Federal Board HSSC-II 2017

BIOLOGY (Revised Syllabus)

SECTION-A (Marks 17)

Time allowed: 25 Minutes

Q.1 Circle the correct option i.e. A/B/C/D. Each part carries one mark.

(i) Synthesis of nitrogenovis wastes like NH_3 urea and uric acid is the function of:

A. Kidney B. Liver
C. Stomach D. Spleen

(ii) Metanephridia are excretory structure in:

A. Pianaria B. Earthworm
C. Cockroach D. Man

(iii) The movement in response to touch is called:

A. Phototropism B. Chemotropism
C. Thigmotropism
D. Geotropism

(iv) Muscle fatigue is caused by:

A. CO_2

B. Accumulation of Lactic acid
C. Ethyl alcohol D. Fumaricacid

(v) **Which one of the following is responsible for delay in ageing of fresh leaf crops as well as keeping flowers fresh?**

A. Ethene B. Abscisic acid
C. Cytokinins D. Auxins

(vi) **In humans, how many pairs of cranial nerves are there:**

A. 10 B. 12
C. 14 D. 20

(vii) **Gastrin is the hormone produced by the:**

A. Liver B. Pancreas
C. Stomach D. Ktdney

(viii) **Evolution of pollen tube is an important step in land adaptation by the:**

A. Bryophytes B. Thallophytes
C. Spermatophytes
D. Pteridophytes

(ix) **How many nucleotides are present in a codon?**

A. One B. Two
C. Three D. Four

(x) **Who experimentally proved that DNA replicates in a semi-conservative manner?**

A. Watson and Crick
B. Meselson Stahl
C. Hershey and Martha Chase
D. Karl Correns

(xi) Branch of Biology which deals with the study of ageing is called:

A. Parasitology B. Gerontology
C. Teratology D. Ecology

(xii) Non-Disjunction takes place during:

A. Mitosis B. Budding
C. Meiosis D. Binary fission

(xiii) Certain genes do not settle peacefully on their loci, they keep on hopping on different loci on the same chromosome or other chromosomes and hence are called as:

A. Lost genes
B. Fixed genes
C. Jumping genes
D. Migrated genes

(xiv) Severe Combined Immunodeficiency Syndrome (SCID) is treated by:

A. Radiotherapy
B. Chemotherapy
C. Physiotherapy
D. Gene therapy

(xv) Who presented the book "The Origin of Species"?

A. Wallace B. Mendel
C. Darwin D. Lamarck

(xvi) In xerosere succession which is the third stage?

A. Crustose lichen stage
B. Moss stage
C. Foliage stage
D. Herbaceous stage

(xvii) **Grassland present in the temperate climates are also called as:**

A. Tundra B. Desert
C. Prairies
D. Coniferous forest

SECTION - B (Marks 42)

Q.2 Answer any FOURTEEN parts. The answer to each part should not exceed 3 to 4 lines. (14×3=42)

(i) What is Pyrexia?
(ii) What is Sciatica?
(iii) Write a short note on Neurons?
(iv) What do you know about gastrulation?
(v) What was the work of Hans Dietrisch?
(vi) What are the various stages of interphase?
(vii) What is phenylketonuria?
(viii) What do you know about tumors?
(ix) Describe briefly Mongolism?
(x) What do you understand from cystic fibrosis?
(xi) How is sexual dimorphism exhibited in Drosophtia?
(xii) What is ecology? Differentiate between Autecology and Synecology.
(xiii) What do you know about the biotic components of an ecosystem?
(xiv) Which idea is known as endosymbiont hypothesis?
(xv) Why the trees are called environmental buffers?
(xvi) What are cerebral hemispheres?
(xvii) Write short note on uremia?

(xviii) What is partial dominance?

(xix) What is the percentage of different types of haemophilia?

SECTION-C (Marks 26)

Note: Attempt any TWO questions. All questions carry equal marks. (2×13=26)

Q. 3 a. Explain Locomotion in Paramecium. (05)

b. What is learning behavior? Describe in detail the various types classified by Thorpe (08)

Q. 4 a. What are biogeochemical cycles? Describe the nitrogen cycle in detail (2+7)

b. Classify the chromosomes depending upon the location of centromere. (04)

Q. 5 a. Define Mendel's law of independent assortment- Explain it with an example. (2+6)

b. Describe the factors affecting gene frequency. (05)