

**BIOLOGY ENTRANCE EXAM – 02**

**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 diaphragm participates in the movement of the:**

- a) liver
- b) lung
- c) upper limb
- d) lower limb

**2. Which nitrogen base is not found in DNA?**

- a) guanine
- b) thymine
- c) uracil
- d) cytosine

**3. The midbrain is involved in:**

- a) vision and hearing
- b) cardiovascular activity
- c) sense of smell and taste
- d) breathing

**4. During exocytosis the cell:**

- a) releases cellular organelles
- b) releases cellular secretions
- c) absorbs cellular secretions
- d) absorbs cellular organelles

**5. The vein, which enters the liver is called:**

- a) liver vein
- b) portal vein
- c) inferior vena cava
- d) upper vena cava

**6. RNA is:**

- a) double stranded
- b) found in the nucleus
- c) found in mitochondrid
- d) single stranded

**7. Which cells have the largest nucleus?**

- a) phagocytes
- b) leukocytes
- c) monocytes
- d) erythrocytes

**8. The peptide bond is:**

- a) covalent
- b) hydrogen
- c) ionic
- d) van der Waals

**9. Progesterone is secreted from the:**

- a) mature follicles
- b) corpus luteum
- c) pituitary gland
- d) exocrine glands

**10. Polar bodies are formed in the course of:**

- a) sporulation
- b) spermatogenesis
- c) oogenesis
- d) implantation

**11. Pepsin is formed by the:**

- a) pancreas
- b) liver
- c) adrenal gland
- d) stomach mucosa

**12. The final urine does not contain:**

- a) water and salts
- b) uric acid
- c) urea and uric acid
- d) amino acids and glucose

**13. Duplication is:**

- a) an intrachromosomal abberation
- b) an interchromosomal abberation
- c) a type of polyploidy
- d) a type of aneuploidy

**14. The true organ of hearing is the:**

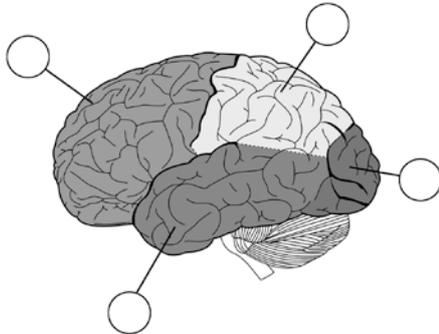
- a) stirrup
- b) Eustachian tube
- c) organ of Corti
- d) cochlea

**15. Glycogen is a reserve food material in the cells of:**

- a) bacteria
- b) animals
- c) plants
- d) fungi

**II. Label the parts of the brain.**

*(max. 4 points)*



- 1. Parietal lobe
- 2. Temporal lobe
- 3. Occipital lobe
- 4. Frontal lobe

**III. Fill in the table:**

*(max. 8 points)*

	Transcription	Translation
Template		
Building blocks		
Main enzyme		
End product		

**IV. 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. The bile activates the enzyme amylase which breaks down carbohydrates.
- 2. The second heart sound is systolic.
- 3. The first cervical vertebra is called atlas and connects the spine to the skull.
- 4. The sclera of the eyeball has a feeding function.
- 5. *Nervus vagus*, the pneumogastric nerve, is the largest nerve of the sympathetic system.
- 6. The epiphysis secretes the hormone melatonin.
- 7. The spinal cord is located in the channel of the spine.
- 8. Amino acids are connected in polynucleotide chains.
- 9. Red blood cells perform phagocytosis.
- 10. Translation takes place in ribosomes.
- 11. Insulin is produced by the suprarenal glands.
- 12. The most characteristic feature of prokaryotic cells is the lack of nucleus.

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

*(max. 8 points)*

**Symbiosis**.....

.....

**Virion**.....

.....

**RNA**.....

.....

**Mitosis**.....

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