explosion in the World is

A. Excellent job facilities

B. Increase in agricultural production

C. Excellent health care

D. Fewer battles and wars

Answer: C



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120. Assertion : Pollen mother cells (PMCs) are the first male gametophytic cells.

Reason : Each PMC gives rise to two pollens.

A. Both statements are right

B. Both statements are wrong.

C. Statement I is right and statement II is
wrong

D. Statement I is wrong and statement II is
right

Answer: B



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121. The enzyme responsible for oxidative decarboxylation of pyruvate to acetyl Co-A is

A. Hexokinase

B. Succinic dehydrogenase

C. Pyruvate dehydrogenase

D. RUBP carboxylase / oxygenase

Answer: C



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122. Chemiosmotic theory of ATP synthesis in the chloroplasts and mitochondria is based on

- A. Proton gradient
- B. Accumulation of K^+ ions
- C. Accumulation of Na^{2+} ions
- D. Membrane potential

Answer: A



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123. Vascular bundles where the phloem is found to be present on both sides of xylem is said to be:

- A. Radial
- B. Conjoint
- C. Collateral
- D. Bicollateral

Answer: D



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124. Which statement is not true for *Drosophila melanogaster*-

A. They complete their life cycle in about two weeks.

B. Single mating produce a large number of progeny flies.

C. It has few hereditary variations that can be seen with a high power microscope.

D. It has a clear differentiation of the sex.

Answer: C



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125. The changes that occurs in female at the onset of puberty are:

- A. The enlargement of breasts
- B. Beginning of menstrual cycle
- C. Stoppage of growth of long bone and height

D. All the above

Answer: D



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126. Which one of the following conditions correctly describes the manner of determining the sex in the given example?

A. Homozygous sex chromosomes (ZZ)

determine female sex in birds

B. XO type of sex chromosomes determine male sex in grasshopper

C. XO condition in human as found in Turner syndrome, determines female sex

D. Homozygous sex chromosomes (XX) produce male in *Drosophila*

Answer: B



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127. The kind of evolution in which two species of different genealogy come to resemble one another closely, is termed as

- A. Progressive evolution
- B. Convergent evolution
- C. Parallel evolution
- D. Regressive evolution

Answer: B



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128. Mark the correct statement.

A. mRNA is polycistronic in eukaryotes and monocistronic in prokaryotes.

B. mRNA is polycistronic in prokaryotes and monocistronic in eukaryotes.

C. mRNA is polycistronic in both eukaryotes and prokaryotes.

D. mRNA is monocistronic in both eukaryotes and prokaryotes.

Answer: B



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129. LH surge occurs during which phase of menstrual cycle ?

- A. Menstrual phase.
- B. At the beginning of proliferative phase.
- C. Just before the end of the proliferative phase.

D. In the middle of the cycle.

Answer: D



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130. In *Selaginella* male gametes are

- A. Aflagellated
- B. Monoflagellated
- C. Biflagellated
- D. Multiflagellated

Answer: C



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131. Two chief functions of leaves are:

- A. Photosynthesis and respiration
- B. Photosynthesis and transpiration
- C. Transpiration and respiration
- D. Respiration and digestion

Answer: B



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132. The main difference in Gram (+ve) and Gram (-ve) bacteria resides in their:

- A. Cell wall
- B. Cell membrane
- C. Cytoplasm
- D. Flagella

Answer: A



133. Where would you look for active cell division in plants

- A. In the pith cells
- B. In the cells of cortex
- C. In the internodal region
- D. At the tip of root and shoot

Answer: D



134. Which plant hormone is related to hastening the maturity period and germination of seeds?

A. Auxin

B. Gibberellin

C. ABA

D. Ethylene

Answer: B



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135. The sensory organs detect all types of changes in the environment and send appropriate signals to

- A. Peripheral nervous system
- B. Autonomous nervous system
- C. Central nervous system
- D. None of these

Answer: C



136. DNA-dependent RNA polymerase catalyzes transcription on one strand of the DNA which is called the

- A. Template strand
- B. Coding strand
- C. Alpha strand
- D. Antistrand

Answer: A





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137. The process of maturation of reproductive cells of testes in male so as to form the male gamete or sperm is known as:

- A. Spermatogenesis
- B. Gametogenesis
- C. Oogenesis
- D. None of these

Answer: A



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138. Which of the following is correct regarding AIDS causative agent HIV

A. HIV is an enveloped virus containing one molecule of single-stranded RNA and one molecule of reverse transcriptase.

B. HIV is an enveloped virus that contains two identical molecules of single-

stranded RNA and two molecules of reverse transcriptase.

