

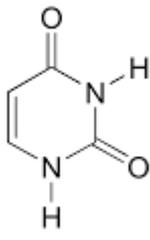
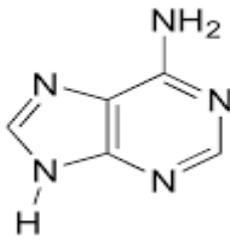
SRI SATHYA SAI VIDYA VIHAR, INDORE
ANNUAL EXAMINATION- FEBRUARY, 2019
CLASS: XI
SUBJECT: BIOLOGY

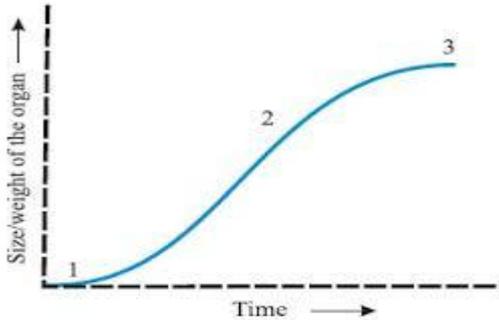
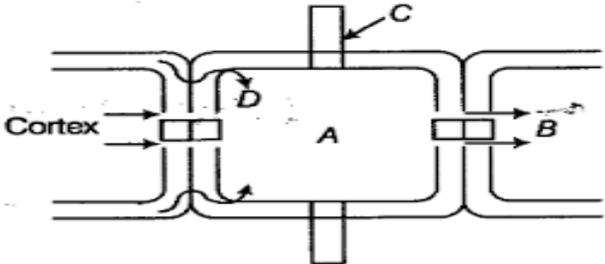
TIME: 3 Hrs

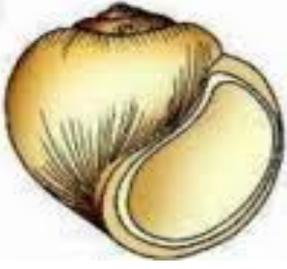
MAX MARKS: 70

GENERAL INSTRUCTIONS:

- All questions are compulsory.
- The question paper consists of four sections A, B, C and D.
- Internal choice is given in all the sections. A student has to attempt only one of the alternatives in such questions.
- Section–A contains 5 questions of 1 mark each.
- Section–B has 7 questions of 2 marks each.
- Section–C is of 12 questions of 3 marks each.
- Section–D has 3 questions of 5 marks each.
- Wherever necessary, the diagrams drawn should be neat and properly labelled.
- **Total number of printed pages: 4**
- **Total number of Questions: 27**

| Section A | | |
|------------------|---|----------|
| Q1 | In which region of the plant production of auxin in abundant amount occurs. | 1 |
| Q2 | List two purposes for which Magnesium is required essentially to the plants. | 1 |
| Q3 | Identify the given figure as purine or pyrimidine? <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p>(A)</p> </div> <div style="text-align: center;">  <p>(B)</p> </div> </div> | 1 |
| Q4 | What is the excretory product from the kidney of: a) Reptiles b) Marine fishes. | 1 |
| Q5 | Give the name and function of a fluid filled double membranous layer which surrounds the lungs. OR How is the entry of food prevented in the respiratory tract? | 1 |
| Section B | | |
| Q6 | Both gymnosperms and angiosperms bear seeds then why are they classified separately? OR What is the role of capsule in life history of moss? | 2 |
| Q7 | If you are provided with microscopic preparations of transverse section of meristematic tissue and permanent tissue. How will you identify it? | 2 |

| | | |
|------------------|---|----------|
| Q8 | Mention the special function performed by a) Tap root of beet root b) Axillary buds of Bougainvillea c) Tap root of radish d) Fleshy leaves of onion. | 2 |
| Q9 | Give the terms for the following: a) The gap between two successive mitotic divisions. b) Division in which chromosome number is halved. c) Phase in cell cycle where DNA is synthesized. d) Division of nuclear material. <p style="text-align: center;">OR</p> Distinguish between metaphase of mitosis and metaphase of meiosis I. | 2 |
| Q10 | In the figure of sigmoid growth curve below label segments 1, 2 and 3.  | 2 |
| Q11 | What are red tides? Why are they harmful? | 2 |
| Q12 | Write the medical terms for the following disorders: a) Faeces are retained within the colon as the bowel movements occur irregularly. b) A difficulty in breathing causing wheezing due to inflammation of bronchi and bronchioles. c) Acute chest pain when no oxygen is reaching to heart muscles. d) Inflammation of glomeruli of kidney. | 2 |
| Section C | | |
| Q13 | Describe the vascular tissue system with the help of the diagram. | 3 |
| Q14 | Name the end products of aerobic and anaerobic fate of glycolysis. List two ways by which molecules of ATP are produced in glycolysis during aerobic respiration in a cell. <p style="text-align: center;">OR</p> Discuss “the respiratory pathway is an amphibolic pathway.” | 3 |
| Q15 | Observe the diagram given and answer the following questions. a) Name the cell A and B. b) Identify C and name the substance it is made of. c) Name the pathway of water movement represented as D.  | 3 |

