BIOLOGY
GROUP : FIRST

TIME: 20 MINUTES
MARKS: 17

OBJECTIVE

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 marks in that question.

DGK-1-24

QUESTION NO. 1

1	Antibody used for treatment of cancer is obtained from (A) Soyabean (B) Maiz (C) Corn (D) Arabidopsis
2	The compound which made environment of earth from reducing to oxidizing is (A) Carbon dioxide (B) Nitrogen dioxide (C) Oxygen (D) Ozone
3	The profession of a species in an ecosystem is called (A) Habit (B) Habitat (C) Niche (D) Trophic level
4	Thar is desert ecosystem of (A) Punjab (B) Sindh (C) Balochistan (D) Khyber Pakhtoon Khawah
5	In sea , tides are generated due to pull of (A) Earth (B) Sun (C) Moon (D) Supiter
6	Large leaves are found in (A) Xerophytes (B) Mesophytes (C) Hydrophytes (D) Sciophytes
7	Opening of buds is due to (A) Photonasty (B) Epinasty (C) Hyponasty (D) Thermonasty
8	The structures help to maintain minerals in the blood (A) Bone (B) Muscle (C) Skin (D) Gland
9	Neurons responsible to carry nerve impulse from central nervous system to effector are (A) Sensory neuron (B) Associative neuron (C) Intermediate neuron (D) Motor neuron
10	Certain human male fail to develop secondary sexual characters due to absence of (A) Progesteron (B) Oxytocin (C) Testosteron (D) Luteonizing hormone
11	Eggs with diploid number of chromosomes are produced as a result of (A) Normal mitosis (B) Normal meiosis (C) Modified mitosis (D) Modified meiosis
12	Apical dominance is caused by (A) Auxin (B) Cytokinin (C) Gibberellin (D) Ethene
13	Complete set of chromosomes in an organism is called (A) Genome (B) Genotype (C) Phenotype (D) Karyotype
14	In a nucleotide , Nitrogen base is attached to carbon number ..... of pentose sugar (A) 1 (B) 2 (C) 3 (D) 4
15	An example of cell that enters G0 – phase permanently during cell cycle is (A) Gland cell (B) Skin cell (C) Nerve cell (D) Bone cell
16	Gene I for blood group is found on chromosome number (A) 6 (B) 7 (C) 8 (D) 9
17	An example of restriction endonuclease is (A) Taq polymerase (B) ECoR1 (C) Gyrase (D) Ligase

SECTION-I

QUESTION NO. 2 Write short answers any Eight (8) of the following 16

i	Differentiate between hypotonic and hypertonic environment
ii	Briefly write about pyrexia
iii	How does high temperature affect plant metabolism ? Write the way plants manage with high temperature.
iv	Compare epinasty and hyponasty
v	Why does human body become stiff after death ? Name that particular condition
vi	How would you justify that amount of work a muscle does is reflected in changes in the muscle itself ?
vii	How are identical twins formed ?
viii	Differentiate between long day and short day plants
ix	What are natural grass lands in the world are used for and how human activities are deteriorating these biomes ?
x	What are taiga ? What kinds of environmental conditions are found there ?
xi	Define the term Demography
xii	Differentiate between reforestation and afforestation

QUESTION NO. 3 Write short answers any Eight (8) of the following 16

i	Give names of two synthetic auxins with their effects
ii	What are mechanoreceptors ? Give their role
iii	What is role of limbic system in brain ?
iv	Does jumping genes act as source of mutation ?
v	Suggest how type A and AB parents could produce a child with blood group O
vi	Define over dominance with an example
vii	Define palindromic sequences
viii	What is PCR ? Give its function
ix	What is anther culture technique ? Give its role
x	What is biome ? Give names of two biomes
xi	Give importance of producers in ecosystem
xii	How food chain is different from food web ?

QUESTION NO. 4 Write short answers any Six (6) of the following 12

i	What is intercalary meristem ? Describe its role
ii	Enlist some symptoms of aging
iii	Describe the importance of promoter region during transcription
iv	What are chromosomal aberrations ?
v	Describe chemical composition of chromosome
vi	Compare apoptosis with necrosis
vii	How a cancerous cell differs from a normal cell ?
viii	Differentiate between endangered and extinct species with examples
ix	What is membrane invagination hypothesis ?

SECTION-II

Note: Attempt any Three questions from this section 8 x 3 = 24

Q.5.(A)	What is kidney stone ? Describe its cure
(B)	Define interphase , Explain its various sub-phases
Q.6.(A)	What is bone fracture ? Describe the mechanism of their repair
(B)	Define biogeochemical cycle. Discuss nitrogen cycle with labeled diagram
Q.7.(A)	Write a detailed note on secretions of Adrenal glands
(B)	What are endangered species ? What measures could be adopted for their preservation
Q.8.(A)	Explain the human male reproductive system in detail
(B)	Discuss genetic basis of ABO system in humans. Also give their importance in blood transfusion
Q.9.(A)	Explain the role of nucleus in development with reference to Acetabularia
(B)	What is genomic library ? How would you locate a gene of interest in the library