C. HIV is an unenveloped retrovirus.

D. HIV does not escape but attacks the acquired immune response.

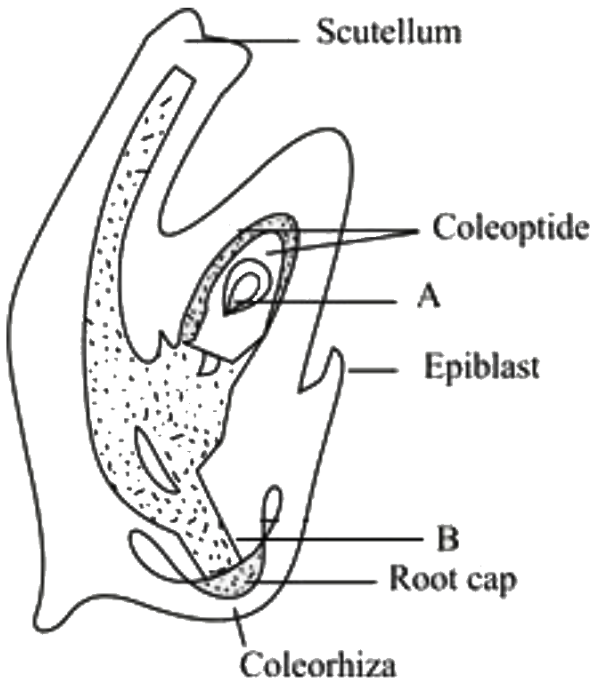
Answer: B



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139. In the L.S. of an embryo of grass, the labels

A and B are:



A. A-Shoot apex, B-Radicle

B. A-Root cap, B-Radicle

C. A-Shoot apex, B-Epiblast

D. None of these

Answer: A



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140. During ecological succession

A. The establishment of a new biotic community is very fast in its primary phase

B. The numbers and types of animals remain constant

C. The changes lead to a community that is in near equilibrium with the environment and is called pioneer community

D. The gradual and predictable change in species composition occurs in a given area

Answer: D



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141. The products resulting from atmospheric reactions of hydrocarbons and nitrogen oxides in the presence of sunlight are called:

- A. Primary pollutants
- B. Secondary pollutants
- C. Tertiary pollutants
- D. Non-pollutants

Answer: B



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142. Read the following statements having two blanks (A) and (B):

"Function of.....(A)..... is to move particles in a specific direction over the epithelium. They are present in the inner surface of hollow organs like.....

(B).....

Select the one option which is correct for both the blanks.

- A. Blank - A Blank - B
Cilia Fallopian tube
- B. Blank A Blank B
Microvilli Epididymis
- C. Blank- A Blank - B
Steriocilia Epididymis
- D. Blank - A Blank - B
Microvilli PCT

Answer: A



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143. It is said that birds have evolved from:

A. Non-chordates

B. Reptiles

C. Amphibians

D. Fishes

Answer: B



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144. Which of the following organisms have a size of only $0.3\mu m$ in length?

A. Mycoplasma

B. Euglenoids

C. Slime moulds

D. All of these

Answer: A



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145. The partial pressure of oxygen in the alveoli of the lungs is

A. Equal to that in the blood

B. More than that in the blood

C. Less than that in the blood

D. Less than that of carbon dioxide

Answer: B



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146. Apomictic embryos in Citrus arise from:

A. Synergids

B. Antipodal cells

C. Diploid egg

D. Maternal sporophytic tissue in ovule

Answer: D



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147. Which of the following statements is false for hormones of the adrenal medulla?

A. They increase alertness

B. Increase strength of heart contraction
and rate of respiration

C. They inhibit the breakdown of lipids and
proteins

D. They stimulate the breakdown of
glycogen and increase glucose level in
blood

Answer: C



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148. Select correct statements from the following:

a. In the majority of the dicotyledonous plants, the direct elongation of the radicle leads to the formation of the primary root.

b. In monocotyledonous plants, the primary root is short-lived and is replaced by a large number of roots. These roots originate from the lowermost node of the stem and constitute the fibrous root system.

c. Adventitious roots are found in *Monstera* and banyan tree.

d. The fibrous root system is found in wheat and mustard plants.

A. a and c only

B. a, b and c only

C. a, c and d only

D. All of the above

Answer: B



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149. The hyphae of *Aspergillus* are

- A. Aseptate and multinucleate
- B. Septate and branched
- C. Aseptate and branched
- D. Septate and uninucleate

Answer: B



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150. Which one of the following is an example of ex-situ conservation?

A. Wildlife sanctuary

B. Seed bank

C. Sacred groves

D. National park

Answer: B



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151. Match the columns and identify the correct option.

	Column I		Column II
A	Thylakoids	(i)	Disc-shaped sacs in Golgi apparatus
B	Cristae	(ii)	Condensed structure of DNA
C	Cisternae	(iii)	Flat membranous sacs in stroma
D	Chromatin	(iv)	Infoldings in mitochondria

A. A-(iii), b-(iv), c-(i), d-(ii)

B. A-(iii), b-(i), c-(iv), d-(ii)

C. A-(iii), b-(iv), c-(ii), d-(i)

D. A-(iv), b-(iii), c-(i), d-(ii)

Answer: A



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152. The membrane sarcolemma is found over

A. Heart

B. Muscle fibre

C. Nerve fibre

D. Both (A) and (B)

Answer: B



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153. In *Drosophila*, the sex is determined by

