

(To be filled in by the candidate)

(Academic Sessions 2017 – 2019 to 2019 – 2021)

BIOLOGY

221-(INTER PART – II)

Time Allowed : 20 Minutes

Q.PAPER – II (Objective Type)

GROUP – II

Maximum Marks : 17

PAPER CODE = 8464

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 part of the brain which is best developed in birds : (A) Cerebellum (B) Medulla (C) Hippocampus (D) Pons
2	If the centromere is located in the middle of the chromosome it is called : (A) Metacentric (B) Sub metacentric (C) Telocentric (D) Acrocentric
3	The actual remains or traces of organisms that lived in the ancient geological times are called : (A) Analogous organs (B) Homologous organs (C) Vestigial organs (D) Fossils
4	The rain fall less than 25 to 50 cm is found in : (A) Desert (B) Grassland (C) Temperate deciduous forest (D) Tropical rain forest
5	The blood passing through glomerulus is filtered into : (A) Bowman's capsule (B) Ureter (C) Bladder (D) Urethra
6	The Ginkgo plant is : (A) Monoecious (B) Dioecious (C) Tricocious (D) Polyecious
7	In plant cell turgor pressure is generated by : (A) Cell wall (B) Cell membrane (C) Mitochondria (D) Vacuole
8	XXX condition is found in : (A) Patau (B) Edward (C) Turner (D) Jacobs
9	In Pakistan grassland ecosystem is found in : (A) Kara Koram (B) Shogran (C) Malam Jabba (D) North Kallat
10	In the development of chick the 24 hours embryo is called : (A) Morulla (B) Gastrula (C) Blastula (D) Neurula
11	The hormone which actively transport water from filtrate in collecting tubules back to kidney is : (A) Aldosterone (B) ADH (C) Testosterone (D) Oxytocine
12	Healing of fracture and repair of the skin wound is example of : (A) Meiosis (B) Regeneration (C) Development (D) Necrosis
13	The follicle cells after release of the egg are modified to form special structure called : (A) Follicle atresia (B) Corpus luteum (C) Uterus (D) Placenta
14	The stage which may lasts for days, weeks or even years is : (A) Leptotene (B) Zygotene (C) Pachytene (D) Diplotene
15	Which one of the following is a facial bone : (A) Frontal (B) Occipital (C) Vomer (D) Sternum
16	The patients lack a gene that code for trans-membrane carrier of the chloride ions : (A) Cancer (B) ADA (C) SCID (D) Cystic fibrosis
17	Which of the following is biotic factor : (A) Topography (B) Gravity (C) Soil energy (D) Decomposers

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

16

- (i) Differentiate between osmoconformers and osmoregulators.
- (ii) Define uremia. What is its permanent treatment?
- (iii) Define pyrexia and pyrogens.
- (iv) Define Herniation of disc. How is it treated?
- (v) Differentiate between bone and cartilage.
- (vi) Give two modifications in the exoskeleton of arthropods.
- (vii) What is seed dormancy? Write its significance.
- (viii) Write the functions of sertoli cells and interstitial cells.
- (ix) Characterize limnetic zone and profundal zone of fresh water lake.
- (x) Write down the name of two dominant plants and two dominant animals of temperate deciduous forest.
- (xi) What is nutrient cycle? What is driving force behind these cycles?
- (xii) Write four effects of removal of forests.

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

16

- (i) What condition result due to hypo and hyper function of cortical hormones?
- (ii) Write the actions of nicotine on nervous and circulatory system.
- (iii) Define imprinting with the example of precocial birds.
- (iv) Differentiate between X-linked dominant and X-linked recessive traits.
- (v) Define monohybrids and dihybrids.
- (vi) Define linkage. Enlist linkage groups of chromosome no. 11 and 23.
- (vii) What do you know about palindromic sequence? Give an example.
- (viii) What are protoplasts? Give scientific name of biodegradable plastic.
- (ix) Give the process of coronary artery angioplasty briefly, using biotechnology.
- (x) Differentiate between food chain and food web.
- (xi) Define ammonification and nitrification.
- (xii) State parasitism and its significance.

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

12

- (i) Define apical meristem.
- (ii) What is inhibitory effect?
- (iii) Define transcription.
- (iv) Differentiate between heterochromatin and euchromatin.
- (v) What are three main components of a DNA?
- (vi) Differentiate between leptotene and zygotene.
- (vii) Explain Turner's syndrome.
- (viii) How genetic drift effect gene frequency?
- (ix) What are homologous organs?

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

5. (a) Explain the structure of nephron. 4
- (b) Describe predation and parasitism with their significance. 4
6. (a) Write a note on sclerenchyma cells and collenchyma cells. 4
- (b) Explain Watson and Crick Model of DNA. 4
7. (a) What is resting membrane potential? How is resting membrane potential maintained across neurolemma? 4
- (b) Describe the importance of forests. 4
8. (a) Describe fruit set and fruit ripening in angiosperms. 4
- (b) What is X-linked recessive inheritance? Explain it with an example. 4
9. (a) Describe various types of meristems. 4
- (b) How did eukaryotes evolve from prokaryotes? 4