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QUESTION - BANK

GRADE - XI

Subject - BIOLOGY.

UNIT - I - Diversity in Living World

Q1 Define the term species.

Q2. What is meant by metabolism.

Q3. Why are living organism classified?

Q4. What do you mean by binomial nomenclature?

Q5. Enumerate the distinctive characteristics that define living being.

Q6. What are Botanical gardens?

Q7 What are zoological parks? What is the scientific purpose of them?

Q8. What are the keys as a taxonomic aid? Name the two basic types of keys.

Q9 What are archaebacteria? Give examples.

Q10. Mention one feature each in which slime moulds resemble (i) plants (ii) fungi respectively.

Q11. Name the constituents that forms fungal cell wall.

Q12. What is dikaryon?

Q13. What is the method of sexual reproduction in Basidiomycetes?

Q14. What is meant by holozoic nutrition?

Q15. How diatomaceous earth is formed?

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Q16. What is the function of heterocyst in cyanobacteria?
Q17. Write two drawback of of 2 kingdom classification.
Q18. Write the merits of 5 kingdom classification.
Q19. Name two symbiotic bacteria and mention where each of them are found.
Q20 Differentiate between cocci and bacilli type of bacteria.
Q21 Write characteristic features of Euglenoids.
Q22. Differentiate between (i) zoospore and aplanospore
(ii) zoospore and zygospore of fungi
Q23. What do the terms phycobiont and mycobiont signify?
Q24. Mention the criteria used for classifying kingdom Fungi into classes.
Q25 What do you mean by coenocytic mycelium?
Q26 Differentiate between gram-positive and gram negative bacteria.
Q27 Describe the three common steps in sexual reproduction of fungi.
Q28 What are these (i) Lichen (ii) Mycorrhizae
Q29. Describe the structure of a bacteriophage.
Q30. Describe briefly four major groups of Protozoa.
Q31 Differentiate between Vibrio and Spirillum types of bacteria.
Q31 What are phycocolloids?
Q32. What is the basis of classification of algae?
Q33. Differentiate between green algae and red algae.
Q34. Name the amphibians of plant kingdom

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why are they called so?

Q35 Differentiate between liverworts and mosses.

Q36. What are tracheophytes? Name two groups of plant kingdom belonging to this type.

Q37. Differentiate between gametophyte of bryophyte and that of pteridophyte.

Q38 Both gymnosperm and angiosperm bear seeds. but why are they classified separately?

Q39. Why is the endosperm of angiosperm triploid?

Q40. Differentiate between haplontic and diplontic life cycle.

Q41. Differentiate between cryptogams and phanerogams Name two divisions of plants under them.

Q42 Enumerate the adoptations present in the leaves of gymnosperms to check excess loss of water.

Q43 What is alternation of generation? How it is present in moss?

Q44 What is the skeleton of porifers made up of?

Q45 Why do cartilagenous fish have to swim constantly?

Q46. Distinguish between intracellular and extracellular digestion.

Q47. What are diploblastic animals? How they are different from triploblastic animals?

Q48. How coelomates are different from pseudocoelomates?

Q49. Differentiate between polyp and medusae.

Q50 Bring out the differences between Aschelminthes and Annelida.

Q51 Bring out the differences between chordates and non chordates.

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Q52. All Vertebrates are chordates but all chordates are not Vertebrates? justify this statement.

Q53. Differentiate between Amphibia and Reptilia.

Q54. Mention the two functions of cnidoblast.

Q55 Mention the salient features of Phylum Echinodermata.

Q56 What do you mean by these terms - (i) Oviparey (ii) Viviparey.

Q57 How Bat is mammal but not a bird?

Q58. Write the salient features of phylum Mollusca.

Q59 What are the features present in protochordates?

Q60 What is metameric segmentation?

UNIT - II. Structural organisation in plants and Animals

Q61 Mention the function of (i) underground stem of ginger (ii) Axillary bud of citrus.

Q62 What are the functions of (i) Taproot of radish (ii) axillary bud of cucumber.

Q63 Define inflorescence.

Q64. How phylloclade is different from cladode?

Q65. What are stilt roots? How are they different from prop roots?

Q66 Differentiate between adventitious roots and fibrous roots.

Q67 Which part of the plant is modified into -
(i) pitcher in pitcher plant
(ii) tendrils in pumpkin.
(iii). tendrils in pea.

