

★★★ **Biology****H.S.S.C (11th) 1st Annual 2024**

Roll No. _____ (To be written by the candidate)

Paper : I

Objective-(iii)

Paper Code

6

4

6

5

Marks:17

Time : 20 Minutes

Note: - You have four choices for each objective type question as A, B, C and D. The choice which you think is correct; fill that circle in front of question number in your answer book. Use marker or pen to fill the circles. Cutting or filling up two or more circles will result no mark.

SECTION-A

| 1 | Questions | A | B | C | D |
|-----|---|--|---|--|--|
| 1. | In most birds the number of air sacs are: | 6 | 7 | <input checked="" type="radio"/> 9 | 8 |
| 2. | Which of the given animals is not omnivorous? | Crow | Man | Pig | <input checked="" type="radio"/> Dog |
| 3. | NADH in respiratory electron transport chain is oxidized by: | FADH | O ₂ | Coenzyme Q <input checked="" type="radio"/> | Cytochrome |
| 4. | How many molecules of glyceraldehyde 3-phosphate are required to produce one molecule of glucose? | 2 <input checked="" type="radio"/> | 1 | 3 | 6 |
| 5. | Paired gill openings are developed in all chordates but non-functional in: | Rat <input checked="" type="radio"/> | Fish | Frog | Amphioxus |
| 6. | A respiratory pigment of blue colour called haemocyanin is present in animals of phylum: | Porifera | Coelenterata | Mollusca <input checked="" type="radio"/> | Arthropoda |
| 7. | In which phylum sexual phase is not observed? | Basidiomycota | Deuteromycota <input checked="" type="radio"/> | Ascomycota | Zygomycota |
| 8. | The simplest of all bryophytes are: | Mosses | Hornworts | Whisk ferns | <input checked="" type="radio"/> Liverworts |
| 9. | African sleeping sickness is caused by: | Trypanosoma <input checked="" type="radio"/> | Entamoeba | Plasmodium | Stentor |
| 10. | Which of the given are spiral shaped bacteria? | Cocci | Pseudomonas | Bacilli | <input checked="" type="radio"/> Vibrio |
| 11. | Independent evolutionary unit among the given is: | Species <input checked="" type="radio"/> | Population | Genus | Family |
| 12. | Vacuole in plants is responsible for: | Photosynthesis | Cellular excretion | Turgor pressure <input checked="" type="radio"/> | Starch storage |
| 13. | Vitamins are essential raw materials for the synthesis of: | Coenzyme <input checked="" type="radio"/> | Prosthetic group | Holoenzyme | Apoenzyme |
| 14. | Carbohydrates are organic molecules and contain three elements: | Carbon, H ₂ O and oxygen | Carbon, sulphur and hydrogen | Carbon, calcium and hydrogen | Carbon, hydrogen and oxygen <input checked="" type="radio"/> |
| 15. | Branch of Biology which deals with study of ancestral history of living organisms is called: | Palaeontology <input checked="" type="radio"/> | Zoogeography | Evolution | Heredit |
| 16. | The substance produced by basophils that inhibits blood clotting is: | Heparin <input checked="" type="radio"/> | Histamine | Fibrin | Albumin |
| 17. | Which vein has oxygenated blood? | Femoral vein | Pulmonary vein <input checked="" type="radio"/> | Subclavian vein | Jugular vein |

Biology**H.S.S.C (11th) 1st Annual 2024**

Roll No. _____ (To be written by the candidate)

Paper : I

Subjective

Marks : 68

Time : 2:40 Hours

SECTION-B**Note:- Section B is compulsory.****2. Write short answers to any EIGHT parts.****(8 x 2 = 16)**

- i. How does fibrous protein differ from globular protein? (2 points required)
- ii. Differentiate the enzyme and coenzyme.
- iii. How does substrate concentration affect the rate of enzyme action?
- iv. Define mycorrhizae. Give one example.
- v. Write down medicinal importance of fungi. (2 points required)
- vi. Give four characteristic features of phylum Annelida.
- vii. Write two benefits and two harms caused by insects.
- viii. Define irreversible inhibitors.
- ix. What are tube feet?
- x. How would you differentiate polyps and medusae?
- xi. Give molecular formula of chlorophyll "a" and "b".
- xii. What are action and absorption spectra?

