

**MASARYKOVA UNIVERZITA**  
Centrum jazykového vzdělávání na Přírodovědecké fakultě  
**VZOROVÝ TEST PRO UČITELSKÉ OBORY**

**Zvolte kód a název předmětu**

Version S

Druh termínu

Vyberte datum

<b>NAME:</b>		<b>UČO:</b>
Listening:		<b>Subtotal</b> (33 points out of 55 to pass)
Grammar & Vocabulary:		
Reading:		

**LISTENING**

(TASK 1)

\_\_\_\_\_ points

**TASK 1***(1 point per item; total: 10 points)*

You will hear a climatologist giving a talk on climate. In statements 1 – 8 below fill in the gaps. Use just one word for each gap. You will hear the talk twice:

1. Human activities cause \_\_\_\_\_ to the atmosphere, oceans and composition of the air.
2. Therefore, scientists study the \_\_\_\_\_ of this phenomenon on sea levels, temperature, rainfall, hydrological resources.
3. The decisions we make are based on the \_\_\_\_\_ we have for the climate.
4. It seems that the models based on experience are no longer \_\_\_\_\_.
5. We need new information to build \_\_\_\_\_ for the future.
6. Scientists derive their predictions from processes that they can \_\_\_\_\_.
7. Scientists ask what controls the \_\_\_\_\_ of various climatic events.
8. The approach that scientists take is rather \_\_\_\_\_.
9. Scientists combine the small-scale processes in order to predict the emerging \_\_\_\_\_ of the complex system.
10. Many phenomena in the climate are not \_\_\_\_\_ from the small-scale processes.

# GRAMMAR & VOCABULARY (TASKS 2 – 6)

\_\_\_\_\_ points

## TASK 2

(1 point per item; total: 4 points)

Various parts of sentences 11 – 14 below are underlined. Write questions in which you ask about the underlined parts. Keep the structure of the original sentence (including tenses and all semantically important words), the only task is to transform it to a question.

Examples: He is going to write the final part of the thesis next month.

**Which part of the thesis is he going to write next month?**

11. Zero in questionnaire A corresponds to “disagree strongly”.

\_\_\_\_\_?

12. The articles published in Science contributed to his fame.

\_\_\_\_\_?

13. The invited authors’ contributions have resulted in an impressive book.

\_\_\_\_\_?

14. That student does not interpret his research data appropriately.

\_\_\_\_\_?

## TASK 3

(1 point per item; total: 4 points)

In items 15 – 18, complete a new sentence so that it has a similar meaning to the original sentence(s). The number of words that you should use to complete the new sentence is given in the brackets.

Example: They published this book in England.

The book **was published (2 words)** in England.

15. I was silly to choose that university.

I shouldn’t \_\_\_\_\_ **(2 words)** that university.

16. “I’ll be prepared for the presentation of the new technologies”, she said to me.

She told me she \_\_\_\_\_ **(3 words)** for the presentation of the new technologies.

17. Would you like to join us in our qualitative research?

Are you interested \_\_\_\_\_ **(2 words)** us in our qualitative research?

18. She doesn’t study cartography at the faculty any more. She failed her exams.

She used \_\_\_\_\_ **(2 words)** cartography at the faculty.

## TASK 4

(1 point per item; total: 3 points)

For questions 19 – 21, decide which answer (A, B, C or D) best fits each gap:

19. The experiment did not work well. \_\_\_\_\_, we decided to repeat it.

A: With reference to    B: Provided that    C: Despite the fact    D: For this reason

20. He used an eight-point scale in the questionnaire, \_\_\_\_\_ a four-point one, used by me.

A: considering    B: consequently    C: in spite of    D: as opposed to

21. “I think, \_\_\_\_\_ I am” is a philosophical statement proposed by the French thinker René Descartes.

