**RUBRIC: SSC 1st ANNUAL EXAMINATION 2022**

**SUBJECT: BIOLOGY-I (HA) Final 10-06-2022 Time 5:00PM**

| **Q.# / Part #** | **Criteria**  | **Level 1 (Marks)** | **Level 2(Marks)** | **Level 3 (Marks)** | **Level 4 (Marks)** | **Level 5 (Marks)** |
| --- | --- | --- | --- | --- | --- | --- |
| $$2(i)$$ | Difference between Oxidation & reduction | Correct difference with example or equation (3) | Correct difference without example or equation (2) | Partially correct difference without example or equation (1) | Some relevant information (0.5) | Wrong answer (0) |
| $$2(ii)$$ | Type of biomolecule  | Correct identification of both Protein as macro-molecule & Amino acid as micro-molecule( 1) | One correct identification (0.5) | Wrong answer (0) |  |  |
| Comparison  | Correct comparison of macro-molecule and micro-molecule (1) | Partially correct comparison (0.5) | Wrong answer (0) |  |  |
| Examples  | Two examples of each of the two i.e. macro-molecule and Micro-molecule (1) | Partially correct response (0.5) | Wrong answer (0) |  |  |
| $$2(iii)$$ | Description / causes of thalassemia  | Correct description / cause (1) | Some relevant information (0.5) | Wrong answer (0) |  |  |
| Symptoms of thalassemia | Any two correct symptoms (1) | Any one correct symptom (0.5) | Wrong answer (0) |  |  |
| Prevention/treatment | Correct description of Prevention/treatment (1) | Partially correct (0.5) | Wrong answer (0) |  |  |
| $$2(iv)$$ | Difference between Fats & oils | Two correct differences (2) | One correct difference (1) | Some relevant information (0.5) | Wrong answer (0) |  |
| Sources of Lipids | Any two sources (1) | Any one source (0.5) | Wrong answer (0) |  |  |
| $$2(v)$$ | Causes of deforestation  | Any three correct causes (1.5) | Any two correct causes (1) | Any one correct cause(0.5) | Wrong answer (0) |  |
| Effects of deforestation  | Any three correct effects (1.5) | Any two correct effects (1) | Any one correct effect (0.5) | Wrong answer (0) |  |
| $$2(vi)$$ | Structure of Ribosomes | Correct description of at least two criteria i.e. without membrane , subunits and chemical composition (2) | Correct description of any one criteria (1) | Some relevant information (0.5) | Wrong answer (0) |  |
| Function of Ribosomes | Correct function (1) | Some relevant information (0.5) | Wrong answer (0) |  |  |
| $$2(vii)$$ | Structure of nerve cell | Correct description of cell body, nucleus, dendrite & axon (2) | Correct description of any three criteria (1.5) | Correct description of any two criteria (1) | Correct description of any one criterion (0.5) | Wrong answer (0) |
| Diagram of nerve cell | Correct diagram with labelling of cell body, dendrite & axon (1) | Correct diagram with partial labelling (0.5) | Wrong answer (0) |  |  |
| $$2(viii)$$ | Phases of interphase | Correct description of any three phases (3) | Correct description of any two phases (2) | Correct description of any one phase (1) | Some relevant information (0.5) | Wrong answer (0) |
| $2(ix$) | Definition of Apoptosis | Correct definition (1) | Partially correct definition (0.5) | Wrong answer (0) |  |  |
| Process | Correct description (1) | Partially correct description (0.5) | Wrong answer (0) |  |  |
| Examples | Two correct examples (1) | One correct example (0.5) | Wrong answer (0) |  |  |
| $2(x$) | Effect of pH on enzyme rate | Correct description (2) | Partially correct description (1) | Some relevant information (0.5) | Wrong answer (0) |  |
| Graph showing effect of pH  | Graph with correct labeling(1) | Partially correct graph (0.5) | Wrong answer (0) |  |  |
| $$2(xi)$$ | Name of model of enzyme action | Correct identification i.e. Lock & Key model (1) | Wrong answer (0) |  |  |  |
| Description of the model of enzyme action | Correct description (1) | Partially correct (0.5) | Wrong answer (0) |  |  |
| Diagram for model of enzyme action | Correct diagram with two labels i.e. active site, substrate (1) | Partially correct diagram (0.5) | Wrong answer (0) |  |  |