3. Write short answers to any EIGHT parts.**(8 x 2 = 16)**

- i. Differentiate the micro and macro molecules.
- ii. Define bioremediation. Give one example.
- iii. Define resolution of human eye.
- iv. What are micro filaments? Give their function.
- v. What is giant amoeba? Give its biological name.
- vi. Differentiate the tests of Foraminifera and Actinopods.
- vii. Define thallus. In which organisms is it found?
- viii. What are diatoms? Give one example.
- ix. Define photorespiration.
- x. What are lenticels? Give their function.
- xi. What is apoplast pathway of water transport in plants?
- xii. Define thrombus and embolus.

4. Write short answers to any SIX parts.**(6 x 2 = 12)**

- i. Define species.
- ii. Differentiate the structure and function of flagella and pilli.
- iii. Write down the scientific name of sugar cane and brinjal.
- iv. Why is sphenopsida called arthropytes?
- v. What is an embryo sac?
- vi. Define circinate vernation.
- vii. Define nutrition. Enlist its types.
- viii. Food habit can be responsible for heartburn. How?
- ix. Trace the route of amino acids and large fatty acids from digestive tract and blood stream.

SECTION-C**Note:- Attempt any THREE questions. Each question carries EIGHT (4+4=8) marks.****(8 x 3 = 24)**

5. (a) Define cloning. Discuss its mechanism and commercial importance. **(1+2+1)**
(b) What is pulmonary respiration? Discuss its phases in frog. **(1+3)**
6. (a) Write down a note on RNA and its types. **(1+3)**
(b) What are the economic gains due to fungi? **(1+1+1+1)**
7. (a) What are plastids? Describe different types of plastids. **(1+3)**
(b) Describe different mechanical and chemical processes occurring in oral cavity for digestion of food in man. **(3+1)**
8. (a) Give characteristics of viruses. **(1x4)**
(b) Explain the mechanism of transpiration pull in cohesion tension theory. **(4)**
9. (a) Write down a note on: i. Nucleoid ii. Plasmid **(2+2)**
(b) Describe three phases of Calvin cycle. **(3+1)**

Sahiwal Board-2023

Roll No.

(To be filled in by the candidate)

Biology

H.S.S.C (11th) 1st Annual 2023

Time : 20 Minutes

Paper : I

Objective – (iv)

Marks : 17



Paper Code

Note: - You have four choices for each objective type question as A, B, C and D. The choice which you think is correct; fill that circle in front of that question number in your answer book. Use marker or pen to fill the circles. Cutting or filling up two or more circles will result no mark.

