

Roll No. _____

(To be filled in by the candidate)

(Academic Sessions 2020 – 2022 to 2022 – 2024)

BIOLOGY224-1st Annual-(INTER PART – II)

Time Allowed : 20 Minutes

Q.PAPER – II (Objective Type)

GROUP – I

Maximum Marks : 17

PAPER CODE = 8463

LHR-1-24

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	Nervous system of hydra lacks : (A) Tentacle receptors (B) Superficial nerve net (C) Ganglia (D) Motor neurons
2	A set of three nucleotides on tRNA specifying a particular amino acid, is called : (A) Code (B) Genetic code (C) Codon (D) Anticodon
3	The oldest homologous structures are : (A) Gills (B) Lungs (C) Human ear muscles (D) Eyes
4	Which one of the following is not a nutritional disorder : (A) Kwashiorkor (B) Goitre (C) Scurvy (D) Osteoarthritis
5	The removal of salts and water by sweating is meant for : (A) Excretion (B) Osmoregulation (C) Thermoregulation (D) Both A and C
6	Ex-vivo gene therapy is used to treat children having : (A) SCID (B) AIDS (C) Cystic fibrosis (D) Both A and B
7	What is not true about sclerenchyma : (A) Lignin (B) Branched pits (C) Non-living (D) Elastic

(Turn Over)

(2)

1-8	A normal man whose father is albino, has married an albino woman. Which disorder other than albinism can occur in his children : (A) Protanopia (B) Leukemia (C) Deuteranopia (D) Both B and C
9	Grassland in tropical climate is called : (A) Prairies (B) Savanna (C) Pampas (D) Taiga
10	Root primordium develops root cambium, also called as : (A) Pericycle (B) Pith (C) Cortex (D) Both A and C
11	What is involved in ecdysis : (A) Nervous system (B) Ecdysone (C) Enzyme (D) All of these
12	In a nucleotide, Uracil is attached to pentose sugar at carbon No : (A) 3 (B) 2 (C) 1 (D) 5
13	Climacteric is associated with production of : (A) Ethene (B) Auxins (C) Cytokinin (D) Both A and C
14	Number of chromosomes in Turner's syndrome individual's cell is : (A) 45 + X (B) 44 + Y (C) 44 + X (D) 46 + X
15	Indicate the incorrect matching among the following : (A) Amygdala ↔ rage (B) Pons ↔ hunger (C) NAA ↔ fruit set (D) Auxins ↔ geotropism
16	A patient that lacks a gene coding for trans-membrane carrier of chloride ions, suffers from : (A) SCID (B) Cystic fibrosis (C) Cancer (D) Hodgkin's lymphoma
17	Which of the following is a macronutrient : (A) Iron (B) Iodine (C) Molybdenum (D) Phosphorus

192-224-I-(Objective Type)- 10000 (8463)

BIOLOGY224-1st Annual-(INTER PART – II)

Time Allowed : 2.40 hours

PAPER – II (Essay Type)

GROUP – I

Maximum Marks : 68

SECTION – I

LHR-1-24

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

16

- (i) “Nature of excretory products is related to habitats”. Justify the statement.
- (ii) How are plants adapted to low temperature?
- (iii) Why the trees are called environmental buffers?
- (iv) Elaborate the role of corpus luteum in menstrual cycle.
- (v) What do you know about “Rigor Mortis”? (vi) What are the affects of antidiuretic hormone?
- (vii) Differentiate tetany and tetanus. (viii) Draw the labelled diagram of a sarcomere.
- (ix) Where Thal and Thar are situated? (x) Enlist ecosystems in Pakistan.
- (xi) How can we save energy? (xii) What is menopause? At what age it starts?

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

16

- (i) What are Meissners corpuscles?
- (ii) Define Neurotransmitters? Also give examples.
- (iii) Write down importance of midbrain.
- (iv) Distinguish between homozygote and heterozygote.
- (v) Why sex influenced traits are common in one sex?
- (vi) Why urine is preferable vehicle for biotechnology product?
- (vii) Define pleiotropy with examples. (viii) Write down goals of human genome project.
- (ix) What problem is related to Denitrification? (x) Distinguish between Habitat and Niche?
- (xi) Give sketch of a food web. (xii) List the different ways to get gene of interest.

(Turn Over)

(2)

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

12

- (i) How temperature affects growth of plant?
- (ii) Differentiate apical dominance and compensatory effect.
- (iii) How does DNA fibre coil tightly?
- (iv) What are the genetic basis of sickle cell anaemia?
- (v) How recombination of genes arise during meiosis?
- (vi) Define genetic code. Give an example. (vii) What is apoptosis?
- (viii) Biogeography is an evidence of evolution. How? (ix) What are hydrothermal vents?

SECTION – II**Note : Attempt any THREE questions.**

- 5. (a) Write down the classification scheme of animals on the basis of thermal characteristics of their environment. 4
- (b) What is non-disjunction? Write its genetic consequence with the example of Down's Syndrome. 4
- 6. (a) What are joints? Discuss different types of joints. 4
- (b) Write a detailed note on nitrogen cycle. 4
- 7. (a) Give detail of major factors which are involved in resting membrane potential. 4
- (b) Explain endosymbiont hypothesis for origin of eukaryotes. 4
- 8. (a) Describe human menstrual cycle. 4
- (b) State law of independent assortment, prove it with one example. 4
- 9. (a) What is growth? Describe different phases of growth in plants. 4
- (b) Write a comprehensive note on gene sequencing. 4