

**NOTE: Four possible answers A, B, C and D to each question are given. The choice which you think is correct, fill that circle in front of that question with Marker or Pen ink. Cutting or filling two or more circles will result in zero mark in that question.**

Q1.

12

1. **The amount of sperms in semen is:**  
(A) 10%                      (B) 50%                      (C) 80%                      (D) 90%
2. **Cytosine always pairs with:**  
(A) Thymine                      (B) Adenine                      (C) Guanine                      (D) Uracil
3. **An example of discontinuous variations is:**  
(A) Height                      (B) Blood groups                      (C) Weight                      (D) Intelligence
4. **All carnivore animals are:**  
(A) Parasite                      (B) Host                      (C) Predator                      (D) Pathogen
5. **Pain killer chemical produced by brain is:**  
(A) Insulin                      (B) Interferon                      (C) Thymosin                      (D) Beta endorphin
6. **Which drug is obtained from bacteria?**  
(A) Aspirin                      (B) Paracetamol                      (C) Terramycine                      (D) Streptomycine
7. **A narrow opening present at the floor of Pharynx is called:**  
(A) Larynx                      (B) Nostril                      (C) Glottis                      (D) Trachea
8. **The normal core temperature of human body is:**  
(A) 35°C                      (B) 37°C                      (C) 39°C                      (D) 40°C
9. **All of the following are hormones except:**  
(A) Glucagon                      (B) Insulin                      (C) Thyroxin                      (D) Pepsinogen
10. **Which hormone develops the male secondary sex characters?**  
(A) Testosterone                      (B) Estrogen                      (C) Progesterone                      (D) Insulin
11. **The hard outer layer of a bone is called:**  
(A) Osteocyte                      (B) Compact bone                      (C) Cartilage                      (D) Spongy bone
12. **An example of corm is:**  
(A) Ginger                      (B) Onion                      (C) Potato                      (D) Garlic

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

Maximum Marks: 48

**SUBJECTIVE TYPE**  
**(PART - I)**

Time Allowed :1.45 Hours

**Q2. Write short answers to any FIVE (5) questions:**

(5×2=10)

- (i) What is difference between larynx and trachea?
- (ii) How smoking effects on circulatory system?
- (iii) Define Homeostasis and give an example.
- (iv) What is difference between latex and mucilage?
- (v) What is meant by lithotripsy?
- (vi) What is meant by ganglion?
- (vii) Define Reflex Action and give an example.
- (viii) What is difference between sensory nerves and motor nerves?

**Q3. Write short answers to any FIVE (5) questions:**

(5×2=10)

- (i) What is fibrous cartilage?
- (ii) Differentiate between hinge and ball and socket joint with examples.
- (iii) Define fragmentation and give an example.
- (iv) Define endospores and give an example.
- (v) What is meant by alternation of generation?
- (vi) Define translation and transcription.
- (vii) Why did Mendel select pea for his experiment?
- (viii) What is meant by incomplete dominance? Give an example also.

**Q4. Write short answers to any FIVE (5) questions:**

(5×2=10)

- (i) What is Biological nitrogen fixation?
- (ii) What are carnivorous plants? Give two examples.
- (iii) Describe the role of Biotechnology in the field of environment.
- (iv) How does lactic acid fermentation occur by bacteria?
- (v) What is the use of saccharomyces in fermentation process?
- (vi) Differentiate between pharmaceutical and addictive drugs.
- (vii) Write down the function of sedatives and give an example also.
- (viii) Write down the effects of marijuana on body.

**(PART - II)**

**Note: Attempt any TWO questions.**

(2×9=18)

- Q5. (a) Describe osmoregulatory function of kidney. 5
- (b) Write down the disorders of human eye. 4
- Q6. (a) Explain Antagonism in Muscle action selecting biceps and triceps as example. 5
- (b) Give an introduction of Pakistan National Aids control Program. 4
- Q7. (a) Write notes on global warming and deforestation. 5
- (b) Which basic steps does a genetic Engineer adopt during the manipulation of genes? 4



**NOTE: Four possible answers A, B, C and D to each question are given. The choice which you think is correct, fill that circle in front of that question with Marker or Pen ink. Cutting or filling two or more circles will result in zero mark in that question.**

Q1.

12

1. The amount of oxygen in expired air is:

- (A) 15%                      (B) 16%                      (C) 20%                      (D) 21%

2. Which plant produces latex?

- (A) Keekar                      (B) Conifer                      (C) Rubber plant                      (D) Tomato

3. Which hormone is also called emergency hormone?

- (A) Adrenaline                      (B) Insulin                      (C) Oxytocin                      (D) Calcitonin

4. Processes that carry nerve impulse away from the cell body are called:

- (A) Dendrites                      (B) Axons                      (C) Myelin sheath                      (D) Synapse

5. Which of the following is the hardest connective tissue?

- (A) Cartilage                      (B) Bone                      (C) Ligament                      (D) Tendon

6. The optimum temperature for seed germination is:

- (A) 10--20°C                      (B) 20--25°C                      (C) 25--30°C                      (D) 30--35°C

7. The example of Rhizome is:

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

8. The actual location of gene on chromosome is:

- (A) Chromatid                      (B) Locus                      (C) Centromere                      (D) Karyotype

9. Bred plants are called:

- (A) cultivars                      (B) Breeds                      (C) Carnivore                      (D) Insectivore

10. The symbiotic relationship in which both partners get benefit is:

- (A) Parasitism                      (B) Competition                      (C) Mutualism                      (D) Commensalism

11. Lactic acid fermentation is carried out by many:

- (A) Fungi                      (B) Algae                      (C) Bacteria                      (D) Protozoans

12. Which drug is obtained from plants?

- (A) Aspirin                      (B) Penicillin                      (C) Cephalosporin                      (D) Opium

# Rawalpindi Board 2018 (Second Group)

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

Maximum Marks: 48

## SUBJECTIVE TYPE (PART - I)

Time Allowed :1.45 Hours

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

- (i) Define cellular respiration.
- (ii) Why does blood become thick due to smoking? Give reason.
- (iii) Define homeostasis.
- (iv) Write two symptoms of kidney failure.
- (v) What is meant by tubular secretion?
- (vi) Write the names of the components of co-ordination process.
- (vii) What is meant by myelin Sheath?
- (viii) Where is the cerebrospinal fluid found?

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

- (i) Differentiate between bone and cartilage.
- (ii) Write the names of three causes of osteoporosis.
- (iii) What is the difference between sexual and Asexual reproduction?
- (iv) Define the technique of tissue culture.
- (v) What is meant by pollination?
- (vi) What is meant by true breeding?
- (vii) Define gene and allele.
- (viii) Differentiate between natural and artificial selection.

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

- (i) Write the names and define the components of an ecosystem.
- (ii) What is smog formation?
- (iii) Write four advantages of using fermenters.
- (iv) What is plasmid? How does it work?
- (v) What is Beta endorphin?
- (vi) Define Narrow Spectrum antibiotics.
- (vii) Name few drugs obtained from animals.
- (viii) What is meant by Social Stigma?

## (PART - II)

**Note: Attempt any TWO questions.**

(2×9=18)

- Q5. (a) Describe the role of skin and lungs in homeostasis. 5
- (b) Describe the structure of human Ear in detail. 4
- Q6. (a) Explain the components of human skeleton. 5
- (b) Explain the two methods of Natural vegetative propagation. 4
- Q7. (a) Write down the effects of Air Pollution. 5
- (b) Write down the objectives of Genetic Engineering. 4