**Pakistan School ,Kingdom of Bahrain**

**Send-up Exam SSC I & SSC II, December 2020/2021**

**Subject: Biology 9th Total Marks: 12**

**Name;\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Time allowed : 20 min.**

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|  **Section A** **is compulsory. All parts of this section are to be answered on the Question paper itself. It should be completed in the first 20 minutes and handed over to the invigilator. Deleting, overwriting is not allowed. Do not use lead pencil.**  |

**Section A: Marks: 12**

**Q1. Circle the correct option i.e. A/B/C/D. Each part carries 1 mark;**

1. It is the study of fossils;
2. Physiology B. Anatomy C. Genetics D. Paleontology
3. Plants require CO2 for ‘photosynthesis’ which one of the following will be the best design for experiment?
4. Grow plants with CO2 B. Grow plants without O2

C. Grow plants without CO2 D. Place plants in the dark

1. Prokaryotes have a cell wall composed of;
2. Peptidoglycan B. Cellulose C. Chitin D. Lignin
3. When we talk about only the outer membrane of cell, we say it is;
4. Cell Membrane B. Plasma Membrane

C. Nuclear Membrane D. None of these

1. Inner Membrane of a Mitochondrion forms many infoldings called;
2. Granum B. Cristae C. Mat D. Thylakoid

 (vi) Each centriole is made of \_\_\_\_\_\_\_ microtubules;

 A. 3 Triplets B. 9 Triplets C. 12 Triplet D. 4 Triplets

 (vii) Some cells enter G0 phase semi permanently e.g.;

 A. Epithelial cells B. Liver cells C. Kidney cells D. Liver and Kidney cells

 (viii) Somatic cells undergo;

 A. Mitosis B. Meiosis C. Give rise gametes D. None of these

 (ix) During Metaphase, Chromosomes arrange themselves along the equator of cell forming

 A. Cell plate B. Metaphase Plate C. phragmoplast D. Synapsis

 (x) How many molecules of CO2 are produced when Krebs’ cycle operates twice?

1. 1 B. 2 C. 3 D. 6

 (xi) \_\_\_\_\_\_ proposed the lock and key model, In order to explain the mechanism of enzyme action;

1. Emil Fisher B. Daniel Koshland C. Winholm Kuhne D. Ibne Nafees

 (xii) ATP was discovered by Karl Lohmann in;

1. 1961 B. 1941 C. 1783 D. 1929
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 **Subject: Biology 9th Total Marks: 53**

 **Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Time allowed : 2: 40 min.**

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|  **Note: Answer any Six parts from Section ‘B’ and attempt any five parts from Section ‘C’, Attempt any Two Questions from Section ‘D’ on the separately provided answer sheet. Use supplementary answer sheet i.e. sheet-B if required. Write your answers neatly and legibly**  |

 **Section A: ( ch 1-5) Marks: 18**

**Attempt any Six Parts; the answer to each part should not exceed 3 to 4 lines.**

 (i) Differentiate between Qualitative and Quantitative observation by giving examples.

 (ii) Scientist must contrast an experiment group with a control group. Justify the statement.

 (iii) Differentiate between Diffusion and Osmosis.

 (iv) State the Fluid Mosaic Model of cell membrane.

 (v) Why is it difficult to use the criterion of interbreeding to defend species of unicellular organisms?

 (vi) Identify causes of over hunting and its effects.

 (vii) How do these organelles function for the cell?

1. Golgi apparatus B. Endoplasmic Reticulum

 (viii) Enlist the major steps of prophase 1.

**SECTION – C Marks:15**

**Attempt any Five question**

 (i) Elaborate the effect of pH on Enzymes activity.

 (ii) Complete the following table for comparison of Light and Dark Reactions of photosynthesis.

|  |  |  |
| --- | --- | --- |
| **Features** | **Dark Reaction**  | **Light Reaction** |
| **Proposed by** |  |  |
| **Year** |  |  |
| **Final products** |  |  |

 (iii) What is the role of Co factors as Prosthetic group and Co enzymes?

 (iv) Differentiate between Alcoholic fermentation and Lactic acid fermentation.

 (v) Why is ATP called the cell’s energy currency?

 (vi) Draw the Molecular structure of ATP.

 (vii) What is the effect of temperature on enzyme activity?

**SECTION – D Marks: 20**

**Attempt any Two questions**

 Q4. Write the Mechanism of Respiration. Describe three main stages of Aerobic respiration. (10)

 Q5. Identify causes of Deforestation and its effects on Biodiversity. (5+5)

 Q6. (a) Describe the events that occur during the phases of cell cycle. (6)

 (b) Draw and Label a Diagram of crossing over. (4)