A. Whether the egg is fertilized or develops parthenogenetically

B. The ratio of the number of X-chromosomes to the sets of autosomes

C. X and Y chromosomes

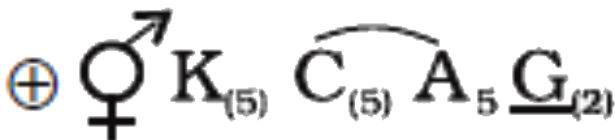
D. The ratio of pairs of X-chromosomes to the pairs of autosomes

Answer: B



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154. The given floral formula can be seen in



A. Soyabean

B. Sunhemp

C. Tobacco

D. Colchicine

Answer: C



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155. Foetal sex can be determined by examining cells from the amniotic fluid by looking for

A. Chiasmata

B. Kinetochore

C. Autosomes.

D. Barr bodies

Answer: D



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156. Which is following is not a steroid hormone?

A. Aldosterone

B. Androgen

C. Estrogen

D. LH

Answer: D



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157. Which of the following is correct about

$Na^+ - K^+$ pump?

A. $3Na^+$ and $2K^+$ are transported

B. $1Na^+$ and $2K^+$ are transported

C. $3Na^+$ and $3K^+$ are transported

D. $2Na^+$ and $3K^+$ are transported

Answer: A



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158. The protons that are produced by the splitting of water accumulates

A. On the outer membrane of thylakoids

B. On the outer membrane of stroma

lamella

C. Within the lumen of thylakoids

D. In the stroma

Answer: C



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159. Kelps and rockweed are examples of

A. Green algae

B. Brown algae

C. Red algae

D. Golden brown algae

Answer: B



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160. *Trichoderma harzianum* is used as a biocontrol agent against various plant

pathogens. To which of the following class of fungi does it belong?

A. Ascomycetes

B. Zygomycetes

C. Deuteromycetes

D. Basidiomycetes

Answer: C



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161. Snow blindness arises due to

A. UV-A

B. UV-B

C. UV-C

D. More than one option is correct E

Answer: B



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162. Toddy is formed by the fermentation of

A. Sap from palms

B. Soyabean

C. Fishes

D. Bamboo shoots

Answer: A



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163. The endoplasmic reticulum is closely associated with the Golgi apparatus. Synthesized proteins from the RER are released from which part of the Golgi apparatus?

- A. Cis face of Golgi apparatus
- B. Cisternae
- C. Trans face of Golgi apparatus
- D. Both (a) and (c)

Answer: C



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164. The concept of transforming principle was first established by _____ using the bacterium _____

A. Hershey and Chase, *Streptococcus pneumoniae*

B. A. Garrod, *Escherichia coli*

C. Fredrick Griffith, *Streptococcus pneumoniae*

D. Oswald Avery, *Klebsiella pneumoniae*

Answer: C



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165. Which one of the following statements is wrong?

A. Water potential is the chemical potential of the water

B. Solute potential is always negative

C. Pressure potential is zero in a flaccid cell

D. Water potential equals solute potential

in a fully turgid cell

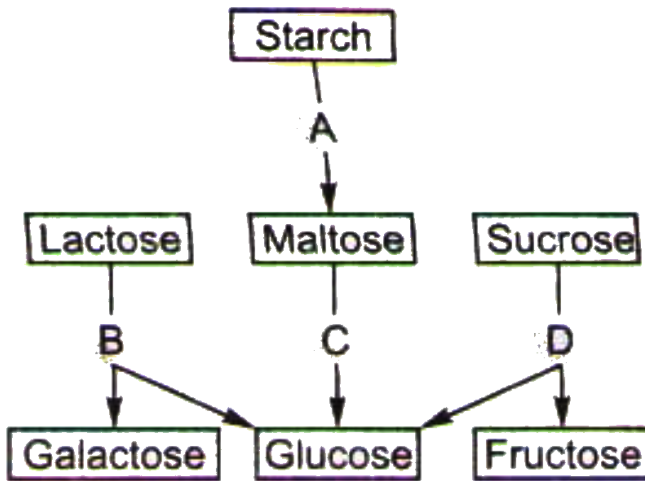
Answer: D



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166. The following is a scheme showing the fate of carbohydrates during digestion in the human alimentary canal. Identify the enzymes acting at stages indicated as A, B, C, and D.

Choose the correct option from those given.



A. A-Amylase, B-Maltase, C- Lactase, D-

Invertase

B. A-Amylase, B- Maltase, C-Invertase, D-

Lactase

C. A-Amylase, B-Invertase, C-Maltase, D-
Lactase

D. A-Amylase, B-Lactase, C- Maltase, D-
Invertase

Answer: D



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167. Mendel did not get linkage phenomena
due to

A. Dominance

B. Independent assortment

C. Segregation

D. Genes on same chromosome

Answer: B



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168. During a procedure, a blood sample is drawn from a patient and kept it in a test tube for analysis of blood corpuscles and plasma.

Which of the following tubes cannot be used for the purpose?

