Q1.

1. The disease in which destruction the wall of alveoli is:

(A) Asthma   (B) Pneumonia   (C) Emphysema   (D) Bronchitis

2. Encyclopaedia "Al-tasrif" is written by:

(A) Al-Farabi   (B) Abu-al-Qasim   (C) Ali Ibn-e-Isa   (D) Al-Haitham

3. The smallest bone in human body is:

(A) Stapes   (B) Incus   (C) Malieus   (D) Vertebera

4. The length of spinal cord is:

(A) 20 cm   (B) 40cm   (C) 60 cm   (D) 70 cm

5. Number of bones in appendicular skeleton is:

(A) 126   (B) 116   (C) 136   (D) 146

6. Female reproductive part of flower is:

(A) Gynoecium   (B) Androecium   (C) Sepals   (D) Petals

7. Example of vegetative propagation by leaves is:

(A) Mint   (B) Potato   (C) Garlic   (D) Bryophyllum

8. Charles Darwin proposed the mechanism of organic evolution in:

(A) 1838   (B) 1882   (C) 1930   (D) 1900

9. Making a normal pigmentation is example of:

(A) Phenotype   (B) Genotype   (C) Traits   (D) Chromosomes

10. Non-renewable resources are:

(A) Fossil fuels   (B) Wind   (C) Water   (D) Soil

11. Diazepam is a drug of:

(A) Vaccines   (B) Sedatives   (C) Antibiotics   (D) Analgesics

12. The enzyme which used to dissolve blood clots is:

(A) amylase   (B) Pepsin   (C) Tripsin   (D) Urokinase

Roll No.(in Figures): .... (in Words): ....

Maximum Marks: 48   **SUBJECTIVE TYPE**   Time Allowed :1.45 Hours

(PART - I)

Q2. Write short answers to any FIVE (5) questions: (5×2=10)

(i)   Explain stomata.

(ii)   What is alveolus?

(iii) Explain thermoregulation.

(iv) Define osmosis.

(v)   Explain renal pelvis.

(vi) Explain reflex arc.

(vii) What is myopia?

(viii) Explain oval window.

Q3. Write short answers to any FIVE (5) questions: (5×2=10)

(i)   Differentiate between compact and spongy bone.

(ii)   What is meant by antagonism?

(iii) Write two advantages of vegetative propagation.

(iv) Write the functions of hilum and micropyle in seed.

(v)   Differentiate between epigeal and hypogeal germination.

(vi) Define traits also give an example.

(vii) Differentiate between homozygous and heterozygous genotype.

(viii) What are breeds and cultivars?

Q4. Write short answers to any FIVE (5) questions: (5×2=10)

(i)   Define community.

(ii)   What is a food web?

(iii) Define alcoholic fermentation.

(iv) What is recombinant DNA?

(v)   What is beta endrophin and what is its use?

(vi) What are pharmaceutical drugs?

(vii) What is heroin, what is its effect on CNS?

(viii) For what purpose vaccines are used?

(PART - II)

Note: Attempt any TWO questions.   (2×9=18)

Q5. (a) Describe in detail osmotic adjustments in plants.   5

     (b) Write a note on nerve cell or neuron.   4

Q6. (a) What is skeleton? Explain the components of human skeleton.   5

     (b) What is seed germination? Explain conditions for seed germination.   4

Q7. (a) Describe in detail the biotic components of ecosystem.   5

     (b) What are the objectives of genetic engineering?   4

Q1.   12

1. Which structure plays an important role for pushing the air out of lungs?

   (A) Nasal cavity   (B) Bronchus   (C) Diaphragm   (D) Bronchiole

2. The maintenance of temperature in internal human body is called:

   (A) Thermoregulation   (B) Osmoregulation   (C) Respiration   (D) Guttation

3. It is the unit of nervous system:

   (A) Ganglions   (B) Nerve   (C) Neuron   (D) Receptor

4. Length of spinal cord is:

   (A) 40 cm   (B) 30 cm   (C) 20 cm   (D) 10 cm

5. Human skeleton contains number of bones:

   (A) 406   (B) 306   (C) 206   (D) 106

6. Example of rhizome stem is:

   (A) Potato   (B) Ginger   (C) Onion   (D) Garlic

7. Part of embryo makes root:

   (A) Cotyledon   (B) Epicotyl   (C) Radicle   (D) Plumule

8. The complete map of human genome was published in:

   (A) 1902   (B) 2000   (C) 2002   (D) 2005

9. Theory of natural selection was presented by:

   (A) Aristotle   (B) Lamarck   (C) Darwin   (D) Malthas

10. Symbiosis in which both partners get benefit is example of:

    (A) Parasitism   (B) Mutualism   (C) Predation   (D) Competition

11. E.coli bacterium was made in:

    (A) 1980   (B) 1975   (C) 1977   (D) 1970

12. Diazepam is:

    (A) Sedative   (B) Hallucinogens   (C) Narcotics   (D) Vaccines

Roll No.(in Figures): .... (in Words): ....

Maximum Marks: 48   **SUBJECTIVE TYPE**   Time Allowed :1.45 Hours

(PART - I)

2. Write short answers to any FIVE (5) questions: (5×2=10)

i) Differentiate between glottis and epiglottis.

ii) How does the gaseous exchange occur in leaves and young stems?

iii) Define hydrophytes and give an example.

iv) Write down the method of lithotripsy.

v) What is meant by succulent organs? Give an example.

vi) Write down the function of occipital lobe.

vii) Differentiate between sympathetic system and parasympathetic system.

viii) What is meant by brain stem?

3. Write short answers to any FIVE (5) questions: (5×2=10)

i) Differentiate between flexion and extension.

ii) What is meant by osteoporosis?

iii) How binary fission take place in invertebrates? Give an example.

iv) Define endospores, give and example.

v) Write the name of two important parts of angiospermic seed.

vi) Differentiate between breeds and cultivars.

vii) Define the Mendel's law of independent assortment.

viii) What is meant by natural selection, also give an example?

4. Write short answers to any FIVE (5) questions: (5×2=10)

i) What is global warming?

ii) Define alcoholic fermentation.

iii) Give uses of glycerol.

iv) Give two objectives of genetic engineering.

v) How gene of interest is isolated?

vi) Explain drugs from animals.

vii) Differentiate between antibiotics and disinfectants.

viii) What are narcotics?

(PART - II)

Note: Attempt any TWO questions.   (2×9=18)

Q5. (a) Describe the osmoregulatory role of kidney.   5

    (b) Explain the structure of neuron.   4

Q6. (a) What is bone? Describe its structure.   5

    (b) Describe the advantages and disadvantages of vegetative propagation of plants.   4

Q7. (a) What is acid rain? Describe its bad effects.   5

    (b) Discuss role of biotechnology in the field of food and agriculture.   4