

Roll No. _____ (To be filled in by the candidate)

(Academic Sessions 2020 – 2022 to 2022 – 2024)

BIOLOGY

224-1st Annual-(INTER PART – II)

Time Allowed : 20 Minutes

Q.PAPER – II (Objective Type)

GROUP – II

Maximum Marks : 17

PAPER CODE = 8464

LHR-2-24

Note : Four possible answers A, B, C and D to each question are given. The choice which you think is correct, fill that circle in front of that question with Marker or Pen ink in the answer-book. Cutting or filling two or more circles will result in zero mark in that question.

1-1	The hormone that keeps the flower fresh : (A) Auxins (B) Ethene (C) Gibberellins (D) Cytokinins
2	The strand which leads towards the replication fork is : (A) Lagging (B) Leading (C) Master (D) Plandromic
3	How many base pairs are present in human genome : (A) 05 billions (B) 03 billions (C) 07 billions (D) 09 billions
4	Coal, oil and natural gas are examples of which resource : (A) Renewable (B) Non-renewable (C) Exhaustible (D) Both B and C
5	Liver helps to synthesize : (A) Bile (B) Citric acid (C) Lactic acid (D) Pesticide
6	Genes for albinism are located on : (A) X chromosome (B) Y chromosome (C) 11 chromosome (D) 9 chromosome
7	The muscles which have intercalated discs : (A) Smooth (B) Cardiac (C) Skeletal (D) Striped

(Turn Over)

(2)

1-8	Principle of population was published by : (A) Cuvier (B) Darwin (C) Wallace (D) Malthus
9	The grass-land having no woody plants known as : (A) Alpine (B) Savanna (C) Coniferous (D) Prairies
10	Gray crescent is present in : (A) Nucleus (B) Cytoplasm (C) Ribosomes (D) Cell membrane
11	In plants which are involved in testa formation : (A) Trachea (B) Tracheids (C) Sclereids (D) Collenchyma
12	The genetic code for methionine is : (A) UAA (B) GGC (C) UAC (D) AUG
13	The endosperm of angiosperm is : (A) Triploid (B) Haploid (C) Diploid (D) Polyploid
14	The chromosomes become visible, short and thick during : (A) Diakinesis (B) Diplotene (C) Leptotene (D) Anaphase
15	MSH is secreted from the : (A) Median lobe of pituitary gland (B) Posterior lobe of pituitary gland (C) Adrenal gland (D) Anterior lobe of pituitary gland
16	The enzyme luciferase is produced in an insect called : (A) Firefly (B) Housefly (C) Butterfly (D) Tsetse fly
17	In Sindh the desert ecosystem is called : (A) Thar (B) Thal (C) Rohi (D) Cholistan

229-224-II-(Objective Type)- 4250 (8464)

Roll No _____ (To be filled in by the candidate)

(Academic Sessions 2020 – 2022 to 2022 – 2024)

BIOLOGY

224-1st Annual-(INTER PART – II)

Time Allowed : 2.40 hours

PAPER – II (Essay Type)

GROUP – II

Maximum Marks : 68

SECTION – I

LHR-2-24

2. Write short answers to any EIGHT (8) questions :

16

- (i) What do hypotonic and hypertonic environment mean for a cell?
- (ii) How cartilaginous fishes show osmoregulatory activity to maintain internal osmotic state with two ways?
- (iii) What are xerophytes, write its one adaptation and one example.
- (iv) Distinguish between the origin and insertion of muscle.
- (v) List the main parts of axial skeleton.
- (vi) Why ecdysis is necessary in arthropods? Justify.
- (vii) Name the causative agent of gonorrhea, also write its two symptoms.
- (viii) Write the role of oxytocin during birth process.
- (ix) Define desertification, give its one reason and one effect.
- (x) Give location and rain fall of temperate deciduous forest in Pakistan.
- (xi) Name one pathogenic and one nutritional deficiency disease.
- (xii) Write the source and harmful effects of chlorofluorocarbon.

3. Write short answers to any EIGHT (8) questions :

16

- (i) Justify, calcitonin is antagonistic to parathormone.
- (ii) Why nitrogen and magnesium deficiency leads to chlorosis?
- (iii) Describe two main functions of spinal cord.
- (iv) What are true breeding traits?
- (v) Is SRY gene important in females?
- (vi) How epistasis is different from dominance?
- (vii) Define anther culture. Write down its one significance.
- (viii) How plants are made salt tolerant?
- (ix) Enlist some possible ways to get a gene.
- (x) Give name of phases of primary succession.
- (xi) Why over grazing is harmful for a grassland?
- (xii) Define ecological niche, who proposed this term?

4. Write short answers to any SIX (6) questions :

12

- (i) How can aging be slowed down?
- (ii) How does temperature affect plant growth?
- (iii) What is the reason behind the development of sickle cell anemia?
- (iv) Define point mutation. Give an example.
- (v) Briefly describe the semi-conservative hypothesis of DNA replication.
- (vi) What is metastasis?
- (vii) How does cytokinesis occur in plant cell?
- (viii) How are evolutionary relationships among species reflected regarding DNA and proteins?
- (ix) What is endosymbiont hypothesis? Give an example.

SECTION – II

Note : Attempt any THREE questions.

5. (a) Explain the excretory products of different animals. 4
- (b) What are meiotic errors? Explain Mongolism and Klinefelter's Syndrome. 4
6. (a) Define joints. How are they classified? Explain different types of joints. 4
- (b) Describe predation and parasitism and their significance. 4
7. (a) Briefly explain synapse. 4
- (b) Discuss endangered species in detail. 4
8. (a) Define photoperiodism. Explain types of plants on its bases. 4
- (b) Briefly explain the problem erythroblastosis foetalis faced by certain parents. 4
9. (a) What are meristems? Explain their types highlighting their location in plant body and their roles. 4
- (b) Write down the steps of DNA finger printing. (Analyzing DNA) 4