A. Test tube containing calcium bicarbonate

B. Test tube containing EDTA

C. Test tube containing heparin

D. Test tube containing sodium oxalate

Answer: A



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169. Consider the following statements with respect to hydrophily and select the right choice

(i) It is quite rare in flowering plants.

(ii) Pollen grains are protected by mucilaginous covering.

(iii) In some plants, pollens are released inside the water.

(iv) Flowers are very colourful but without nectar.

A. i, ii & iii are correct

B. ii, iii & iv are correct

C. i, ii & iv are correct

D. Only i is correct

Answer: A



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170. Taxonomy without phylogeny is similar to bones without flesh is the statement of

A. Oswald

B. Tippo John Hutchinson

C. Takhtajan

D. Bentham and Hooker

Answer: C



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171. Notochord is

A. Endodermally derived structure, formed

on the dorso ventral side

B. Ectodermally derived structure, formed
on the dorsal side

C. Mesodermally derived structure, formed
on the dorsal side

D. Mesodermally derived structure, formed
on the ventral side

Answer: C



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172. Bulliform cells are found in

A. Grasses Adaxial epidermal cells of dorsiventral leaves

B. Grasses - Abaxial epidermal cells of dorsiventral leaves

C. Grasses - Adaxial epidermal cells of isobilateral leaves

D. Grasses - Abaxial epidermal cells of isobilateral leaves

Answer: C



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173. The hepatitis-B vaccine has been produced on a large scale through

A. Recombinant DNA technology using

Claviceps

B. Recombinant DNA technology using E.

coli

C. Recombinant DNA technology using yeast

D. Recombinant DNA technology using mice

Answer: C



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174. Test-tube baby means a baby born when

A. It is developed in a test tube

B. It develops from a non-fertilized uterus

C. It is developed through tissue culture method

D. The ovum is fertilized externally and there after implanted in the uterus

Answer: D



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175. In the male reproductive system of cockroaches, which of the following structures represents the external genitalia?

- A. Gonopore
- B. Vas deferens
- C. Phallomere
- D. Ejaculatory duct

Answer: C



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176. Fats are broken down into glycerol and fatty acids with a series of chemical reactions occurring in the digestive tract. The fatty acids are then absorbed through the small intestine and enter lacteals. The excess of such fatty acids gets converted into fats and are stored in the adipose tissue present in the subcutaneous layer. Under starvation, the fatty acids are mobilized to be used as energy during cellular respiration. These fatty acids during cellular respiration are first broken down into

A. Pyruvate

B. Succinate

C. Oxaloacetic acid

D. Acetyl Co-A

Answer: D



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177. Production of a Humulin using transgenic

E. coli is possible because:

- A. Bacterial cell can carry out the RNA splicing reactions
- B. The human chromosome can replicate in bacterial cell
- C. The mechanism of gene regulation is identical in humans and bacteria
- D. The genetic code is universal

Answer: D



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178. Which of the following groups of viruses are known to infect the nose and respiratory passage in humans?

- A. Retroviruses
- B. Echoviruses
- C. Rhinoviruses
- D. Oncogenic viruses

Answer: C



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179. Which of the following set of examples is correct with respect to escaping time as a response to abiotic factors?

A. Bacteria, fungi and all plants - Thick spores

B. Bear and fishes – Hibernation

C. Zooplanktons and phytoplanktons-
Diapause

D. Snails and fishes - Aestivation

Answer: D



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180. From a single ear of corn, a farmer planted 200 kernals which produced 140 tall and 40 dwarf plants. The genotype of these offsprings are most likely

- A. TT, Tt and tt
- B. TT and tt only
- C. TT and Tt only

D. Tt and tt only

Answer: A



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181. A: Each cell of the sporogenous tissue is capable of giving rise to a microspore tetrads

R: Most abundant microspore tetrads is the product of simultaneous cytokinesis

A. Pollen grain

B. Microspore

C. Male gametophyte

D. Pollen mother cell

Answer: D



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182. How many of the given statements are incorrect?

A. The ovaries are located on each side of the lower abdomen.

B. Mons pubis a cushion of fatty tissue covered by skin and pubic hair.

C. A primary spermatocyte completes the second meiotic division leading to the formation of two equal, haploid cells called secondary spermatocytes, which have only 23 chromosomes each.

D. The secondary follicles get surrounded by more layers of granulosa cells and a new theca, they are called tertiary follicles.

A. None

B. One

C. Two

D. Three

Answer: C



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183. Intra uterine devices (IUDs) are inserted by doctors or expert nurses in the uterus through vagina. These IUDs are presently available as the non- medicated IUDs (e.g., _____1_____), copper releasing IUDs

(_____ 2 _____) and the hormone releasing IUDs (_____ 3 _____).

A.

1	2	3
Lippes loop	Cu-7, Cu T, Progestasert,	Multiload 375, LNG-20

B.

(2) Lippes loop	Cu-7, Cu T, Multiload 375	Progestasert, LNG-20
-----------------	---------------------------	----------------------

C.

