**SOCIAL BALUNI PUBLIC SCHOOL**

**CLASS XI**

**BIOLOGY THEORY**

**PA2-EXAMINATION 2021-22**

**General Instructions**

1. The question paper comprises three sections A, B and C. There are 40 questions in the question paper. All questions are compulsory.
2. Section-A- Q.no.1 to 22 are multiple choice questions (MCQs) of one mark each.
3. Section-B- Q.no. 23 to 30 are assertion- reason type questions of one mark each.
4. Section-C- Q.no. 31 to 40 are case study-based questions of one mark each.
5. There is no overall choice.

**Time: 90 Min M.M 40**

**SECTION A**

1. Which of the following organism can be found in extreme saline condition?
2. Eubacteria
3. Archaebacteria
4. Cyanobacteria
5. Mycobacteria
6. Which of the following statement is false about the fungi?
7. They are eukaryotes
8. They are heterotrophs
9. They possess a purely cellulose cell wall
10. None of the above
11. Which of the plants groups need both land and water to complete their lifecycle?
12. Tracheophyta
13. Pteridophyta
14. Thallophyta
15. Bryophyta
16. Which of the following shows maximum diversity?
17. Plants
18. Animals
19. Monera
20. Protistans
21. Species found in different geographical location are called
22. Sympatric species
23. Allopatric species
24. Sibling species
25. Morpho species
26. Fusion of two motile gametes which are dissimilar in size is termed as
27. Oogamy
28. Isogamy
29. Anisogamy
30. Zoogamy
31. Hold fast, stipe and frond constitute the plant body in case of
32. Rhodophyceae
33. Chlorophyceae
34. Phaeophyceae
35. All of the above
36. The embryo sac of an angiosperm is made up of
37. 8 cells
38. 7 cells & 8 nuclei
39. 8 nuclei
40. 7 cells 7 nuclei
41. The giant red wood tree (Sequoia Sempervirens) is a/an
42. Angiosperm
43. Free fern
44. Pteridophyte
45. Gymnosperm
46. In some animal groups, the body is found divided into compartments with serial repetition of at least some organs. This characteristic feature is named
47. Segmentation
48. Metagenesis
49. Metamerism
50. Metamorphosis
51. Birds and mammals share one of the following characteristics as a common feature
52. Pigment Skin
53. Pneumatic bones
54. Viviparity
55. Warm blooded
56. Given below are types of cells present in some animals. Which of the following cells can differentiate to perform different functions?
57. Choanocytes
58. Interstitial cells
59. Gastrodermal cells
60. Nematocytes
61. Which type of symmetry occurs in sea anemone?
62. Bilateral
63. Radial
64. Asymmetry
65. None of these
66. Which one of the following phylum is characterized by absence of true coelom?
67. Annelida
68. Mollusca
69. Echinodermata
70. Nematoda
71. Osteichthyes belongs to
72. Class amphibia
73. Super class Pisces
74. Super class Tetrapoda
75. Division agnatha
76. Which of the following used to grow microbes?
77. Laminaria
78. Gelidium
79. Chlorella
80. Sargassum
81. Ribbon shaped chloroplast occurs in
82. Ulothrix
83. Spirogyra
84. Chlamydomonas
85. Riccia
86. Choose the wrong statement
87. Neurospora is used in the study of biochemical genetics.
88. Morels and truffles are poisonous mushrooms
89. yeast is unicellular and useful in fermentation
90. penicillium is multicellular and produces antibiotics
91. Which of the following structures are not found in a prokaryotic cell?
92. Ribosomes
93. Mesosomes
94. Plasma membrane
95. Nuclear envelope
96. Specialized cells for fixing atmospheric nitrogen in Nostoc are
97. Akinetes
98. Heterocyst’s
99. Hormogonia
100. Nodules
101. Antheridia and Archegonia are sex organs of
102. Moss
103. Mucor
104. Spirogyra
105. Puccinia
106. In a monoecious plant
107. Male and female sex organs are on the same individual
108. Male and female gametes are of two morphologically distinct type
109. Male and female sex organs are on different individuals
110. All the stamens are fused to form one unit

**SECTION B**

**Direction** (Q. Nos. 23-30) For given questions two statements are given, one labeled Assertion (A) and the other labeled Reason (R). Select the correct answer to these questions from the codes a), b), c) and d) as given below.