| $$2(xii)$$ | Observations during study of malaria | Any three correct observations for cause of malaria/spread of malaria (3) | Any two correct observations (2) | Any one correct observation (1) | Some relevant information (0.5) | Wrong answer (0) |
| 2(xiii) | Environmental Hazards caused by use of fertilizers | Any three correct Hazards (3) | Any two correct Hazards (2) | Any one correct Hazards(1) | Some relevant information (0.5) | Wrong answer (0) |
| $$2(xiv)$$ | Transpiration as necessary evil | Correct description i.e. why is it evil and how is it important? (3) | Correct description of any one criteria/ Partially correct description (1.5) | Some relevant information (0.5) | Wrong answer (0) |  |
| $$2(xv)$$ | Universal donor (Blood Group O)  | Correct description i.e. No antigen, all antibodies, safely donated to all blood types (1.5) | Correct description of any two criteria (1) | Correct description of any one criteria (0.5) | Wrong answer (0) |  |
| Universal recipient (Blood Group AB) | Correct description i.e. All antigen, No antibodies, safely receive from all blood types (1.5) | Correct description of any two criteria (1) | Correct description of any one criteria (0.5) | Wrong answer (0) |  |
| $$3(a)$$ | Double pump circulation by Heart  | Correct description of pulmonary circulation with names of heart chambers and major vessels involved (2) | Partially correct description (1) | Some relevant information (0.5) | Wrong answer (0) |  |
| Correct description of systemic circulation with names of heart chambers and major vessels involved (2) | Partially correct description (1) | Some relevant information (0.5) | Wrong answer (0) |  |
| Flow Chart of blood circulation | Correct flow chart (1) | Partially correct (0.5) | Wrong answer (0) |  |  |
| $3(b$) | Identification of Photosynthetic organelle | Correct identification chloroplast (1) | Wrong (0) |  |  |  |
| Structure of chloroplast | Correct description mentioning double membrane, granum/ thylakoid and stroma (2) | Partially correct description mentioning any two aspects (1) | Some relevant information (0.5) | Wrong answer (0) |  |
| Diagram of chloroplast | Correct diagram with four labeling (2) | Correct diagram with any two labeling (1.5) | Partially correct diagram with incomplete labelling / Correct diagram only (1) | Partially correct diagram only (0.5) | Wrong answer (0) |
| $4$ (a) | Structure of Stomach | Correct description of any two aspects from shape, two opening/sphincter, thick muscular wall (1) | Correct description of any one aspect (0.5) | Wrong answer (0) |  |  |
| Function of Stomach | Correct description of any three secretions of gastric juice (3) | Correct description of two secretions (2) | Correct description of one secretion (1) | Some relevant information (0.5) | Wrong answer (0) |
| Diagram | Correct diagram with four labels (2) | Correct diagram with two labels (1.5) | Partially correct diagram with incomplete labelling / Correct diagram only (1) | Wrong answer (0) |  |
| 4 (b) | Characteristics of Fungi | Any two correct Characteristics (2) | Any one correct Characteristic (1) | Some relevant information (0.5) | Wrong answer (0) |  |
| Characteristics of Monera | Any two correct Characteristics (2) | Any one correct Characteristic(1) | Some relevant information (0.5) | Wrong answer (0) |  |
| 5 (a) | Events of Light reactions | Correct description of four steps (4) | Correct description of three steps (3) | Correct description of two steps (2) | Correct description of one steps (1) | Some relevant information (0.5) | Wrong answer (0) |
| 5 (b) | Description of Prophase-I | Correct description of condensation, synapsis tetrad, crossing over etc. (4) | Correct description of any three aspects (3) | Correct description of any two aspects (2) | Correct description of any one aspect (1) | Some relevant information (0.5 | Wrong answer (0) |
| Diagrams | Complete & labelled diagrams (2) | Partially correct labelled diagram (1) | Only diagrams (0.5) | Wrong answer (0) |  |