

HSE Global Scholarship Competition - 2020

DEMO VERSION OF COMPETITION TASKS IN PSYCHOLOGY 11TH GRADE

**to be completed within 120 minutes
the maximum score is 100 points**

This assignment includes four parts.

Part 1 - a question on psychology requiring a detailed answer. The maximum score for this task is 20 points.

Part 2 – tasks to test your logical thinking. The maximum score for these tasks is 20 points.

Part 3 - you will need to analyze a case and offer your own solutions. The maximum score for this task is 30 points.

Part 4 - a task in biology. The maximum score for this task is 30 points.

Part 1.

Answer the question below and briefly explain your answer.

What is the difference between the character and temperament of an individual?

Task key:

Temperament manifests itself as the combination of a person's psychodynamic properties, such as the intensity, speed and pace of mental reaction, and emotional tone. On the other hand, character is an individual combination of a person's substantial properties, manifested in his/her behaviour and attitude to reality.

Furthermore, temperament is innate, whereas character is formed on the basis of one's temperament and may change during a person's life.

Part 2.

2.1. One of the words in each line below is superfluous, as it does not fit with the other words. Please choose one correct answer for each question.

Write your answers in the table below “Key to tasks in Part 2.1.”:

1. a) sofa b) wardrobe c) computer d) bed e) armchair;
2. a) wormwood b) rose c) tulip, d) orchid e) chamomile;
3. a) cat b) parrot c) hamster d) dog e) bear;
4. a) Riga b) Moscow c) Minsk d) Rio de Janeiro e) Berlin;
5. a) plate b) cup c) saucer d) bucket e) bowl;
6. a) bullfinch b) rook c) swallow d) skylark e) hummingbird;

7. a) Poland b) Romania c) Greece d) Canada e) Spain;
 8. a) adjective b) noun c) verb d) adverb e) suffix;
 9. a) biology b) mathematics c) literature d) chemistry e) physics;
 10. a) artist b) doctor c) dancer d) musician e) artist.

Key to tasks in Part 2.1.:

Question	1	2	3	4	5	6	7	8	9	10
Answer	C	A	B	D	D	A	D	E	C	B

2.2. Logical problems:

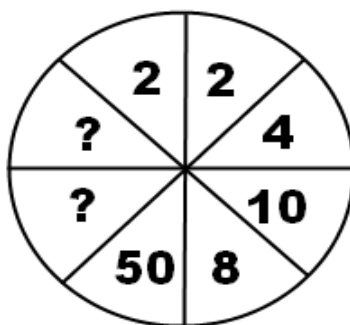
2.2.1. Put in the correct sequence (2 points):

81; 49; 25; ?; 1

Task key:

Answer: 9. All of the above numbers are simple and arranged in a descending order.

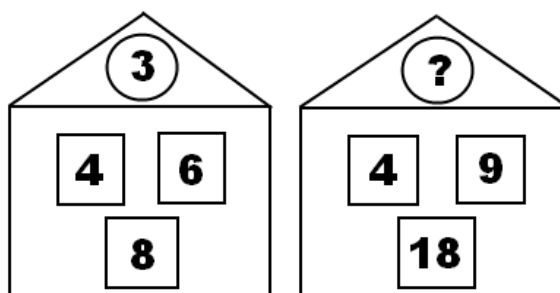
2.2.2. Insert the missing numbers (4 points):



Task key:

Answer: 16 and 250. Two consistent patterns link every second number in the figure. In the first pattern, the numbers are multiplied by 2; in the second sequence – by 5.

2.2.3. Insert the missing number (4 points):



Task key:

Answer: 2. The products of numbers along the horizontal and vertical lines are equal: $4 * 6 = 3 * 8$. Hence, since $4 * 9 = 36$, 18 must be multiplied by 2.

Part 3.

Analyze the stated case in terms of psychological mechanisms.

Russian psychologists conducted an experiment, where a person was placed in a dark room. If he or she had been warned in advance that during the experiment there would be just-noticeable stimuli, he or she would become aware of them, and if he or she had not been warned, such stimuli would tend to go unnoticed.

What do you think was actually studied under this experiment? What conclusions can we draw from it?

Task key:

This experiment investigates the psychological factors underlying an analyzer's sensitivity. The results indicate that the sensitivity of an analyzer depends not only on sensory factors, such as illumination, interference, physiological state or personal abilities, but also on whether or not a respondent is focused on his/her perception of a particular signal or ready to perceive it. When given instructions to "guess", rather than provide the right answer, respondents tend to be less susceptible to mental blocks or fear of making an error.

Here, we can observe a clear interconnection between the effectiveness of perception and goal-setting (instructions in this case). In other words, our perception is also influenced by psychological factors, such as fear of failure and setting clear goals for a given task.

Part 4.

Answer the question below.

As a result of a rare genetic mutation, a boy is born without a staple and anvil in his middle ear. Explain what type of hearing impairments he would have and why. Which cognitive function would suffer the most?

Task key:

The main function of stapes and anvils is the amplification of sound oscillations in the air transmitted to the inner ear. It is logical to assume that a newborn would either not be able to hear at all, or would have very weak hearing, because the sound vibrations reaching the cochlea would be too weak to activate sensitive cells. Therefore, oral speech would be the cognitive function most affected by this type of impairment, since its development is largely dependent on one's hearing.