

Roll No. **LHR-G1-12-19** (To be filled in by the candidate)

(Academic Sessions 2015 – 2017 to 2017 – 2019)

**BIOLOGY**

219-(INTER PART – II)

Time Allowed : 20 Minutes

Q.PAPER – II ( Objective Type )

GROUP – I

Maximum Marks : 17

**PAPER CODE = 8463**

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 simplest form of learning is : (A) Habituation (B) Imprinting (C) Insight learning (D) Latent learning
2	The particular array of chromosomes that an individual possesses is called : (A) Genome (B) Genepool (C) Karyotype (D) DNA-Duplex
3	The change in frequency of alleles at a locus that occurs by chance is called : (A) Genepool (B) Genetic (C) Genetic drift (D) Mutation
4	Upper layer of earth's crust is : (A) Dust (B) Sand (C) Land (D) Soil
5	The malpighian tubules remove nitrogenous wastes from the : (A) Lymph (B) Haemolymph (C) Coelomic fluid (D) Hind gut
6	Hypophosphatemic rickets is an X-linked : (A) Dominant trait (B) Co-dominant trait (C) Over-dominant trait (D) Recessive trait
7	The disease which causes immobility and fusion of vertebral joints is called : (A) Arthritis (B) Rickets (C) Sciatica (D) Spondylosis
8	The pairing of homologous chromosomes is completed in phase of meiosis : (A) Leptotene (B) Zygotene (C) Pachytene (D) Diplotene
9	Which of the following biome is most fragile : (A) Tundra (B) Desert (C) Grassland (D) Forest
10	Discharge of egg from ovary is called : (A) Gametogenesis (B) Oogenesis (C) Ovulation (D) Menstrual cycle
11	Bats and humming birds are called : (A) Ectoderm (B) Endotherms (C) Ecotherms (D) Heterotherms
12	Clear cytoplasm, in an ascidian zygote produces : (A) Muscle cells (B) Larval epidermis (C) Gut (D) Notochord
13	Corpus luteum secretes a hormone called : (A) Progesterone (B) Oestrogen (C) Oxytocin (D) Testosterone
14	Cell death due to tissue damage is called : (A) Apoptosis (B) Necrosis (C) Metastasis (D) Suicide
15	The sclerenchyma cells found in seed coats and nutshells are called : (A) Fibers (B) Sclereides (C) Tracheids (D) Vessels
16	The enzyme luciferase is produced in an insect called : (A) Housefly (B) Firefly (C) Butterfly (D) Tsetsefly
17	Primary succession, which starts in a pond ecosystem is termed as : (A) Derosere (B) Hydrosere (C) Ecosere (D) Xerosere

**192-219-I-(Objective Type)- 6625 (8463)**

Roll No

**LHR-C21-12-A**

(To be filled in by the candidate)

(Academic Sessions 2015 – 2017 to 2017 – 2019)

**BIOLOGY**

219-(INTER PART – II)

Time Allowed : 2.40 hours

PAPER – II ( Essay Type )

GROUP – I

Maximum Marks : 68

**SECTION – I****2. Write short answers to any EIGHT (8) questions :**

16

- (i) Differentiate between osmoconformers and osmoregulators.
- (ii) Define counter current multiplier.
- (iii) Skin does not come within the definition of excretory organ. Comments.
- (iv) What is jet propulsion? Explain with an example.
- (v) Differentiate between effective stroke and recovery stroke.
- (vi) What is sleep movement? Also write an example.
- (vii) Give any two requirements to produce recombinant DNA.
- (viii) Give the role of restriction endonucleases.
- (ix) List the name of eight cities of Pakistan where desert ecosystem occurs.
- (x) Differentiate between alpine and boreal coniferous forests.
- (xi) How man is responsible to increase the number of endangered species?
- (xii) Differentiate between deforestation and afforestation.

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

16

- (i) How do plants respond to environmental stresses?
- (ii) List the four types of hormones with examples.
- (iii) Differentiate between CNS and PNS.
- (iv) Define vernalisation. Which parts of plants received its effects?
- (v) Differentiate between oviparous and viviparous.
- (vi) Explain the role of gonadotropins in human female.
- (vii) Write formula to calculate recombination frequency.
- (viii) Define codominance with an example.
- (ix) In grasshoppers male has 23 chromosomes, while female has 24 chromosomes. Work out.
- (x) Differentiate between food chain and food web.
- (xi) Differentiate between autecology and synecology.
- (xii) What roles are played by links of food chain.

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

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- (i) Write any four causes of aging.
- (ii) What are neoblasts and what is their role in development?
- (iii) Write any two differences between normal cells and cancer cells.
- (iv) How meiosis plays its role in producing genetic variations?
- (v) Why cap and tail is added to eukaryotic RNA, when it leaves from nucleus to cytoplasm?
- (vi) Write two characteristics of DNA polymerase III.
- (vii) Define promoter and what is its role?
- (viii) What is membrane invagination hypothesis?
- (ix) Describe briefly, how molecular biology supports evolution.

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

5. (a) Describe the excretion in cockroach. Also draw labelled diagram. 3,1
- (b) How the flow of energy in food chain of an ecosystem takes place? 4
6. (a) Explain sliding filament model. How the bridges are controlled? 2,2
- (b) Explain work of Beadle and Tatum on Neurospora with help of a figure. 2,2
7. (a) Explain the role of hormones produced by posterior lobe of pituitary gland. 4
- (b) Describe importance of forests. 4
8. (a) Describe male reproductive system in man. 4
- (b) Explain the phenomenon of sex determination in humans. 4
9. (a) Explain Darwin theory of natural selection. 4
- (b) Write a note on regeneration. 4

192-219-I-(Essay Type)-26500