1	2	3
Lippes loop, Multiload 375	Cu-7, Cu T, Progestasert,	LNG-20

D.

1	2	3
Lippes loop, Multiload 375	Cu-7, Cu T,	Progestasert, LNG-20

Answer: B



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184. Choose the incorrect statement:

A. Callus is an unorganised mass of cells

B. Growth of callus culture is faster than suspension culture

C. In callus culture, if high auxin to cytokinin ratio is maintained then roots are formed

D. In callus culture, if high cytokinin to auxin ratio is maintained then shoots

are formed

Answer: B



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185. The feeding of cattle should be carried out in a scientific manner with special emphasis on

- A. Quality of fodder.
- B. Quantity of fodder.

C. Both the quality and quantity of fodder.

D. Neither the quality nor the quantity of fodder.

Answer: C



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186. Which of these is used as vector in gene therapy for SCID

A. Arbovirus

B. Rotavirus

C. Enterovirus

D. Retrovirus

Answer: D



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187. Ecologically, the most important factor that controls the distribution of organism on Earth is

A. Rainfall

B. Temperature

C. Light

D. Humidity

Answer: B



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188. Which pigment/s is/are required for the mechanism of vision?

A. Opsin

B. Retinal

C. Both opsin and retinal

D. None of these

Answer: C



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189. Which of the following is not an invasive alien species in the Indian context?

A. Lantana

B. Parthenium

C. Eichhornia

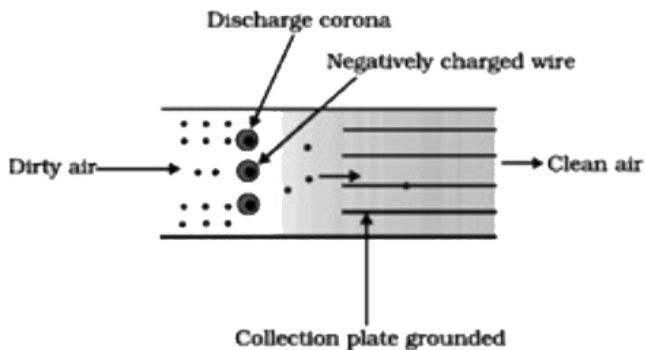
D. All of these

Answer: D



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190. The diagram provided below is used to remove which type of pollution?



A. Particulate matter

B. Gaseous pollution

C. SO_2 pollution

D. Sound pollution

Answer: A



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191. Match the columns

Column-I		Column-II
A. Nitrous oxide	(i)	Secondary pollutant from car exhausts
B. Chlorofluorocarbons	(ii)	Combustion of fossil fuels
C. Methane	(iii)	Denitrification
D. Ozone	(iv)	Refrigerators aerosols sprays
E. Carbon dioxide	(v)	Cattle, rice fields, toilets

A. A = (iii), B = (iv), C = (v), D = (i), E = (ii)

B. A = (v), B = (i), C = (iii), D = (iv), E = (ii)

C. A = (iv), B = (v), C = (i), D = (ii), E = (iii)

D. A = (ii), B = (iii), C = (iv), D = (v), E = (ii)

Answer: A



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192. Which of the following bryophytes provides a product that is commonly used as fuel?

- A. Funaria
- B. Sphagnum
- C. Polytrichum
- D. Marchantia

Answer: B



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193. Parenchyma is usually present in,

- i) Cortex
- ii) Phloem fibre
- iii) Pericycle
- iv) Pith
- v) Hypodermis
- vi) Medullary rays

vii) Xylem fibres

viii) Mesophyll tissue

A. i, iii, iv, vi, viii

B. i, ii, iii, iv, vi

C. i, v, vi, vii

D. i, ii, iv,vi

Answer: A



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194. The cell organelle associated with photorespiration is

A. Mesosome

B. Ribosome

C. Peroxisome

D. Lysosome

Answer: C



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195. A karyotype is used to study

I) Number of chromosomes

II) Position of centromere

III) Position of chromosome

IV) Length of the arms

V) Secondary constriction

A. I, II and III

B. I, II, IV, V

C. All of these

D. I, IV, V

Answer: B



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196. Which of the organisms show mitotic divisions in both haploid and diploid cells?

A. Animals

B. Plants

C. Both of these

D. None of these

Answer: B



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197. cell undergoes mitosis in 30 minutes. Find the number of cells produced after 24 hours if initially 10^5 cells are present.

A. $2^{24} \times 10^5$

B. $2^{48} \times 10^5$

C. $2^{48} + 10^5$

D. $48 \times 10^{5-}$

Answer: B



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198. The osmotic pressure of 1 M solution of sucrose is 22.4 atm. What will be the osmotic potential of 0.1 M sucrose solution?

- A. 22.4 atm
- B. 2.2 atm
- C. – 2.24 bars
- D. 0

Answer: C



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199. How many ATP will be produced during the production of 1 molecule of acetyl CoA from 1 molecule of pyruvic acid ?