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Q68. How is marginal placentation different from parietal placentation?

Q69. From which region of the root, root hairs arise? What is their function?

Q69. What is common between the fruits of mango and coconut? Explain.

Q70 Describe the different parts of leaf of a dicot plant.

Q71 Describe the different regions of a root.

Q72 Differentiate between hypogynous and epigynous flower with an example of each

Q73 Describe the structure of a maize grain seed.

Q74. How pinnately compound leaf are different from palmately compound leaf? Give example of each kind.

Q75 What is a flower? Describe the parts in a typical angiospermic flower.

Q76 Draw the floral diagram of Solanaceae and write its floral formula. How are the whorls of calyx and corolla of this different from those of fabaceae.

Q77 Write the differences between a dicot seed and a maize grain.

Q78 What are the structural and functional differences between parenchyma and collenchyma.

Q79. What is Casparian strip? What function does it perform?

Q80 Distinguish between heart wood and sap wood.

Q81 What is a meristem. Name the three kinds of meristem.

Q82 What is phellogen? What does it produce?

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Q83. How is cambeal ring formed in dicot root?
Q84. Differentiate between autumn wood and spring wood.
Q85. What are closed, conjoint and collateral vascular bundles?
Q86. How monocot stem is different from dicot stem?
Q87 How ligaments are different from tendon?
Q88. Name the specific tissue that lines bonechisles. State any one advantage of this tissue being present there.
Q89. How striated muscles are different from ~~smooth~~ smooth muscles?
Q90 Describe the reproductive organs of male cockroach.
Q91 Describe the digestive system in cockroach.
Q92. How male cockroach is different from female cockroach morphologically?
Q93. What are the following and where do they ~~found~~ found in a animal body?
(a) chondrocytes (b) Axons (c) ciliated epithelium.
Q94. Describe the three types of junctions present in the epithelium and other tissues.

UNIT- III Cell the unit of life

Q94. Multicellular organism show division of labour. Explain.
Q95. Mention the two junctions of glycocalyx.
Q96. What are polysomes? What their function?
Q97. ~~Where~~ Where is the middle lamella present? and what is it made up of?

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Q98. Differentiate between cilia and flagella.

Q99. Write the function of vacuole in a plant cell.

Q100 what are plasmodesmata? Write their function.

Q101 what types of enzymes do lysosomes contain? what is there function.

Q102 Explain the structure of mitochondria.

Q102. Describe the structure of plastids.

Q103 Name the two types of Endoplasmic reticulum and differentiate between them.

Q104 what are the different types of plastids. what do they are their functions?

Q105 Both lysosomes and vacuoles are endomembrane structures, yet they differ in their functions. Comment.

Q106. Describe the structure of centriole.

Q107 Define metabolism.

Q108. Explain the composition of triglyceride.

Q109. Explain the structure of DNA. How it is different from RNA?

Q110 what are fatty acids? Give two examples.

Q111 Describe premary and secondary structure of proteins.

Q112 How inorganic catalyst are bi different from enzymes?

Q113. Describe key - lock mechanism of enzyme action.

Q114 How phospholipids are arranged in a plasma membrane? Explain.

Q115. what are co-factors for enzymes? Name any two types of co-factors.

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Q116. Illustrate a glycosidic, a peptide and a phosphodiester bond.

Q117 How temperature affects the enzyme action?

Q118 Describe competitive inhibition with an example.

Q119 Differentiate between saturated and unsaturated fatty acids. Give one example for each.

Q120 How are amino acids classified on the basis of number of carboxyl and amino groups in them.

Q121 Bring out the differences between primary and secondary metabolites. Give example also.

Q122. Name the two major stages in M phase of cell cycles. Differentiate between them.

Q123 What are kinetochores? Write their function.

Q124. What is the significance of Meiosis?

Q125 How does cytokinesis in plant cells differ from that in animal cells?

Q126 Name the different sub stages of Prophase I of Meiosis and describe them.

Q127. Define the following -
(i) Synapsis (ii) Bivalent

Q128. Why meiosis division is called reductional division?

Q129. Describe different stages of Mitosis.

Q130 What is the significance of Mitosis.

UNIT IV - Plant physiology.

Q131. Differentiate between diffusion and facilitated diffusion.

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Q132 Name four elements that are easily mobilised in a plant.