1. If both Assertion and Reason are true and Reason is the correct explanation of Assertion.
2. If both Assertion and Reason are true but Reason is not the correct explanation of Assertion.
3. If Assertion is true but Reason is false.
4. If both Assertion and Reason are false.
5. Assertion: Euglena is called as plant animal.

Reason: Pellicle of Euglena is made up of cellulose and not protein.  **(c)**

1. Assertion: “Fungi imperfecti” does not show alternation of generation.

Reason: The diploid phase is present in only zygote. **(c)**

1. Assertion: Cnidoblasts are present on the tentacles and the body in cnidarians.

Reason: Cnidoblasts are used for anchorage, defense and capture of the prey. **(a)**

1. Assertion: Sponges belong to Porifera.

Reason: Sponges have canal system.  **(b)**

1. Assertion: In lichens, mycobiont and phycobiont are symbiotically associated in algae which is predominant and fungi is a subordinate partner.

Reason: In this symbiotic association, the fungus provides food while the alga protects fungus from unfavourable conditions.   **(d)**

1. Assertion: Animals that have an exoskeleton, lacks an endoskeleton.

Reason: Skeleton cells in the embryonic stage migrate to either stage and produce exoskeleton or endoskeleton but never both.  **(d)**

1. Assertion: Bacteria are classified among plants.

Reason: They have cell walls. **(a)**

1. Assertion: Chlorella could be utilized to keep the air in space vehicles. Reason: The space travelers feed on Chlorella soup. **(b)**

**SECTION C**

**Case Study 1**

Uttrakhand is a particular state of India which covers the all three regions of Himalayas. Upper, middle and lower all three of them and hence has a wide variety of vegetation. A lot of its region is covered with dense forests of gymnosperms. When we study plant kingdom, gymnosperm specially has a very different place in it, covering huge species of plants in it which we even have domesticated for our ornamentation too. Gymnosperm is peculiar in its own nature have different ecological habitat, seed morphology and the nature of the family itself gather a huge curiosity in scientific world. Poonam Tripathi, Lalit Tewari and Ashish Tewari signified it as a most ancient seed plant of plant kingdom in there book “Gymnosperms of Nainital”.

1. In gymnosperm, the ovules typically are
2. Bitegmic and anatropous
3. Bitegmic and orthotropous
4. Unitegmic and orthotropous
5. Unitegmic and anatropous
6. A gymnospermic plant
7. Bear flower
8. exhibit no vascular tissue
9. Produce seeds in cones
10. Does not produce seeds in cones
11. The megasporium is also known as
12. Ovule
13. Nucellus
14. Fruit
15. Micropyle
16. Flowers and cones are similar because
17. Both assist seed dispersal
18. Both are responsible for attracting insects to pollinate
19. Both are shiny and bright
20. Both are reproductive structure
21. An auto trophic, prokaryotic and nitrogen fixing symbiont is present in
22. Cicer
23. Cycas
24. Sequoia
25. Pinus

**Case Study 2**

A fine morning Ravi and Rajesh were canoeing on lake in middle Himalaya’s region. The side of lake was covered with green mushy things, different variety of birds were present on the lake, migratory birds come in the summer season to lay their eggs there as lot of food in the form of fish is available there. A herd of horse was running at a distance. Though moving through the lake was exhausting them the experience was wonderful as a wide range was biodiversity was present.

**36.** Which of the following characteristic features always holds true for the corresponding group of animals?

|  |  |  |
| --- | --- | --- |
| **a.** | Viviparous | Mammalia |
| **b.** | Possess a mouth with upper and lower jaw | Chordata |
| **c.** | 3-chambered heart with one incomplete divided ventricle | Reptilia |
| **d.** | Cartilaginous – endoskeleton | Chondrichthyes |

1. Choose the correct statements.
2. All mammals are viviparous
3. All cyclostomes do not possess jaws and paired fins
4. All reptiles have a three-chambered heart
5. All Pisces have gills covered by an operculum
6. Which one of the following characteristics is not shared by birds and mammals?
7. Breathing using lungs
8. Viviparity
9. Warm blooded nature
10. Ossified endoskeleton
11. Select the taxon mentioned that represents both marine and freshwater species
12. Echinoderms
13. Ctenophora
14. Cephalochordata
15. Cnidaria
16. Which one of the following living organisms was present in waters of lake?
17. Cyanobacteria
18. Sea-fan (*Gorgonia*)
19. *Saccharomyces*
20. Blue-green algae