SECTION-A

| Q.1 | Questions | A | B | C | D |
|-----|---|---------------------------------|----------------------------------|----------------------------------|----------------------------------|
| 1. | A contagious disease is: | Cancer | Asthma | Tuberculosis | Emphysema |
| 2. | The example of an insectivorous plant is: | Dodder | Dionaea | Puccinea | Neotia |
| 3. | In yeast Pyruvic acid is converted into: | Ethyl alcohol | Methyl alcohol | Acetic acid | Lactic acid |
| 4. | The absorption spectrum of light for chlorophyll ranges: | 430–660 nm | 430–670 nm | 430–680 nm | 430–690 nm |
| 5. | The worm that damages the wood of ships is called: | Hook worm | Sepia | Teredo | Mytilus |
| 6. | The respiratory pigment of mollusc is called: | Haemocyanin | Haemoglobin | Haemolymph | Colourless pigment |
| 7. | The symptom of candidosis is: | Convulsion | Psychotic thrush | Oral thrush | Renal thrush |
| 8. | The male gametophyte has two wings in: | Cycas | Taxus | Picea | Pinus |
| 9. | Which of the given pigment is absent in algae? | Phycocyanin | Carotenoids | Xanthophylls | Phycocerythrin |
| 10. | The hollow, non-helical, filamentous appendages in bacteria: | Cilia | Pilli | Flagella | Cyst |
| 11. | Mumps and measles are caused by: | RNA naked virus | DNA naked virus | RNA enveloped virus | DNA enveloped virus |
| 12. | The liver and muscle cells appear filled with glycogen within membrane bounded organelles in disease: | Glycogenosis type -I | Glycogenosis type -II | Glycogenosis type -III | Glycogenosis type -IV |
| 13. | The charge bearing site of an enzyme is called: | Catalytic site | Binding site | Blocking site | Active site |
| 14. | The number of carbon atom in waxes are: | C ₅ –C ₁₅ | C ₁₅ –C ₂₅ | C ₂₅ –C ₃₅ | C ₃₅ –C ₄₅ |
| 15. | The oldest period of Mesozoic era is: | Jurassic | Cretaceous | Triassic | Silurian |
| 16. | The hydrostatic pressure in xylem and root, pressure of roots is responsible for: | Bleeding | Guttation | Imbibition | Transpiration |
| 17. | The renal vein brings deoxygenated blood from: | Brain | Liver | Lungs | Kidneys |

213-323-1A-21500 ★★★★★

Biology

H.S.S.C (11th) 1st Annual 2023

Time : 2:40 Hours

Paper : I

Subjective

Marks : 68

Note:- Section B is compulsory. Attempt any 3 questions from Section C.

SECTION-B

2. Write short answers to any Eight parts.

(8 x 2 = 16)

- Differentiate between anabolic and catabolic reaction.
- Only small quantities of vitamins are needed. Why?
- Enlist different regions of active site and write down their functions.
- Define Inhibitors and give their examples.
- Differentiate between karyogamy and plasmogamy.
- What is ergotism?
- Write down two affinities of echinoderms with hemichordates.
- What is marsupium?
- Give two parasitic adaptations of Platyhelminthes.
- What is agricultural importance of earth worm?
- Why non cyclic phosphorylation changes into cyclic phosphorylation under certain conditions.
- Define oxidative phosphorylation.

3. Write short answers to any Eight parts.

(8 x 2 = 16)

- How can we determine the age of rocks?
- Differentiate between organ and organelle.
- What do you know about middle lamella?
- Differentiate between cristae and cisternae?
- Why is it difficult to classify the protists?
- Discuss the importance of chlorella.
- What do you know about ramenta? Also write down their function.
- Differentiate between homosporous and heterosporous.
- What do you know about blue babies?
- Differentiate between cavum venosum and cavum pulmonale.
- What are red tides?
- How the oomycetes are different from fungi?

4. Write short answers to any Six parts.

(6 x 2 = 12)

- What is Herpes simplex?
- Differentiate between heterotrophic and saprophyte bacteria.
- What is symbiotic nutrition?
- Define microphagous feeders. Give example.
- What is the role of Gastrin?
- Differentiate between pulmonary and cutaneous respiration.
- What are parabronchi?
- What is rubisco? Write its function.
- Differentiate between bronchi and bronchioles.

SECTION-C

Note:- Attempt any Three questions. Each question carries eight marks (4+4=8)

(8 x 3 = 24)

- What is cloning? Give its applications.
 - Give comparison between closed and open circulatory system.
- Discuss the taxonomic position of Fungi.
 - Write the importance of carbon. Why carbon is called skeleton of life?
- Explain chemical composition of bacterial wall in detail.
 - Write a comprehensive note on life cycle of Adiantum.
- What do you know about the structure of viruses?
 - Sketch the Calvin Cycle.
- Write down composition and functions of Ribosomes.
 - Describe digestion of food in human stomach.

Note:- You have four choices for each objective type question as A, B, C and D. The choice which you think is correct; fill that circle in front of that question number in your answer book. Use marker or pen to fill the circles. Cutting or filling up two or more circles will result no mark.