Q133 What is meant by source and sink in plants with regard to translocation?

Q134 Name four factors that affects the rate of transpiration.

Q135 How are mineral ions actively absorbed into the root and xylem for further transport.

Q136 How do apoplast and symplast pathways differ in a plant.

Q137 Explain the cohesion theory of ascent of water in tall trees.

Q138 Explain mass flow hypothesis of translocation of sugars in a plant.

Q139 Briefly describe water potential. Name the factors affecting it.

Q140 Explain Nitrogen cycle in Nature.

Q141 Mention any four common symptoms of mineral deficiencies in plants.

Q142 Differentiate between Macronutrients and Micronutrients.

Q143 What are the steps involved in formation of root nodule? explain.

Q144 Write the role of the following mineral nutrients. Iron, Calcium, Sulphur, Manganese, Potassium, Chloride, Phosphorous.

Q145 Name any 4 deficiency symptoms in plants. Correlate them with concerned mineral deficiency.

Q146 What will happen to the activities of nitrogenase enzyme, in the absence of leghaemoglobin in

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root nodules.

Q147 Give two reasons as to why photosynthesis is important for sustaining life on earth.

Q148. Photorespiration poses a threat to plants. yet it occurs in angiosperms. Why?

Q149 Differentiate between grand and stroma of chloroplast.

Q150. Give a common comparison between the anatomy of of leaf in C3 and C4 plants.

Q151 Differentiate between PS I and PS II

Q152 Expand RuBP. What is role in photosynthesis.

Q153. What is the law of limiting factor.

Q154 When and how does RuBisCo act as an oxygenase.

Q155. Describe cyclic photophosphorylation. How it is different from non cyclic one.

Q156. Explain Calvin cycle.

Q157 What is fermentation. Name any two compounds produced in this process.

Q158 What is glycolysis. What are the main steps of it. What is the end product of it.

Q159 What is the importance of Fo-F1 particles in ATP production during aerobic respiration.

Q160 What is oxidative decarboxylation? What happens to pyruvate immediately after this reaction? Name the enzyme involved in this reaction.

Q161 Describe Krebs cycle. How many ATP are formed in aerobic respiration.

Q162 How do fats and protein enter in respiratory pathway?

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Q163 How aerobic respiration is different from anaerobic respiration?

Q164 Explain E.T.S. (Electron Transport System)

Q165 What are the parameters to measure growth.

Q166 What is apical dominance. Name the hormones that controls it.

Q167 What is meant by abscission? Name the phytohormone involved in it.

Q168 How long day plants are different from short day plant?

Q168 Write full form of NAA, ABA, 2-4-D, IAA. Write their uses also.

Q169 What is photoperiodism? Explain the categories of plants on the basis of it.

Q170 Give two examples of the cells in a plant, that have undergone

(i) Dedifferentiation (ii) Redifferentiation.

Q171 What is vernalisation? Discuss its significance in plants.

Q172 Give two protein digestive enzymes in pancreatic juice and gastric juice. How do they function?

Q173 How does intestinal juice contribute to the digestion of proteins? What provides

Q174 Bile does not contain any enzyme but it plays an important role in digestion.

Q175 Write is the role of gastrin and CCK in digestive mechanism.

Q176 Explain how CO_2 is transported by blood in human body by various ways.

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Q177. Describe step by step what happens in the different phases of cardiac cycle in humans.
Name the two heart sounds and how are they produced.

Q178 What is lymph ? How is it formed ? Describe its major functions.

Q179 How do kidneys contribute to osmoregulation ?

Q180 Describe the structure and working of renal corpuscle.

Q181 Explain the mechanism of muscle contraction by sliding filament theory.

Q182 Describe in detail the structure of Sarcomere.

Q183 Describe the various kinds of skeletal joints in human body.

Q184 Taking one example, describe the functioning of the various components of a spinal reflex arc.

Q185 Explain the mechanism through which a sound produces a nerve impulse in the internal ear.

Q186 Write a short note on fore brain.

Q187 List the hormones secreted by adenohypophyses. Mention the action of each hormone and its target organ.

Q188 Name the hormone that regulates each of the following and mention the source of ah
(i) Uterine contractions (ii) Ovulation
(iii) Rise in blood sugar (iv) Fall of calcium ion level in blood (v) Milk secretion.

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