

Dear BMC Student,

In the Department of Physiology a computerized system is used to analyze your answers for the tests. The advantage of this system is that your answers are analyzed very precisely. The other advantage of our system is that besides calculating your scores we check our multiple choice questions, too. This way we can reveal the wrong or incorrect questions and these questions will not count in the total score. Using this computerized system requires you to copy your answers to an answer sheet. Only the answers that are clearly marked on the answer sheet count. Therefore the precise and clean work is your own particular interest!

### **Rules to follow during the test:**

Please, be at the announced lecture hall 10 minutes before the beginning of the test.

We start writing the test on time.

**Please get ready your student ID (any other photo ID)! Participation on the test is denied in the absence of student ID!**

Leave your coat and bag in the cloakroom (on the hangers) of the lecture hall. You may ONLY take pen, pencil and eraser with you. Your cellphone must be **TURNED OFF** during the test. Furthermore, you are NOT allowed to possess any electronic translators or any other electronic device including tablet, laptops, phones, smartwatch as well as books, notes with you where you sit. It is also prohibited to use any written and electronic help. You must NOT discuss the answers with others.

If you have any questions or problems during the test, please indicate it to the teacher.

**You MUST NOT take home neither the question sheet nor the answering sheet!**

How to fill out the answering sheet:

On the bottom one part of the answering sheet is shown. To fill out this answering sheet you may need pen, pencil and eraser. Do not use corrector/whiteout! The general rule is NOT to write outside the squares! If you do it the analyzing software may give you zero points for more than one question!

It is advised to use a pencil first to write your answers into the numbered boxes on the left. You may make any correction here, because during the analysis, we never count what is written into these numbered boxes. When you finish answering to all the questions use a PEN to copy your answers into the appropriate

square using an X mark. If you write more than one X's into the same line the software will give zero points for that question. **Please work clearly and never write out of the square.** This is your own particular interest and responsibility!

You are free to write on the question sheet but those answers will not be analyzed and you must give it back together with the answering sheet at the end of the self control test.

Do not forget to write your name and your NEPTUN code on the answering sheet and on the question sheet!

The rules written here may seem complicated, but you will see it is easy to follow them and the use of our answering sheet is simple. Good luck on the test!

The image shows a sample of a test answering sheet. At the top, there is a header with numbers 0-9. Below it, a box contains handwritten information: "Név (Name): JOHN TODAY BMC1", "Group 4", and "NEPTUN : ABC123". To the right of this box is a large empty rectangular area. Below the header, there are three columns of questions, each with five options (A, B, C, D, E). The questions are numbered 1 through 80. Each question has a grid of five boxes for the options. Some boxes contain an 'X' mark, indicating the selected answer. For example, question 1 has 'C' selected, question 2 has 'D', question 3 has 'A', question 4 has 'B', question 5 has 'E', question 6 has 'C', question 7 has 'D', question 8 has 'C', question 9 has 'B', question 10 has 'A', question 11 has 'B', question 12 has 'C', question 13 has 'E', question 14 has 'A', question 15 has 'D', question 16 has 'A', question 17 has 'D', question 18 has 'A', question 19 has 'D', and question 20 has 'C'. Two red boxes highlight specific areas: one around the handwritten information and the NEPTUN code, and another around the large empty rectangular area to the right. These areas are where students are instructed not to write.

**Do NOT write anything into the indicated parts**

## Sample test questions

**Answer the next questions by using the key :**

- A. if 1st, 2nd and 3rd statements are correct
- B. if 1st and 3rd statements are correct
- C. if 2nd and 4th statements are correct
- D. if only the 4th statement is correct
- E. if all statements are correct

Which of the followings inhibit(s) gastric emptying?

1. bile acids
2. cholecystokinin
3. gastrin
4. secretin

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**In the following questions choose the one FALSE statement!**

- A. Secretin stimulates the bicarbonate secretion of the ductal cells of the pancreas.
- B. Cholecystokinin stimulates the enzyme secretion of the acinar cells of the pancreas.
- C. In the presence of secretin the bile contains less bicarbonate.
- D. Secretin has a choleric effect.
- E. Acidic duodenal content induces secretin production.

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**In the following questions choose the one CORRECT statement!**

Parasympathetic nervous system:

- A. Stimulates the secretory function of small intestine.
- B. Stimulates the enzyme production of pancreatic acinar cells.
- C. Stimulates the bile secretion in the liver.
- D. Is involved in the reflex control of gastric juice secretion.
- E. All statements are correct.

