



INDIAN SCHOOL AL WADI AL KABIR
ASSESSMENT I (2022-2023)
MARKING SCHEME
BIOLOGY (044)

CLASS: XI
DATE: 22.09.2022

Max. Marks: 70
Time: 3 Hours

| SECTION A | | |
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| Sl. No. | | MARKS |
| 1 | (a) Sporophyll | 1 |
| 2 | (b) Cymose | 1 |
| 3 | (a) Heterocyst | 1 |
| 4 | (c) Euglenoids | 1 |
| 5 | (a) Parenchyma | 1 |
| 6 | (c) Epiblema | 1 |
| 7 | (c) Fungi | 1 |
| 8 | (a) Petals attached to perianth | 1 |
| 9 | (b) Both assertion and reason are true, but reason is not the correct explanation of assertion. | 1 |
| 10 | (c) Assertion is true but reason is false. | 1 |
| SECTION B | | |
| 11 | (a) Radial symmetry and bilateral symmetry (1) (b) Carpels free and united (1) | 2 |
| 12 | (i) Mycoplasma (ii) Gonyaulax/ red dinoflagellates (iii) Trypanosoma (iv) Basidiomycetes | 2 |
| 13 | Exchange of gases (1) and transpiration (1) | 2 |
| 14 | Respiratory roots (1), helps in gaseous exchange (1) | 2 |
| 15 | Any four criteria (1/2 x 4) <p style="text-align: center;">OR</p> <i>Mangifera indica</i> - Explanation | 2 |
| 16 | (a) all categories together constitute the taxonomic hierarchy (b) a group of individual organisms with fundamental similarities form a species (c) a unit of classification, in fact, represents a rank and is commonly termed as taxon (d) Genus comprises a group of related species which has more characters in common in comparison to species of other genera. | 2 |

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| 17 | (a) They are land plants but require water for fertilisation (b) Sexual reproductive stage is not known | 2 |
| SECTION C | | |
| 18 | (a) (a) Parenchyma, (b) Sclerenchyma (1) (b) Parenchyma – living cells, thin cell wall (1) Sclerenchyma – dead cells, very thick cell wall (1) | 3 |
| 19 | Diagram (1), explanation (1.5), example (1/2) | 3 |
| 20 | (a) Gametophyte of bryophytes – protonema and gametophyte of pteridophytes – prothallus (2) (b) Protonema and leafy stage (1) OR (a) Definition of heterospory and reason (2) (b) Antheridium and archegonium (1) | 3 |
| 21 | Diagrams (1 + 1) Any two points (1) | 3 |
| 22 | Placentation – arrangement of ovules on placenta (1) Phyllotaxy – arrangement of leaves on stem (1) Aestivation – arrangement of sepals or petals on thalamus | 3 |
| 23 | (A) – Green algae, (B) – Starch, (C) -Phaeophyceae, (D) – Chl. a and c and fucoxanthin, (E) – Chl. a and d and phycoerythrin, (F) – Floridean starch | 3 |
| 24 | Diagram (1), four labels (1/2 x 4) OR Presence and absence of trichomes, differentiated and undifferentiated ground tissues, differences in vascular bundle (any three correct points) (1 + 1 + 1) | 3 |
| SECTION D (Case study based) | | |
| 25 | (i) (a) Protein (ii) (b) Free RNA (iii) (a) Bacteriophage (iv) (d) RNA (v) (b) Both assertion and reason are true, and reason is not the correct explanation of assertion. | 5 |
| 26 | (i) (a) (ii) (b) (iii) (c) (iv) (d) (v) (a) | 5 |
| SECTION E | | |
| 27 | (a) (i) stipule, (ii) stilt root, (iii) bisexual flower (iv) placenta (b) (i) Ovary superior and inferior (ii) Spring like supportive structures from leaf and stem (iii) Covering of plumule and radicle in monocot seed OR Explanation of regions (3) and labelled diagram (2) | 5 |

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| 28 | <p>Secondary thickening in dicot stem – Activity of vascular cambium (3) and cork cambium (2)</p> <p style="text-align: center;">OR</p> <p>(i) (1/2) x 6</p> <p>(a) Periderm – phellem + phellogen + phelloderm</p> <p>(b) Bulliform cells – empty, colourless and large cells on monocot leaf</p> <p>(c) Lenticels – lens shaped opening on bark</p> <p>(d) Endarch xylem – protoxylem towards centre and metaxylem to periphery</p> <p>(e) Casparian strips - thickenings on endodermis of root</p> <p>(f) Conjunctive tissue – tissue between xylem and phloem in roots</p> <p>(ii) Explanation (1 + 1)</p> | 5 |
| 29 | <p>Monera (1), Special cell wall (1), Three types – names and explanation – halophiles, thermoacidophiles and methanogens (1 +1 +1)</p> <p style="text-align: center;">OR</p> <p>Protozoans are classes of Kingdom Protista (1), amoeboid, ciliated, flagellated and sporozoa (1 +</p> | 5 |