| | | |
|-------------------|---|-----------------|
| <p>Q16</p> | <p>A cyclic process is occurring in C₃ plant, which is light dependent and needs O₂. This process does not produce energy rather it consumes energy.</p> <p>a) What is the name of the process? b) Where does it occur c) What are end products of this process?</p> <p style="text-align: center;">OR</p> <p>Give schematic representation of nodule formation in plants.</p> | <p>3</p> |
| <p>Q17</p> | <p>a) Out of three types of dentition, which type provides separate socket for tooth in the jaw bone. b) Draw the transverse section of gut.</p> | <p>3</p> |
| <p>Q18</p> | <p>a) What is portal vein? Mention its significance. b) What is stroke volume? What is its relation with cardiac output?</p> | <p>3</p> |
| <p>Q19</p> | <p>a) Name the type of joint present between: i) Carpel /metacarpal of thumb ii) Femur/acetabulum b) Differentiate between pectoral and pelvic girdle.</p> <p style="text-align: center;">OR</p> <p>a) Explain with the help of diagram how does a muscle return to its original form during relaxation? b) What causes muscle fatigue?</p> | <p>3</p> |
| <p>Q20</p> | <p>a) What does an enzyme do in terms of energy requirement of a reaction? b) Give an example of co enzyme. c) Distinguish between apoenzyme and co enzyme.</p> | <p>3</p> |
| <p>Q21</p> | <p>Mention the features that will mark the completion of Anaphase and Telophase in mitotic cell division.</p> | <p>3</p> |
| <p>Q22</p> | <p>Mention three differences and three similarities between mitochondria and chloroplast.</p> | <p>3</p> |
| <p>Q23</p> | <p>a) What is the function of inclusion bodies in prokaryotic cell b) Where are they present? c) Give two examples of inclusion bodies.</p> <p style="text-align: center;">OR</p> <p>Differentiate between electron microscopic structure of cilia/ flagella and centriole.</p> | <p>3</p> |
| <p>Q24</p> | <p>a) Identify the given organism A and B. b) To which Phylum do they belong? c) Mention the unique features of the phylum on the basis of following points: i) Excretion ii) Reproduction iii) Circulatory system iv) Locomotion</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p>(A)</p> </div> <div style="text-align: center;">  <p>(B)</p> </div> </div> | <p>3</p> |

| Section D | | |
|------------------|--|----------|
| Q25 | <p>a) In which segment does the following structures lie in the earthworm's body?</p> <p>i) Spermathecae ii) Pharynx iii) Gizzard iv) Intestine v) Septal nephridia vi) Typhlosole vii) Pharyngeal nephridia. viii) Ovary</p> <p>b) How male frogs can be distinguished from a female frog.</p> <p style="text-align: center;">OR</p> <p>a) Name the locomotory appendages of cockroach on the basis of external morphology. b) Distinguish between smooth muscle and striated muscle. c) Differentiate between tendon and ligament.</p> | 5 |
| Q26 | <p>a) Differentiate between:</p> <p>i) Resting potential and action potential ii) Cerebrum and cerebellum iii) Rods and cones</p> <p>b) Diagrammatically represent the mechanism of action of any steroid hormone.</p> <p style="text-align: center;">OR</p> <p>Draw a labeled diagram to show different parts of human eye and give the location and function of the following:</p> <p>a) Cornea b) Iris c) Vitreous humor</p> | 5 |
| Q27 | <p>a) Briefly explain chemiosmotic hypothesis. b) Give comparison between cyclic and non cyclic photophosphorylation.</p> <p style="text-align: center;">OR</p> <p>Explain the process of biosynthetic phase of photosynthesis occurring in chloroplast.</p> | 5 |