SECTION-A

| Q.1 | Questions | A | B | C | D |
|-----|--|-----------------------|---------------------|----------------------|------------------------------|
| 1. | A method in which pests are destroyed by using some living organism is called: | Biological control | Insecticide control | Cultural control | Pesticide control |
| 2. | Identify the unsaturated fatty acid. | Acetic acid | Butyric acid | Palmitic acid | Oleic acid |
| 3. | The optimum <i>pH</i> for pepsin is: | 2.00 | 4.50 | 5.50 | 7.60 |
| 4. | Nuclear membrane is continuous with: | Endoplasmic reticulum | Golgi bodies | Lysosomes | Peroxisomes |
| 5. | The mysterious brain infection in man is caused by: | Virion | Fungi | Bacteria | Prions |
| 6. | Antibiotics are produced by fungi and certain bacteria of groups: | Oomycetes | Basidiomycetes | Ascomycetes | Actinomycetes |
| 7. | Which one of the given phylums has no flagella? | Euglenophyta | Pyrrophyta | Rhodophyta | Chlorophyta |
| 8. | The number of ascospores in each ascus are: | 2 | 4 | 6 | 8 |
| 9. | Vascular system is absent in: | Bryophytes | Pteridophytes | Gymnosperms | Angiosperms |
| 10. | During development of an animal mesoderm layer gives rise to: | Nervous system | Digestive system | Integumentary system | Reproductive system |
| 11. | Which one of the given is intermediate host for Taenia? | Snail | Pig | Sparrow | Man |
| 12. | The product of cyclic phosphorylation is/are: | ATP | NADP | NADP and ATP | NADP, ATP and O ₂ |
| 13. | In which of the given parts of body lactic acid fermentation takes place? | Brain | Muscle | Heart | Liver |
| 14. | Appendix arise from blind end of: | ileum | Caecum | Colon | Rectum |
| 15. | Surfactant is mainly composed of: | Lipids | Proteins | Lipoproteins | Carbohydrates |
| 16. | Which one of the given parts of fish body has oxygenated blood? | Sinus venosus | Dorsal aorta | Ventral aorta | Atrium |
| 17. | Hydathodes are linked with one of the given processes. | Imbibition | Bleeding | Guttation | Transpiration |

Biology**H.S.S.C (11th)-A-2022**

Time : 2:40 Hours

Paper : I

Subjective

Marks : 68

Note:- Section B is compulsory. Attempt any 3 questions from Section C.**SECTION-B**

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2. Write short answers to any Eight parts.**(8 x 2 = 16)**

- Why proper arrangement of amino acids is necessary for proteins? Give an example.
- What will happen to enzymatic reactions if the temperature becomes 50°C?
- Why some enzymes are not produced in active form? Give an example.
- Enzymes become denatured in what ways? Explain briefly.
- What are septate and non-septate hyphae?
- Write a brief note on yeast.
- Give four parasitic adaptations in Platyhelminthes.
- Define Moulting.
- What do you know about locusts?
- Give two differences between osteichthyes and chondrichthyes.
- What is compensation point?
- How absorption spectrum differs from action spectrum?

3. Write short answers to any Eight parts.**(8 x 2 = 16)**

- Differentiate between biopesticides and biological control.
- How a biologist can help to reduce environmental pollution?
- Why thylakoid has grana and intergrana?
- Describe the fact that centrifugation is necessary for cellular fractionation.
- How are limestone deposits formed?
- Write two similar and two different characters between algae and green plants.
- Give two examples each of red algae and green algae.
- What is the name of oomycetes which played infamous role in human history? Comment why it is so notorious?
- Which plant group is called arthropytes and why?
- Differentiate between monocots and dicots.
- What will be direction of flow of blood in the heart of fishes?
- Define Immunity. What is difference between active and passive immunity?