A. 3 ATP

B. 5 ATP

C. 8 ATP

D. 38 ATP

Answer: A



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200. Two important intrinsic controls which are important in plant growth and development are

- A. PGRs
- B. Genomic control
- C. Both (a) and (b)
- D. O_2 concentration

Answer: C



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201. Name the vascular connection that exists between the digestive tract and liver.

- A. Venous system
- B. Arterial system
- C. Lymphatic system
- D. Portal system

Answer: D



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202. How much blood is filtered by the kidneys per minute ?

A. 125 mL

B. 500 mL

C. 1100mL

D. 5000mL

Answer: C



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203. Which of the following sphincters guards the opening of the stomach into the duodenum?

- A. Sphincter of Oddi
- B. Pyloric sphincter
- C. Oesophageal sphincter
- D. Ileocaecal sphincter

Answer: B



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204. Incorrect statement about electrical synapse is

A. The neurotransmitter released from the pre-synaptic membrane binds to receptors on the postsynaptic membrane

B. Impulse conduction occurs at faster rate

C. Pre-synaptic and post-synaptic neurons

are very close to each other at synapse

D. No requirement of neurotransmitters

Answer: A



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205. Which of the following correctly describes the functions of FSH in females?

A. It stimulates growth and development of the ovarian follicles.

B. It induces ovulation of fully mature follicles and maintains the corpus luteum.

C. It stimulates the synthesis and secretion of hormones called androgens from testis.

D. It regulates spermatogenesis.

Answer: A



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206. How many of the given statements are true?

1. Pars nervosa stores and releases two hormones called oxytocin and vasopressin.

II. Melatonin influences the menstrual cycle.

III. Calcitonin stimulates reabsorption of Ca^{2+} by the renal tubules.

IV. After ovulation, the ruptured follicle is converted to macula lutea.

A. None

B. One

C. Two

D. Three

Answer: C



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207. The enzyme missing in Phenylketonuria is

A. Phenyl alanine hydroxylase

B. Phenyl alanine reductase

C. Phenyl oxidase

D. Phenyl oxidoreductase

Answer: A



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208. Which of the following biological phenomenon involves a bacteriophage?

A. Transformation

B. Conjugation

C. Translocation

D. Transduction

Answer: D



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209. Blind sac body plan is found in

A. Platyhelminthes and Aschelminthes

B. Molluscs and Echinodermata

C. Porifera and Coelenterata

D. Coelenterata and Platyhelminthes

Answer: D



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210. Which of the following is not a characteristic feature of phylum echinodermata?

- A. Presence of water vascular system and indirect development of larvae
- B. Bilaterally symmetrical and acoelomate
- C. Reproduction is asexual and fertilisation is internal
- D. Presence of water vascular system with a well-developed excretory system

Answer: A



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211. The Montreal Protocol has been introduced to

- A. Check depletion of the ozone layer
- B. Mitigate the climatic change
- C. Check soil erosion
- D. Preserve water resources

Answer: A



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212. In angiosperms, the endoperm is

- A. Short lived
- B. Persistent female gametophyte
- C. Formed before fertilisation
- D. Formed after fertilisation

Answer: D



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213. A large quantity of monoclonal antibodies are produced from

- A. B-Cells
- B. Myeloma cells
- C. Hybridoma cells
- D. T-Lymphocytes

Answer: C



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214. Gel electrophoresis is used for

A. Cutting of DNA into fragments

B. Separation of DNA fragments according to their size

C. Separation of r DNA only

D. Isolation of DNA from cell

Answer: B



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215. Common pathways of aerobic and anaerobic respiration is

A. Electron transport system

B. Krebs's

C. Glycolysis

D. Glycogenolysis

Answer: C



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216. Select the mismatch among the following.

A. Chondrichthyes -Placoid scales

B. Columba – Diaphragm

C. Balanoglossus - Proboscis glands

D. Limulus- Chitinous cuticle

Answer: B



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217. The genus of chiton (a mollusc) is

A. Chaetopleura

B. Dentalium

C. Aplysia

D. Architeuthis

Answer: A



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218. The mucosa of the stomach is lined with

A. Non-glandular simple cuboidal
epithelium

B. Glandular simple cuboidal epithelium

C. Non-glandular simple columnar
epithelium

D. Glandular simple columnar epithelium

Answer: D



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219. In rotifers, syngamy is absent. Which mode of reproduction is observed in this organism instead?

A. Parthenogenesis

B. Apomixis

C. Polyembryony

D. Apospory

Answer: A



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220. In which of the following locations are sacred groves found?

A. Khasi and Jaintia Hills in Meghalaya

B. Aravalli Hills of Rajasthan

C. Sarguja, Chanda and Bastar areas of
Madhya Pradesh

D. All of the above

Answer: D



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221. Which set of evolutionary stages of human were discovered before ape-man?

- A. Dryopithecus, Ramapithecus
- B. Java man, Australopithecus
- C. Australopithecus, Handy man
- D. Kenyapithecus, Heidelberg man

Answer: A



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222. Phloem sap is mainly composed of

- A. Water & sucrose
- B. Water and minerals
- C. Sucrose and minerals
- D. Minerals and hormones

Answer: A



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223. Which of the following muscles are known to be involuntary, branched and striated?

