Roll No. of Candidate: _____ GRW

Biology (New Scheme) **(INTER PART-II) 419-(II)** **Paper: II**
Time: 20 Minutes **OBJECTIVE** **Marks: 17**
Code: 8463

Note: You have four choices for each objective type question as A, B, C and D. The choice which you think is correct, fill that circle in front of that question number. Use marker or pen to fill the circles. Cutting or filling two or more circles will result in zero mark in that question. Attempt as many questions as given in objective type question paper and leave other blank.

1.

1. Ozone depletion is commonly caused by:
   A) CFCs B) CO_2 C) smoke D) smog
2. A gamete without any sex chromosome is called:
   A) heterogamete B) nullo gamete C) nill gamete D) homogamete
3. Coniferous forests located at high altitude are called:
   A) boreal B) tundra C) alpine D) savanna
4. The paired chromosomes repel each other and begin to separate in subphase of meiosis-I is:
   A) zygotene B) diakinesis C) diplotene D) pachytene
5. Disease in living organisms caused by parasites is called:
   A) parasitism B) infestation C) infection D) predation
6. Separation of homologous chromosomes occurs during:
   A) prophase B) metaphase C) anaphase D) telophase
7. Which one is not a vestigial organ of human being?
   A) appendix B) coccyx C) nictitating membrane D) eye lid
8. Which one is not a part of limbic system?
   A) thalamus B) hypothalamus C) amygdala D) hippocampus
9. Transgenic bacteria are produced in large vats called:
   A) transducer B) bioreactor C) biomultiplier D) culter media
10. Tetany is a disease caused by:
    A) low calcium in blood B) low vit.D in blood
    C) low sugar in blood D) high calcium in blood
11. The phenomena in which transfer of genetic material from one cell to another and can alter the genetic make up of the recipient cell is:
    A) translocation B) translation C) transduction D) transformation
12. The inactive non conducting wood is called:
    A) primary wood B) secondary wood C) heart wood D) sap wood
13. The negative physiological changes in our body are called:
    A) degeneration B) abnormalities C) aging D) regeneration
14. Each cardiac beat supplies _____ of blood to human kidney:
    A) 10 % B) 15 % C) 20 % D) 25 %
15. During pregnancy, luteotropic hormone LTH and placental lactogen stimulate Mammary development in preparation for:
    A) gestation B) lactation C) after birth D) miscarriage
16. Detection of changes and signalling for effector's response to control system is called:
    A) –ive feedback mechanism B) feedback mechanism
    C) transformation D) nephridial system
17. Some times partheno carpy is artificially induced for commercial purposes as in tomato, peppers by adding:
    A) gibberellins B) cytokinins C) auxins D) ethene

Biology (New Scheme) (INTER PART-II) 419 GKW Paper: II
Time: 2:40 Hours SUBJECTIVE Marks: 68
Note: Section I is compulsory. Attempt any THREE (3) questions from Section II.

(SECTION – I)

2. Write short answers to any EIGHT questions. $(2 \times 8 = 16)$

i. Compare Hypotonic environment with hypertonic environment.
ii. What are "Malpighian Tubules"? In which organism they are found?
iii. Enlist the three steps in urine formation in human.
iv. Define secondary growth. Give its significance.
v. Name the types of turgor movements.
vi. What is cramp? Give its two causes.
vii. What are the two goals of the human genome project?
viii. What are probes? Give its use.
ix. What are planktons? Give its two types.
x. Differentiate between coniferous alpine and coniferous boreal forest.
xi. Name any two diseases which are caused due to nutritional deficiency.
xii. Define pollution. Give its four types.

3. Write short answers to any EIGHT questions. $(2 \times 8 = 16)$

i. What is the main function of parathyroid gland?
ii. Write down commercial applications of Ethene.
iii. Define the term effectors. Write down names of two important effectors of humans.
iv. Define diplohaplontic life cycle in plants.
v. How you define oviparous and viviparous?
vi. Define test tube babies.
vii. What do you know about monohybrid and dihybrid crosses?
viii. What do you know about "Epistasis"?
ix. What are "Polygenic Traits"? Give an example from human beings.
x. How xerosere differentiate from hydrosere?
xi. What is "Prey and Predator"?
xii. Define the term "Plant Biomass"?

4. Write short answers to any SIX questions. $(2 \times 6 = 12)$

i. Differentiate between point mutation and chromosomal aberrations.
ii. What is the role of RNA polymerase in Transcription?
iii. Briefly describe Alkaptonuria disease.
iv. Differentiate between inhibitory and compensatory effect.
v. What is "Discoidal Cleavage"?
vi. What changes occur in cell during metaphase of mitosis?
vii. What is non-disjunction of chromosomes?
viii. Define homologous organs, give one example.
ix. Briefly describe, how biogeography provides an evidence for evolution?

(SECTION – II)

5. (a) Explain the process of excretion in Earthworm with labelled diagram. 2+2
(b) Describe two major forms of succession. 4

6. (a) Define Antagonism. Discuss the case of Elbow joint with their phenomenon. 4
(b) Write a note on Watson and Crick model of DNA. 4

7. (a) What are receptors, discuss their types. 2+2
(b) Discuss "Greenhouse Effect" and "Acid Rain". 4

8. (a) Describe human female's menstrual cycle. 1+3
(b) Define epistasis and explain it with Bomby phenotype. 4

9. (a) What is "Regeneration"? Discuss it in various animals. 4
(b) Describe the main points of theory of natural selection.