4. Write short answers to any Six parts.**(6 x 2 = 12)**

- Define Retroviruses.
- Write down few words on the capsule of bacteria.
- Write down the names of any two salivary glands. Compare them.
- Define Heart Burn.
- Define Dyspepsia.
- Write down the lung capacity of humans.
- By listening "Smoker's Cough" which disease come in our mind? Elaborate.
- How muscles get their oxygen?
- Has pH any effect on the blood when oxygen combines with haemoglobin?

SECTION-C**(EACH QUESTION CARRIES EIGHT (8) MARKS)**

- Why is understanding of biodiversity important and how biology is helping to mankind to conserve environment? **4**
 - What is ascent of sap? Explain the Cohesion-Tension Theory? **4**
- Describe the structure of amino acids and importance of proteins. **2+2**
 - Describe nutrition in Fungi and explain mycorrhizal association. **2+2**
- Wise use of antibiotics is necessary. What happens if we misuse them? Introduce antibiotics as well. **4**
 - Comprehend various processes that occurred in vascular plants to evolve microphylls and megaphylls. **4**
- Describe the structure and function of plasma membrane. **4**
 - Explain the digestion of food in Hydra. **4**
- Describe the structure and function of plasma membrane. **4**
 - Describe any four methods of animal nutrition. **4**

Sahiwal Board-2021

Roll No.

(To be filled in by the candidate)

Biology



Inter (Part-I)-A-2021

Time : 20 Minutes

Paper : I

Objective – (III)

Marks : 17

Paper Code

Note: - You have four choices for each objective type question as A, B, C and D. The choice which you think is correct; fill that circle in front of that question number in your answer book. Use marker or pen to fill the circles. Cutting or filling up two or more circles will result no mark.

| Q.1 | Questions | A | B | C | D |
|-----|--|--|--|--|--|
| 1. | Scientific name of Sago-palm is: | Cycas | Pinus | Taxus | Picea |
| 2. | Colour of spores of smuts is: | brown | yellow | black | blue |
| 3. | Euglenoids are thought to be closely related to: | zooflagellates | dinoflagellates | diatoms | brown algae |
| 4. | Hepatitis is inflammation of: | Kidney | Heart | Liver | Lungs |
| 5. | Which is composed of double stranded DNA molecules? | Mesosomes | Ribosomes | Plasmids | Granules |
| 6. | Cell membrane is chemically composed of how much proteins? | 20 – 40 % | 40 – 60 % | 60 – 80 % | 80 – 100 % |
| 7. | Enzymes involved in synthesis of protein are integral part of: | Mitochondria | Ribosomes | Chloroplast | Nucleolus |
| 8. | Which of the given value is the heat capacity of water? | 1.0 | 2.0 | 3.0 | 4.0 |
| 9. | In biological control an aphid is being controlled by: | Honey bee | Wasp | Mosquito | Dragon fly |
| 10. | Plasmodesmata are found in: | sympplast | apoplast | protoplast | chloroplast |
| 11. | Which constitutes about 90% of plasma? | inorganic ion | water | proteins | organic nutrients |
| 12. | Which help in voice production when vibrated by air? | spinal cord | vocal cord | trachea | bronchi |
| 13. | All of the Insectivorous plants are true. | Prokaryotes | Heterotrophs | Autotrophs | Protists |
| 14. | Calvin cycle is also known as: | C ₂ – pathway | C ₃ – pathway | C ₄ – pathway | C ₅ – pathway |
| 15. | Molecular formula of chlorophyll “a” is: | C ₅₅ H ₇₀ O ₅ N ₄ Mg | C ₅₅ H ₇₀ O ₅ N ₄ Mg | C ₅₅ H ₇₂ O ₅ N ₄ Mg | C ₅₅ H ₇₂ O ₅ N ₄ Mg |
| 16. | J-shaped stomach is found in: | Shark | Perch | Trout | Plaice |
| 17. | The larvae such as bipinnaria are found in phylum. | Porifera | Coelentrata | Echinodermata | Annelida |

212-321-A-14500 ★★

Note: Section I is compulsory. Attempt any 3 questions from Section II.

