

Roll No. of Candidate : _____

BIOLOGY

(Intermediate Part-II , Class 12th) 422 - (I)

Paper II

(Group – I)

Time: 20 Minutes

OBJECTIVE

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Code: 8461

44JQ1-22

Marks: 17

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 others blank.

1. Fresh water flatworms excrete very dilute _____.
(A) plasma (B) tissue fluid (C) uric acid (D) urine
2. Rickets is a disease in children with _____.
(A) soft bones (B) herniation
(C) bowed legs and deformed pelvis (D) arthritis
3. The living cells of cartilage are called _____.
(A) chondrocytes (B) osteoblasts (C) osteocytes (D) osteoclasts
4. Antidiuretic hormone (ADH) is also called as _____.
(A) oxytocin (B) vasopressin (C) androgen (D) oestrogen
5. Menstruation usually lasts for _____ days.
(A) 3 – 7 (B) 3 – 9 (C) 1 – 3 (D) 1 – 2
6. An inevitable process is _____.
(A) regeneration (B) induction (C) abnormal development (D) aging
7. Meristems are young tissues or group of cells that retain the potential to _____.
(A) penetrate (B) regenerate (C) divide (D) survive
8. Which one bears greater molecular mass among following nitrogenous base of nucleic acid _____.
(A) guanine (B) thymine (C) cytosine (D) uracil
9. The plane of new cell wall formation in a dividing cell is determined by _____.
(A) microtubules (B) golgi bodies (C) endoplasmic reticulum (D) mitotic apparatus
10. The significance of mitosis is that it _____.
(A) takes place in all cells (B) ensures the survival
(C) occurs under adverse conditions (D) produces identical cells
11. Enlargement of liver and spleen occurs in _____.
(A) haemophilia (B) pleiotropy
(C) erythroblastosis foetalis (D) hypophosphataemic rickets
12. Which one is used to make the animal eggs transgenic?
(A) particle gun (B) by agrobacterium (C) vortex mixing (D) micropropagation
13. For the treatment of familial hypercholesterolemia patients, a normal gene is inserted into patients through _____.
(A) retrovirus (B) agrobacterium (C) any bacterium (D) phage virus
14. Archaeobacteria can tolerate temperature upto _____.
(A) 120 °C (B) 130 °C (C) 140 °C (D) 110 °C
15. Succession is initiated by a few hardy invaders called _____.
(A) predators (B) pioneers (C) parasites (D) grazers
16. The desert ecosystem in Western Punjab is known as _____.
(A) Thar (B) Thal (C) Cholistan (D) Sahara
17. The population of Pakistan at the time of independence in 1947 was _____ million.
(A) 31.5 (B) 32.5 (C) 33.5 (D) 30.5

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 x 8 = 16)

- i. What is a renal failure?
- ii. Justify the importance of kidneys as vital organs.
- iii. Conclude whether hemodialysis or peritoneal dialysis is better than the other one.
- iv. How many different regions are present in vertebral column? Name them. Also write down number of vertebral in each region.
- v. Differentiate between cartilaginous joints and synovial joints.
- vi. Define smooth muscles.
- vii. What is the stimulus for ovulation in oestrous cycle?
- viii. Define genital herpes.
- ix. Write down plant and animal life of tundra ecosystem.
- x. Differentiate between phytoplankton and zooplankton.
- xi. What are the consequences of population increase?
- xii. What are four different effects of acid rain?

3. Write short answers to any EIGHT questions.

(2 x 8 = 16)

- i. How epilepsy is characterized and diagnosed?
- ii. Give any two types of hormones with examples on the basis of composition.
- iii. Justify that calcitonin is antogonistic to parathormone.
- iv. Differentiate between phenotype and genotype.
- v. Differentiate between diabetes mellitus type-I and diabetes mellitus type-II.
- vi. Give example and illustrate sex limited trait.
- vii. Narrate how gene of interest can be made from mRNA?
- viii. What are palindromic sequences? Write down palindromic sequence for Eco R1.
- ix. How bacterial cells can take up recombinant plasmid?
- x. Differentiate between primary and secondary consumers.
- xi. Give an example and write down about commensalism.
- xii. Justify that lichens are examples of mutualism.

4. Write short answers to any SIX questions.

(2 x 6 = 12)

- i. If all the cells contain same nuclear material, what causes the cells to differentiate?
- ii. Which type of cleavage is found in bird's egg? Discuss briefly.
- iii. Enlist initiation codon and nonsense codons.
- iv. Why a cap and tail is added to mRNA?
- v. What is transformation?
- vi. Sketch and label cell cycle.
- vii. What is metastasis?
- viii. Which idea is known as endosymbiont hypothesis?
- ix. What is the difference between endangered species and threatened species?

(SECTION - II)

5. (a) Give osmoregulatory adaptations in terrestrial animals. (4)
- (b) Define ecosystem. Describe its components. (4)
6. (a) Explain the type of growth in plants due to which diameter of their stem increases. (4)
- (b) What is genetic code? Explain the essential features of genetic code. (4)
7. (a) Suggest the various commercial applications of auxins & gibberellins. (4)
- (b) Describe the various reasons for world population explosion. (4)
8. (a) Explain and draw human female reproductive cycle. (4)
- (b) Write down a note on "Epistasis" and "Bombay Phenotype". (4)
9. (a) Explain the phenomenon of embryonic induction. (4)
- (b) Many factors can alter the gene frequency. Discuss various factors responsible for evolutionary change. (4)