

**BIOLOGY ENTRANCE EXAM – 04**

**I. Answer the following questions and mark the correct answers with an (X) in the table below.**

*(max. 15 points)*

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
a)															
b)															
c)															
d)															

- 1. The ear ossicles are located in the:**
  - a) middle ear
  - b) external ear
  - c) inner ear
  - d) anterior ear
- 2. The ovaries produce:**
  - a) testosterone
  - b) cortisone
  - c) progesterone
  - d) growth hormone
- 3. The main male hormone is:**
  - a) insulin
  - b) estrogen
  - c) progesterone
  - d) testosterone
- 4. The thyroid is a:**
  - a) muscle
  - b) gland
  - c) joint
  - d) ligament
- 5. The temporal bones are part of the:**
  - a) rib cage
  - b) trunk
  - c) limbs
  - d) cranium
- 6. The sphincter is a:**
  - a) muscle
  - b) bone
  - c) ligament
  - d) gland
- 7. Hormones are secreted in:**
  - a) blood
  - b) muscles
  - c) saliva
  - d) sweat
- 8. The floating ribs are:**
  - a) pairs 8, 9 and 10
  - b) the first two pairs
  - c) pairs 7, 8 and 9
  - d) the last two pairs
- 9. Which events take place in prophase?**
  - a) the nuclear volume decreases
  - b) the chromatin starts to condense
  - c) chromosomes are situated in cell poles
  - d) chromosomes are paired
- 10. Translation is a process of:**
  - a) DNA synthesis
  - b) RNA synthesis
  - c) protein synthesis
  - d) nucleotide synthesis
- 11. No nucleus is present in:**
  - a) neutrophils
  - b) eosinophils
  - c) erythrocytes
  - d) leukocytes
- 12. Starch is a food reserve in the cells of:**
  - a) plants
  - b) animals
  - c) bacteria
  - d) fungi
- 8. The intracellular digestion is performed by:**
  - a) peroxisomes
  - b) plastids
  - c) mitochondria
  - d) lysosomes
- 14. The extracellular form of the virus is known as:**
  - a) viroid
  - b) prion
  - c) virion
  - d) capsid
- 15. The passage of ions through the cell membrane is known as:**
  - a) phagocytosis
  - b) pinocytosis
  - c) osmosis
  - d) endocytosis

**II. Which of the following statements are correct? Mark them with an (X) in the table below.**

*(max. 5 points)*

1	2	3	4	5	6	7	8	9	10	11	12

1. Amino acids recognize their corresponding codons on mRNA via tRNAs.
2. The bones of the trunk make up the vertebral column and the rib cage.
3. The viral capsid is a lipid structure.
4. Ribosomes are situated in the nucleus.
5. The iris is situated behind the sclera and contains pigments.
6. Anaerobic oxygenation produces a large amount of energy.
7. Amino acids are produced as a result of transcription.
8. Muscles are the active part of the locomotive system.
9. The central nervous system includes the spinal cord and the pituitary gland.
10. The suprarenal glands are located in the cavity of the skull.
11. The temporal bones belong to the bones of the trunk.
12. The malpighian bodies are situated in the kidney.

**III. Give a short definition for the following terms:**

*(max. 8 points)*

1. Phagocytosis.....

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2. Peripheral nervous system.....

.....

3. Gametogenesis.....

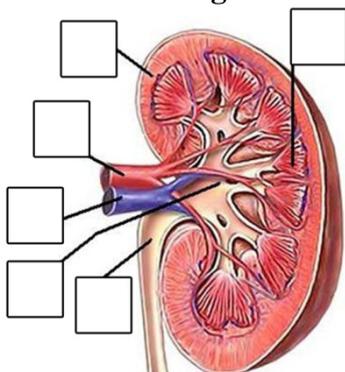
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4. Homeostasis.....

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**IV. Label the figure with the corresponding numbers.**

*(max. 6 points)*



1. pyramid
2. artery
3. cortex
4. medulla
5. pelvis
6. vein

**V. Fill in the table:** (*max. 6 points*)

	Interphase	Metaphase
Mitotic spindle		
Appearance (structure) of chromosomes		
Cellular localization of chromosomes		