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**Answer the next questions by using the key :**

- A. First statement is TRUE, second statement is TRUE and there is a CAUSATIVE RELATION between the statements
- B. First statement is TRUE, second statement is TRUE
- C. First statement is TRUE, second statement is FALSE
- D. First statement is FALSE, second statement is TRUE
- E. First statement is FALSE, second statement is FALSE

The digestion and absorption of lipid containing foodstuffs can be complete in the absence of pancreatic juice,

BECAUSE

lipids are absorbed solely in the form of triglycerides.

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**In the following questions choose the one CORRECT combination!**

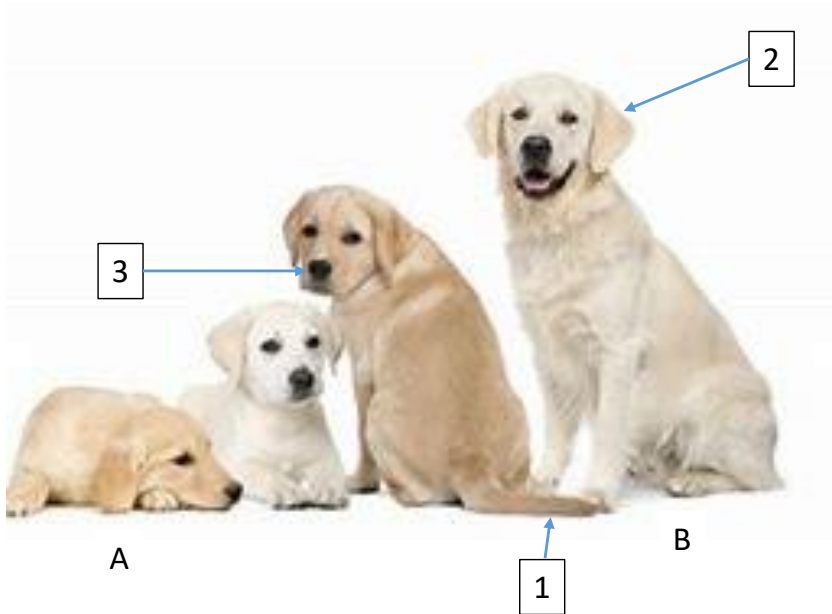
Thiamine, or vitamin ....., if absent causes ....(H, pernicious anemia; C, scurvy; D, beriberi).

- a. B1, H
- b. B2, D
- c. B6, C
- d. B1, D
- e. B2, C

# Sample essay questions

Write the appropriate words from the list below to the number of the following graph.

cats, dogs, amphibians, ear, nose, eye, leg, tail, sits, stands, lies, runs



1.

3.

Animals on the picture are: .....

What does animal B do on the picture: .....

**Answer the questions based on the picture above!**

How many animals to you see on the picture? .....

True or false:

Every animal on the picture is a cat: .....

There are at least one black dog on the picture: .....

Dog A is standing: .....

Identify the numbered structures on the picture above, then write the appropriate numbers to the gaps of the following text.

There are two of ..... in a healthy dog. The movement of the body part indicated with ..... is used to show the emotions by the dog. Compared to humans the organ ..... is much more sensitive.

Identify the followings in the formula below!

$$V_m = \frac{RT}{F} \ln \left( \frac{p_K [K^+]_o + p_{Na} [Na^+]_o + p_{Cl} [Cl^-]_i}{p_K [K^+]_i + p_{Na} [Na^+]_i + p_{Cl} [Cl^-]_o} \right)$$

R:  
pK  
F:  
[Na<sup>+</sup>]<sub>o</sub>

Circle the correct name of the equation above:      Nernst      Goldman-Hodgkin-Katz

Associate the terms found in the first column of the table with the appropriate descriptions below the table. The descriptions are numbered; you need to write only the numbers in the empty boxes next to the term. There are exactly as many boxes as the number of descriptions to choose. You may need to use a number more than once, and there might be numbers that you will not need to use.

Dog				
Cat				
Rat				
Chicken				
Shark				

1. has four legs
2. is a mammal
3. is a fish
4. its most often used as a laboratory animal
5. is a bird
6. swims most quickly
7. has no legs
8. can fly long distances (1-2 kms) without a brake
9. its offspring is called puppy
10. its offspring is called kitten
11. its teeth grow in several rows
12. it hibernates during winter