

Biology

PR – XI (A-I-B5) (25)

۱۔ ہر سوال کے سامنے چار دائرے دیئے گئے ہیں۔ صرف صحیح جواب والا دائرہ بھر دیں۔

۲۔ دائروں کو شیڈ (بھرنے) کے لیے نیلے یا کالے رنگ کا پن استعمال کریں۔

۳۔ جواب میں ایک سے زائد دائرے بھرنے سے جواب غلط تصور ہوگا۔

Time: 20 Min

SECTION-A

Marks: 18

- 1) Garden snail belongs to the phylum:
☐ Annelida ☒ Mollusca ☐ Arthropoda ☐ Echinodermata
- 2) Which of the given hormone promotes the growth of lateral buds in intact plants?
☐ Auxin ☐ Gibberellins ☒ Cytokinin ☐ Ethylene
- 3) The movement of hyphae of fungi towards sugar is an example of:
☐ Phototropism ☐ Geotropism
☐ Thigomotropism ☒ Chemotropism
- 4) Intrinsic factor is a protein that bind with ingested:
☐ Vitamin B₃ ☐ Vitamin B₆ ☐ Vitamin B₉ ☒ Vitamin B₁₂
- 5) Reducing stress and tensions is also the treatment of:
☐ Diarrhea ☒ Hypertension
☐ Tuberculosis ☐ Pneumonia
- 6) Which of the given type of WBCs clean up pus as a part of the healing process:
☐ Macrophages ☐ B Lymphocytes
☐ T Lymphocytes ☒ Neutrophils
- 7) The electron acceptor which captures the lost electron from Photosystem II is:
☒ Plastoquinone ☐ Cytochrome b
☐ Cytochrome c ☐ Plastocyanin
- 8) When HIV binds and fuses to immune system cells it releases its:
☒ RNA ☐ DNA ☐ Protein ☐ Lipid
- 9) Bacteriophage carry a piece of DNA from a donor to recipient bacteria in the process of:
☐ Conjugation ☐ Transformation
☒ Transduction ☐ Binary fission
- 10) Which of the given is used to immunize tuberculosis disease?
☐ ORS ☒ BCG ☐ UHT ☐ PCV

- 11) They have air bladders which keep them afloat during high tides. This statement belongs to:
☐ Dinoflagellates ☐ Diatoms ☒ Brown algae ☐ Red algae
- 12) Young leaves of ferns are called:
☐ Strobile ☐ Prothallus ☒ Fronds ☐ Sporangia
- 13) Which of the given organelle is responsible for protein synthesis?
☐ Lysosomes ☐ Smooth endoplasmic reticulum
☐ Golgi apparatus ☒ Rough endoplasmic reticulum
- 14) Which of the given has 13 pairs of chromosomes?
☐ Man ☒ Frog ☐ Gorilla ☐ Chimpanzee
- 15) Glycogen and starch are polymers of:
☐ Amino acid ☒ Glucose
☐ Glycerol ☐ Fatty acid
- 16) Starch present in plants is a type of:
☐ Monosaccharide ☐ Disaccharide
☐ Oligosaccharide ☒ Polysaccharide
- 17) Papain enzyme is used in:
☐ Baking soda ☐ Corn starch
☒ Meat tenderizer ☐ Ingredient
- 18) Photosynthetic pigment absorbs light from:
☒ Visible spectrum ☐ Photon ☐ Ultraviolet ☐ Starlight

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Note: Time allowed for Section-B and Section-C is 2 Hours and 40 minutes.

SECTION-B

Attempt any TEN parts. Each part carries FOUR marks.

- Q1: Describe cell wall with respect to the thickness of its three layers.
- Q2: Explain base pairing between two strands of DNA as suggested by Watson and Crick.
- Q3: Give one example of enzymes present in oxidoreductases, transferases, hydrolases and lyases.

- Q4: How Phosphoglycerate (PGA) is formed during carbon fixation.
- Q5: Recognize the disease caused by prions that affects animals? How does it transmit?
- Q6: Enlist four products in which bacteria are used?
- Q7: Briefly describe the roles of lichens.
- Q8: Write down the uses of gymnosperms as a source of food and medicine with examples.
- Q9: Differentiate between monotremata and placentalia with respect to the development and nourishment of young ones.
- Q10: Describe the structure of collenchymas tissues in plants.
- Q11: Briefly describe the role of liver in protein metabolism.
- Q12: Relate the structure of capillary with its function.
- Q13: Why adults and teens tend to get fewer cold than kids. Give reason.

SECTION-C

Note: Attempt any THREE questions. All questions carry equal marks.

- QIII (a) Explain how mitochondrion is a self-replicating organelle?
(b) Why water expands at low temperature? Explain.
- QIV (a) Discuss the sources of coenzymes and why they are necessary for life?
(b) Write five diagnostic characteristics of bony fishes. Give examples.
- QV (a) Define any three physical methods to control harmful bacteria.
(b) How glycolysis is helpful in anaerobic respiration?
- QVI (a) Give a comparison between short day plants and day neutral plants.
(b) Define cardiac cycle. Describe different types of valves present in heart including their location.