(SECTION-I)

2. Write short answers to any Eight parts. (8 x 2 = 16)
- Draw the formation of Glycylalanine showing peptide linkage.
 - Define Reversible and Irreversible Inhibitors.
 - Give a diagrammatic representation of an enzyme substrate reaction (Lock and key model).
 - Differentiate between enzyme and inhibitors.
 - Differentiate between obligate and facultative parasites.
 - How fungi is economically helpful in the manufacture of antibiotics and other drugs?
 - How sponges reproduce?
 - How Platyhelminthes have adapted themselves to the parasitic mode of life?
 - Differentiate between mantle and radula.
 - Write down three basic characteristics of Chordates.
 - What happens to pyruvic acid before entering into citric acid cycle?
 - Define Alcoholic Fermentation.
3. Write short answers to any Eight parts. (8 x 2 = 16)
- Differentiate between Microbiology and Biotechnology.
 - What are endangered species? Give example.
 - Differentiate between chromoplasts and leucoplasts.
 - Give any two functions of Nucleolus.
 - Name a parasitic amoeba. What disease does it cause?
 - Write two examples of zooflagellates.
 - Give two characters of green algae similar to green plants.
 - What are Euglenoids? Give their evolutionary significance.
 - Define Double Fertilization. How is it important for storage of food?
 - Differentiate between homospory and heterospory.
 - Differentiate between active and passive immunity.
 - Differentiate between thrombus and embolus.
4. Write short answers to any Six parts. (6 x 2 = 12)
- Give biological classification of Corn plant.
 - Define Cysts.
 - What is Swallowing?
 - Define Dyspepsia, also give its symptoms.
 - How does Sundew get its food?
 - Define Larynx.
 - Define Alveoli.
 - How do carbon dioxide and temperature affect the capacity of haemoglobin to combine with oxygen?
 - Define Carcinoma.

(SECTION-II)

(Each question carries Eight (4+4=8) Marks)

5. (a) Discuss biology and the service of mankind.
(b) Describe the hypothesis "Influx of K⁺ ions" about opening and closing of stomata.
6. (a) Write a note on amino acids.
(b) Discuss the importance of fungi in genetic research, food and pharmaceutical industry.
7. (a) Write a note on Nutrition in Bacteria.
(b) Write life cycle of an angiospermic plant.
8. (a) Write a note on any four viral diseases in man.
(b) Make a complete sketch of glycolysis.
9. (a) Describe in detail the structure and functions of Endoplasmic Reticulum.
(b) Write a note on Food poisoning.

Sahiwal Board-2019

Roll No. _____ Annual 2019

biology (New Scheme)

(INTERMEDIATE PART- I) (I)

Paper : I

Time: 20 Minutes

OBJECTIVE

Code: 6461



Marks : 47

1. You have four choices for each objective type question as A, B, C and D. The choice which you think is correct, fill that circle in front of that question number. Use marker or pen to fill the circles. Cutting or filling two or more circles will result in zero mark in that question.

1. In human body percentage of nitrogen accounts for:
(A) 2 % (B) 3 % (C) 1 % (D) 10 %
2. Which one serves to build macromolecules:
(A) ATP (B) Starch (C) Glucose (D) Keratin
3. Optimum pH for catalase is:
(A) 7.60 (B) 9.70 (C) 5.50 (D) 6.70
4. Integration of cellular compartments is a function of:
(A) intermediate filament (B) microfilament (C) microtubules (D) centrioles
5. Spirochete is a bacterium
(A) Aerobic (B) Anaerobic (C) Facultative (D) Microaerophilic
6. Hepatitis C is caused by virus:
(A) DNA- non enveloped (B) DNA enveloped (C) RNA non enveloped (D) RNA enveloped
7. Laminaria is an example of
(A) Red algae (B) Diatoms (C) Green algae (D) Brown algae
8. Candida albicans is a
(A) Smut (B) Rust (C) Yeast (D) Morel
9. The rhizome in adiantum is protected by
(A)ramenta (B) fronds (C) stipe (D) stomium
10. The largest invertebrate animal is
(A) whale (B) squid (C) octopus (D) dragon fly
11. 80 % food of sponges consists of
(A) detrital organic matter (B) algae (C) phytoplankton (D) zooplankton
12. Chlorophyll a is
(A) red - green (B) yellow - green (C) orange - green (D) blue - green
13. When equal intensities of light are given more photosynthesis takes place in spectrum :
(A) blue (B) orange (C) red (D) green
14. Taste buds of tongue play important role in food :
(A) digestion (B) selection (C) lubrication (D) mastication
15. Of the total volume of leaf air spaces may comprises
(A) 40 % (B) 20 % (C) 10 % (D) 30 %
16. A substance produced by basophils and inhabits blood clotting:
(A) fibrinogen (B) histamine (C) interferon (D) heparin
17. Cavum venosum and cavum pulmonale are pockets present in heart of
(A) birds (B) mammals (C) reptiles (D) fish

