

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

(Academic Sessions 2018 – 2020 to 2020 – 2022)

BIOLOGY

222-(INTER PART – II)

Time Allowed : 20 Minutes

Q.PAPER – II (Objective Type)

GROUP – I

Maximum Marks : 17

PAPER CODE = 8463 **LHR-91-22**

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	Parthenocarpy is artificially induced by : (A) Cytokinins (B) Auxin (C) Ethene (D) Absciscic acid
2	Pairing of homologous chromosomes is called : (A) Bivalent (B) Tetrad (C) Synapsis (D) Crossing over
3	According to --- hypothesis, aerobic bacteria developed into mitochondria : (A) Symbiotic (B) Endosymbiont (C) Mutualistic (D) Both A and B
4	What is our principle source of energy : (A) Nuclear energy (B) Geothermal energy (C) Solar energy (D) Tidal energy
5	Bats use ---- for evaporative cooling : (A) Saliva (B) Urine (C) Shivering (D) Both A and B
6	pBR 322 would enable separating out colonies of bacteria in a medium containing : (A) Tetracycline (B) Ampicillin (C) Gel (D) Both A and B
7	Sarcoplasmic reticulum surround each : (A) Myofilament (B) Myofibril (C) Sarcomere (D) Both A and B
8	The position of a gene on the chromosome is called its : (A) Locus (B) Genotype (C) Phenotype (D) All of these
9	Fresh water ecosystem covers less than : (A) 10% (B) 05% (C) 02% (D) 01%
10	The epiblast is presumptive : (A) Ectoderm (B) Mesoderm (C) Endoderm (D) Both A and B
11	The membrane that bounds vacuole is called : (A) Tonoplast (B) Symplast (C) Apoplast (D) All of these
12	Chromosomal part which uncoils during interphase is called : (A) Euchromatin (B) Heterochromatin (C) Chromatin (D) Both A and B
13	A plant has a growth pattern called : (A) Closed growth (B) Open growth (C) Primary growth (D) Secondary growth
14	Autosomal non-disjunction may occur in other than : (A) 20 th chromosome (B) 21 st chromosome (C) 23 rd chromosome (D) None of these
15	The normal speed of nerve impulse in human is --- per second : (A) 100 m / sec (B) 120 m / sec (C) 150 m / sec (D) None of these
16	During PCR thermostable enzyme is used named as : (A) DNA polymerase (B) Taq polymerase (C) Both A and B (D) None of these
17	The actual location of place where an organism lives is called : (A) Biosphere (B) Lithosphere (C) Atmosphere (D) Habitat

Roll No (To be filled in by the candidate)

(Academic Sessions 2018 – 2020 to 2020 – 2022)

BIOLOGY

222-(INTER PART – II)

Time Allowed : 2.40 hours

PAPER – II (Essay Type)

GROUP – I

Maximum Marks : 68

SECTION – I

LHR 41-22

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

16

- (i) How animals of hypotonic environment osmoregulate? Give examples.
- (ii) Animals excrete nitrogenous wastes with digestive feces. Give example and significance of this adaptation.
- (iii) How land animals trap a thick layer of air around the body? Give its significance.
- (iv) What is Ecdysis?
- (v) Differentiate Hinge Joint and Ball and Socket joint by giving example.
- (vi) What is arthritis?
- (vii) Define seed dormancy. Give its significance.
- (viii) Can we find a fruit without seeds? Give example.
- (ix) What is eutrophication?
- (x) Differentiate between prairies and savanna.
- (xi) Define soil. Give its basic constituents.
- (xii) What are industrial effluents? Give their two effects.

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

16

- (i) What happens when an impulse reaches a synaptic knob?
- (ii) Elaborate habituation as simplest form of learning.
- (iii) Give negative effects of nicotine.
- (iv) What is a sex limited trait?
- (v) State sexual dimorphism in drosophila.
- (vi) Define linkage group.
- (vii) How gene therapy helps cancer patients?
- (viii) What are molecular scissors? How were they obtained?
- (ix) Write down the role of lambda phages as a vector.
- (x) Interpret the role of decomposers in recycling.
- (xi) Compare hydrosere with that of xerosere.
- (xii) What is parasitism? Write down its importance.

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

12

- (i) Compare gastrulation and organogenesis.
- (ii) How inhibitory effect and compensatory effect are caused?
- (iii) What is Karyotype? Give its application in species recognition.
- (iv) Give the composition of chromosomes.
- (v) Differentiate between heterochromatin and euchromatin.
- (vi) What is mitotic apparatus?
- (vii) How cancer cells can be distinguished from normal cells?
- (viii) What is modern synthesis or Neo-Darwinism?
- (ix) What are analogous organs? Give example.

SECTION – II

Note : Attempt any THREE questions.

5. (a) Discuss the temperature classification of animals. 4
- (b) Discuss nitrogen depletion and its remedies. 4
6. (a) Compare sclerenchyma cells with collenchyma cells. 4
- (b) What is transcription? How it is carried out in cell? 4
7. (a) Explain the steps of that mechanism which maintains the concentration of secretions in the body. 4
- (b) Write a note on ozone depletion. 4
8. (a) Describe the phenomena of fruit set and fruit ripening. 4
- (b) Explain the process of crossing over with the help of diagram. 4
9. (a) Define and explain embryonic induction. 4
- (b) $p + q = 1$ 4
- Argue that this balance shown in theorem may not vary for a non-evolving population? 4