- A. Skeletal muscle
- B. Smooth muscle
- C. Cardiac muscle
- D. Both (a) and (c)

Answer: C



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224. Which of the following is a substitution of mitochondria in *E. coli*?

- A. Ribosome
- B. Mesosome
- C. Glyoxysome
- D. Golgi body.

Answer: B



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225. Which of the following amino acids is coded by only single codon?

A. Tyrosine

B. Phenylalanine

C. Tryptophan

D. Isoleucine

Answer: C



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226. Destruction of chlorophyll, premature falling of leaves and yellowing of leaf is caused due to the excess amounts of _____ in the atmosphere.

A. CO_2

B. SO_2

C. CO

D. Fly ash

Answer: B



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227. What is correct about the anal cerci in a cockroach?

- A. Emerge out from the 10th segment in both the sexes.
- B. Found in male cockroaches only.
- C. These are short thread like structures
- D. These are used for the purpose of reproduction.

Answer: A



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228. Which of the following structures is composed of cuboidal epithelium and contains microvilli?

A. Glomerulus

B. Ducts of glands

C. Proximal convoluted tubule of nephron

D. Distal convoluted tubule of nephron

Answer: C



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229. Which substance is incorrectly matched with its mode of absorption in the gut?

A. Na^+ - Active absorption

B. Most of the glucose- Active absorption

C. Cl^- - Simple diffusion

D. Most of the amino acids -Facilitated transport

Answer: D



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230. Which of the following is correct for mRNA synthesized in leucocytes?

A. Exons and introns do not appear in the mature RNA.

B. Exons appear but introns do not appear in the mature RNA.

C. Introns appear but exons do not appear
in the mature RNA.

D. mRNA is not synthesized in leucocytes.

Answer: B



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231. In the larynx, which of the following is a thin elastic cartilaginous flap?

A. Thyroid

B. Soundbox

C. Glottis

D. Epiglottis

Answer: D



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232. Spinal cord passes through

A. Neural canal

B. Diocoel

C. Central canal

D. Ventricular system

Answer: A



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233. Which of the following disorders show a karyotype of 47 chromosomes (XXY)?

A. Turner's Syndrome

B. Down's Syndrome

C. Trisomy 21

D. Klinefelter's Syndrome

Answer: D



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234. In sickle cell anaemia glutamic acid is replaced by valine Which one of the following triplets codes for valine ?

A. GGG

B. GAG

C. GAA

D. GUG

Answer: D



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235. Distance between the genes and percentage of recombination shows

A. A direct relationship

B. An inverse relationship

C. A parallel relationship

D. No relationship

Answer: A



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236. In the human brain, the cerebral aqueduct passes through:

A. Corpus callosum

B. Cerebral hemispheres

C. Midbrain

D. Spinal cord

Answer: C



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237. Protochordates are

A. Salpa, Doliolum, Branchiostoma

B. Ascidia, Lancelet, Hag fish

C. Doliolum, Balanoglossus, Saccoglossus

D. Aplysia, Salpa, Amphioxus

Answer: A



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238. Racemose inflorescence is observed in the family:

A. Oleaceae

B. Liliaceae

C. Solanaceae

D. Fabaceae

Answer: D



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239. The stem with bicollateral vascular bundles and flowers with synandrous condition is found in

A. Compositae

B. Solanaceae

C. Cucurbitaceae

D. Asclepiadaceae

Answer: C



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240. Which organ is responsible for the secretion of the erythropoietin hormone?

A. Heart

B. Kidney

C. Spleen

D. Anterior pituitary

Answer: B



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241. Which of the following is incorrect about spermatogenesis?

- A. Meiosis-I leads to the formation of secondary spermatocytes
- B. Meiosis-II leads to the formation of spermatids
- C. Production of one sperm and 3 polar bodies
- D. Primary spermatocytes are diploid in nature

Answer: C



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242. Which taxonomical aid provides protection and identification of animals in artificial habitat?

A. Museum

B. Herbarium

C. Zoological park

D. Botanical garden

Answer: C



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243. Bacteria that are saprotrophs but can be a parasite and cause disease upon introduction to host body are called as

- A. Obligate saprotroph
- B. Obligate parasite
- C. Facultative parasite
- D. Facultative saprotroph

Answer: C



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244. Which of the following changes does not occur during conversions of secondary follicle into tertiary follicle?

- A. Development of antrum.
- B. Differentiation of theca layers.
- C. Primary oocyte completes meiosis-I.
- D. Second polar body is released.

Answer: D



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245. Oogamous type of sexual reproduction is found in

A. Chlamydomonas

B. Volvox

C. Spirogyra

D. Both (A) and (B)

Answer: B



246. In which of the following plants, both pollen grains and seeds have a wing- shaped structure ?

A. Cycas

B. Selaginella

C. Azolla

D. Pinus

Answer: D



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247. In chloroplast, the site for initial photochemical reaction is

- A. Intermembrane space
- B. Inner member are of chloroplast
- C. Thyllakoid membrane
- D. Stroma

Answer: C



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248. In which of the following enzyme non-protein part is haeme?