Sahiwal Board-2019

Roll No. _____

Biology (New Scheme)

(INTERMEDIATE PART - I)

Time : 2 : 40 Hours

SUBJECTIVE



Note :- Section I is compulsory. Attempt any three (3) questions from Section II.

(Section - I)

2. Write short answers to any Eight Parts. (8 x 2 = 16)

- i. What are terpenoids? Give examples.
- ii. What is the difference between prosthetic group and coenzyme?
- iii. Differentiate between binding site and catalytic site.
- iv. Give any four characteristics of enzymes.
- v. What are haustoria?
- vi. Define parasexuality.
- vii. What are pseudocoelomates.
- viii. Differentiate between budding and gemmules.
- ix. What is radula?
- x. Define mantle.
- xi. Differentiate between absorption spectrum and action spectrum.
- xii. What is porphyrin ring?

3. Write short answers to any Eight parts. (8 x 2 = 16)

- i. What is integrated disease management.
- ii. Name the four geological eras of history of earth.
- iii. Differentiate between chromoplast and leucoplast.
- iv. Give role of mitochondria in the cell.
- v. What are choanoflagellates? To which cells of sponges they resemble?
- vi. Give four characteristics of dinoflagellates with examples.
- vii. What are apicomplexans? How do they move?
- viii. Describe evolutionary significance of englenoids.
- ix. Write names of two extinct and two living members of psilopsida.
- x. Differentiate between homosporous and heterosporous.
- xi. How guttation differs from transpiration?
- xii. Differentiate between systemic circulation and pulmonary circulation.

4. Write short answers to any Six parts. (6 x 2 = 12)

- i. What are mumps and measles?
- ii. How respiration occurs in bacteria?
- iii. How selection of food takes place by oral cavity?
- iv. What are fluid feeders?
- v. Write down the role of secretin in digestion.
- vi. Define photorespiration and its consequences.

(Turn Over)

Sahiwal Board-2019

- vii. Give four (04) properties of respiratory surfaces in animals.
- viii. What is larynx or voice box?
- ix. What are the symptoms of Asthma?

(Section – II)

Note:- Attempt any three (3) questions from Section II. (4+4 x 3 = 24)

- 5. (a) Describe organ and organ system level of biological organization.
(b) Define cardiac cycle? Write its three phases.
- 6. (a) Write note on various types of RNAs.
(b) Explain land adaptations in Fungi.
- 7. (a) Write down the characteristics and economic importance of cyanobacteria.
(b) How Bryophytes have adapted themselves to land habitat.
- 8. (a) Explain five kingdom system of Robert Whittaker and its modification.
(b) Draw and explain Calvin cycle.
- 9. (a) Describe structure and function of plasma membrane.
(b) What are heterotrophs? Give methods of animal nutrition.

215 – 319 –16500

OBJECTIVE

Code: 6463



Note: You have four choices for each objective type question as A, B, C and D. The choice which you think is correct, fill that circle in front of that question number. Use marker or pen to fill the circles. Cutting or filling two or more circles will result in zero mark in that question.

