

BIOLOGY, GROUP FIRST

NEW COURSE

ACADEMIC SESSION: 2015 - 2017 TO 2017 - 2019

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 mark in that question.

QUESTION NO. 1

- 1 Most cartilaginous fishes possess salt excreting organs known as the
(A) Caecal gland (B) Foetal gland (C) Rectal gland (D) Sebaceous gland
- 2 In human beings, the homeostatic thermostat is present in a
(A) Amygdala (B) Hippocampus (C) Thalamus (D) Hypothalamus
- 3 The collenchymatous cells are highly lignified and found in the
(A) Epidermis (B) Cortex (C) Pith (D) Xylem
- 4 Tube feet are locomotory organs of
(A) Jelly fish (B) Silver fish (C) Cuttle fish (D) Star fish
- 5 Flowering is induced in pineapple by growth hormone called
(A) Gibberellins (B) Absciscic acid (C) Cytokinins (D) Ethene
- 6 Low temperature treatment given to plants stimulates the production of vernalin which is actually the
(A) Auxin (B) Gibberellins (C) Cytokinins (D) Ethene
- 7 Most of the major organs of embryo are formed within the
(A) 10 week (B) 12 week (C) 14 week (D) 16 week
- 8 Gray vegetal cytoplasm gives rise to
(A) Larval epidermis (B) Muscle cell (C) Gut (D) Neural tube
- 9 Sickle cell anemia is caused due to change of glutamic acid to
(A) Histidine (B) Lucine (C) Valine (D) Prolin
- 10 The spindle fibers are composed of traces of RNA and a protein called
(A) Insulin (B) Actin (C) Myosin (D) Tubulin
- 11 Separation of homologous chromosomes occur during
(A) Prophase (B) Metaphase (C) Anaphase (D) Telophase
- 12 If an offspring has its parental types 30+30 and recombinant types 20+20. What is the percentage of its recombination frequency.
(A) 20 (B) 40 (C) 60 (D) 80
- 13 A team of Japanese scientists are attempted to introduce the C4 Cycle into the
(A) Wheat (B) Rice (C) Corn (D) Cotton
- 14 Flagella may have arisen through ingestion of Prokaryotes like
(A) Clostridium (B) Vibro (C) Spirochetes (D) Salmonella
- 15 Relationship between insects and flowering plants is the example of
(A) Commensalism (B) Mutualism (C) Predation (D) Parasitism
- 16 Andropogon, Stipa and Panicum are found in ecosystem called.
(A) Grass land (B) Desert (C) Tundra (D) Coniferous
- 17 The percentage of land under cultivation is
(A) 30 % (B) 21% (C) 11% (D) 5%

SECTION-I**QUESTION NO. 2 Write short answers any Eight (8) questions of the following**

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1	Write two adaptations of xerophytes.
2	Make sketch of urea cycle.
3	Briefly describe hemodialysis.
4	What is sciatica and its causes.
5	Differentiate between active and passive flight.
6	What are synovial joints? Write the names of its two types.
7	Write two practical uses of DNA finger printing technology.
8	What are restriction endonucleases?
9	What is limnetic zone, mention its life.
10	Write about two factors which influence life on land
11	What is population explosion, write its two causes.
12	What is algal bloom?

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

16

1	Write down the functions of sympathetic nervous system.
2	What are two similarities of nervous coordination and chemical coordination?
3	Define diurnal rhythms and circannual rhythms
4	Define asexual and sexual reproduction.
5	What do you know about apomixis?
6	Write down the function of ACTH released from fetal pituitary.
7	Define test cross.
8	What is a genic system for determination of sex?
9	Define Pleiotropy with an example.
10	Define biogeochemical cycle.
11	How Niche is different from habitat?
12	Define food chain, draw an example of simple food chain.

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

12

1	Define aging. Give four signs of aging.
2	Compare determinate with indeterminate growth.
3	Differentiate between malignant and benign tumor.
4	What is the cause and symptoms of Down's syndromes.
5	Name any four animal species declared extinct in Pakistan.
6	How molecular biology provides an evidence for evolution?
7	Write down the structural formulae of cytosine and thiamine.
8	What is alkaptonuria? Give its cause.
9	Differentiate between template and coding strand.

SECTION-II**Note: Attempt any Three questions from this section**

8 x 3 = 24

Q.5.(A)	Explain different stages of xerosere succession.
(B)	Describe excretion in plants.
Q.6.(A)	Describe the mechanism of repair of broken bone.
(B)	How Alfred Hershey and Martha Chase proved that DNA is hereditary material?
Q.7.(A)	Differentiate between nervous system of Hydra and Planaria.
(B)	Write a note on degradation and depletion of energy resources.
Q.8.(A)	Sketch the life cycle of an Angiosperm.
(B)	Define sex linkage. Discuss X-linked dominant inheritance in humans.
Q.9.(A)	Define Meristem, describe its various types.
(B)	Write a note on endangered species.