A. Carbonic anhydrase

B. Peroxidase

C. Catalase

D. Both (B) and (C)

Answer: D



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249. S.L. Miller gave the experimental proof of the theory of chemical evolution. Which chemical substances were obtained by him during the experiment?

A. RNA

B. DNA

C. Amino acids

D. Complex proteins

Answer: C



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250. Tubulin protein is synthesized in which phase of cell cycle?

- A. Prophase
- B. Metaphase
- C. Interphase
- D. Telophase

Answer: C



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251. Which of the following is not common between facilitated transport and active transport?

A. Uphill transport

B. Highly selective

C. Transport saturates

D. Requirement of special membrane proteins

Answer: A



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252. All the following statements are correct about homologous organs, except

A. Homologous organs share common origin

B. Homologous organs perform same functions

C. Homologous organs show divergent evolution

D. Members having homologous organs share common ancestors.

Answer: B



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253. The product of light reaction in green algae is

A. ATP, NADPH + H^+

B. NAD^+

C. NADP

D. ATP and NADH

Answer: A



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254. Identity the disease which is characterized by the following symptoms:

A. Alveoli filled with fluid

B. Fever chills headache

C. Coughing

A. Pneumonia

B. Diphtheria

C. Small pox

D. Hepatitis

Answer: A



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255. Primary acceptor of TCA cycle is

A. Oxaloacetate

B. Acetyl CoA

C. Citric acid

D. Pyruvic acid

Answer: A



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256. Which of the following shows plasticity?

A. Cotton

B. Silk cotton

C. Neem

D. More than one option is correct

Answer: A



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257. Which of the following is not true about the stomach in humans?

A. Oesophagus opens in cardiac part of stomach.

B. Pepsin is the proteolytic enzyme of stomach.

C. Rennin is the proteolytic enzyme in gastric juice of infants.

D. The secretion of gastric glands does not have lipases

Answer: D



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258. Which of the following organism is not correctly matched with its respiratory organs?

Column I (Organisms)	Column II (Respiratory organs)
(a) Earthworms	Moist cuticle
(b) Aquatic molluscs	Gills
(c) Frogs	Pulmonary and cutaneous respiration
(d) Flatworms	Gills

A. (a)

B. (b)

C. (c)

D. (d)

Answer: D



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259. From the given list how many are not associated with asexual reproduction?

Sugarcane, ginger, maize, barley, tobacco, pea, sunflower, potato, Bryophyllum

A. Three

B. Two

C. Five

D. Four

Answer: C



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260. Amoebiasis' (amoebic dysentery) is caused by

- A. *Entamoeba coli*
- B. *E. coli*
- C. *Entamoeba histolytica*
- D. *Entamoeba dispar*

Answer: C



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261. Minerals required for germination of pollen grain on stigma are

A. Ca, B

B. N, P

C. Mg, S

D. Fe, Ca

Answer: A



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262. Grasshopper is an example of

- A. XY type of sex-determination
- B. XO type of sex-determination
- C. Environmental sex determination
- D. Genie Sex balance theory

Answer: B



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263. *Monascus purpureus* is a yeast used commercially in the production of:-

- A. Citric acid
- B. Streptokinase
- C. Statins
- D. Cyclosporin

Answer: C



264. Amphetamines and caffeine are respectively

- A. Amphetamines Caffeine
Stimulant Depressant
- B. Amphetamines Caffeine
Depressant Depressant
- C. Amphetamines Caffeine
Depressant Stimulant
- D. Amphetamines Caffeine
Stimulant Stimulant

Answer: D



265. Which of the following is not haploid?

A. Primary spermatocyte

B. Spermatogonia

C. Ootid

D. Both (a) and (b)

Answer: D



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266. Select the correct statement.

A. Population of India has crossed 1 billion in May 2000.

B. Cervical caps and vaults both are barrier methods of contraception.

C. 'Saheli' is once a month pill.

D. Government of India has legalized MTP act in 1981

Answer: B



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267. Mark the correct pair.

- A. Migration - Polar bear
- B. Diapause - Zooplanktons
- C. Diapause - Desert lizards
- D. Suspend- Locust

Answer: B



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268. The Abingdon tortoise became extinct on Galapagos island within a decade of the introduction of goats. This is an example of

- A. Resource Partitioning
- B. Competitive release
- C. Competitive inclusion
- D. Interference competition

Answer: D



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269. The radula is found in _____ and helps in _____

- A. Mollusca, feeding.
- B. Mollusca, respiration
- C. Echinodermata, excretion
- D. Echinodermata, circulation

Answer: A



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270. The ability of an environment to support a population is called its

- A. Biotic Potential
- B. Purifying capacity
- C. Carrying Capacity
- D. Environmental Resistance

Answer: C



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