- i. The open circulatory system is present in
(A) periplaneta (B) pheretima (C) Rana tigrina (D) Amphioxus
- ii. Water potential of pure water is:
(A) less than zero (B) more than zero (C) equal to zero (D) equal to one
- iii. Respiratory organs in fish are
(A) lungs (B) gills (C) skin (D) Fins
- iv. Accumulation of bile in blood causes the condition called:
(A) constipation (B) ulcer (C) jaundice (D) piles
- v. First action spectrum was obtained by
(A) T.W. Engelmann (B) Van neil (C) Malvin Calvin (D) Ernst Haeckel
- vi. Pyruvic acid is produced as a result of
(A) krebs cycle (B) citric acid cyle (C) respiratory chain (D) glycolysis
- vii. The largest invertebrate is:
(A) earth worm (B) star fish (C) giant squid (D) ascarus
- viii. Mammals have only:
(A) right arotic arch (B) left arotic arch (C) both left and right arotic arches (D) no arotic arch
- ix. Saccharomyces cerevisiae is a
(A) Yeast (B) Algae (C) Bacterium (D) Protozone
- x. A monoecious plant is that in which:
(A) male and female sex organs on same plant (B) male and female sex organs on different plants
(C) only has male sex organ (D) only has female sex organ
- xi. Conjugation in bacteria is promoted by the structure:
(A) Flagella (B) Pili (C) Cillia (D) Spores
- xii. Which one is microaerophilic bacterium?
(A) campylobacter (B) spirochet (C) mycoplasma (D) vibrio Comma
- xiii. Which one is an insect?
(A) Hag fish (B) Cuttle fish (C) Silver fish (D) Star fish
- xiv. Proteins are synthesized by
(A) polysome (B) nucleosome (C) lysosome (D) ribosome
- xv. If protein part of co-factor is covalently bonded to enzyme, it is called as
(A) co-enzyme (B) prosthetic group (C) activator (D) apoenzyme
- xvi. Chemical nature of most cellular secretions is
(A) proteins (B) lipids (C) carbohydrates (D) glycoproteins
- xvii. The most recent era is
(A) Paleozoic (B) Cenozoic (C) Mesozoic (D) Protozoic

Sahiwal Board-2018

Biology (New Scheme) (INTERMEDIATE PART - I)
Time : 2 : 40 Hours Academic Session 2017 - 2019

Paper : I
Marks : 68



SUBJECTIVE

Note :- Section I is compulsory. Attempt any three (3) questions from Section II.

(Section - I)

2. Write short answers to any Eight Parts. (8 x 2 = 16)

- i. What is the difference between deductive reasoning and inductive reasoning?
- ii. What is hydroponic culture technique?
- iii. What are obligate intracellular parasites?
- iv. What is lock and key model? Who proposed it?
- v. Define co-factor. What is its function?
- vi. Differentiate between activator and coenzyme.
- vii. Name three sub classes of mammalia.
- viii. Give beneficial effects of insects.
- ix. Give some uses of shells of mollusca.
- x. Define metamorphosis.
- xi. What is histoplasmosis?
- xii. Differentiate between conidia and spores.

3. Write short answers to any Eight parts. (8 x 2 = 16)

- i. Differentiate between spore and cyst.
- ii. Write two main characteristics of ciliates.
- iii. Write two characters of giant amoeba.
- iv. Give the ecological importance of dinoflagellates.
- v. What are foraminiferans? Give their importance.
- vi. Name living and extinct representatives of psilopsida.
- vii. What are accessory pigments? Give two examples.
- viii. Differentiate between essential and non essential parts of a flower.
- ix. What is Rubisco? Write down its function.
- x. Differentiate between bolus and chyme.
- xi. Give the composition of saliva.
- xii. What is botulism? Give its cause.

4. Write short answers to any Six parts. (6 x 2 = 12)

- i. What are conjugated molecules? Give example.
- ii. Write down functions of SER.
- iii. Write down salient features of "Cell Theory".
- iv. What is photorespiration? Give its products.
- v. What is respiratory distress syndrome?
- vi. Write down properties of respiratory surfaces in animals.