A: actually    B: therefore    C: moreover    D: even though

**TASK 5**

(1 point per item; total: 8 points)

Complete gaps 22– 29 in the text below with the following words. There are three words that you will not need to use:

<i>awareness</i>	<i>comprises</i>	<i>conceptual</i>	<i>criterion</i>	<i>evaluation</i>	<i>initial</i>	<i>mindful</i>	<i>persist</i>
<i>promote</i>	<i>rapport</i>	<i>switch</i>					

Teaching and learning should be inseparable, in that learning is a (22) ..... and product of effective teaching. In essence, learning is the goal of teaching. Someone has not taught unless someone else has learned. After a few years of teaching, many faculty realize that students learn too little of what they teach. Science teaching requires attention to both the content of the course and the process of moving students from their (23) ..... state of knowledge and understanding to the desired level. In fact, teaching is part of a whole that (24) ..... the teacher, the learner, the disciplinary content, the teaching/learning process, and the (25) ..... of both the teacher and the learner.

Undergraduate students value good teaching, and many of those who (26) ..... from a science major to another field cite poor teaching as an important factor in their decision (Seymour and Hewitt, 1994). When the data from students who (27) ..... in a science major was combined with data from students who switched out of a science major, poor teaching by science faculty was the students' most frequently cited concern. Although students are turned off by poor teaching, they also have identified characteristics of good teaching:

- a teacher's enthusiasm and passion for the subject,
- (28) ..... between a teacher and a student or group of students during discussions in and out of class,
- intellectual challenges from a teacher, (29) ..... understanding of ideas, and
- a teacher's scholarship.

**TASK 6**

(1 point per item; total: 6 points)

In sentences 30– 35 below, use the word given in brackets in capital letters to form a word that fits in the gap. Use only one word for each gap. Do not use **-ing** forms:

Example: This **procedure** should be carefully controlled and taken into account. (**PROCEED**)

30. Various statistical \_\_\_\_\_ showed no significant difference between the two types of sites. (**ANALYSE**)
31. He had no intention of getting drawn into a \_\_\_\_\_ discussion. (**HYPOTHESIS**)
32. The \_\_\_\_\_ process can delay the results. (**VERIFY**)
33. In order for the medicine to work \_\_\_\_\_ you must take the correct amount. (**EFFECTIVITY**)
34. What is an \_\_\_\_\_ in science? (**ASSUME**)
35. When preparing for a presentation, should I \_\_\_\_\_ it all? (**MEMORY**)

# READING

(TASKS 7 – 9)

\_\_\_\_\_ points

## TASK 7

(1 point per item; total: 5 points)

In the text below find five words that fit the meaning of explanations 36 – 40. Find **only one word** for each explanation. The words occur in the text in the same order as their explanations below the text.

In *discipline-centered teaching*, the course has a fixed structure. The needs, concerns, and requirements of teacher and student are not considered because the course is driven by and depends mainly on the disciplinary content that must be presented. The teacher transmits information, but the content is dictated by some separate authority such as a department syllabus committee or textbook author.

The teacher acts as a model of the educated person in *instructor-centered teaching*. He or she is regarded as the authoritative expert, the main source of knowledge, and the focal point of all activity. The student is the passive recipient of the information already acquired by the teacher. The teacher selects from the discipline the information to be taught, studied, and learned.

*Student-centered teaching* focuses on the student and, in particular, on the cognitive development of the student. The teacher's goal is to help students grasp the development of knowledge as a process rather than a product. The focus of classroom activities and assignments is on the student-centered process of inquiry itself, not on the products of inquiry. Students create their own conceptual or cognitive models. Content, teaching style, and methods are adapted to aid the cognitive and intellectual growth of students. Student-centered teaching combines an understanding of the way that humans process information with other factors that affect learning such as attitudes, values, beliefs, and motivation.

- 36. communicates, passes .....
- 37. given, told exactly, influenced .....
- 38. obtained, learned .....
- 39. understand something, especially difficult .....
- 40. the process of asking questions, discovering things .....

**TASK 8***(1 point per item; total: 9 points)*

Nine parts of sentences have been removed from the text below. Choose one of parts (A – I) for each gap (41 – 49). Write the appropriate letter next to a number, e.g. **41 G**:

- A) as we travel through the twenty-first century
- B) pepper most books about the future
- C) it chooses to deliver them
- D) are reflected in the curriculum it offers
- E) which will quite literally change our minds
- F) which pervade the school
- G) they may witness the more concerted use of international cooperation
- H) are unfit for the twenty-first century purpose
- I) has not even been invented yet

What you think a school should look like depends on the values you hold. What a school *is* like is dependent on its values. A school's values (41) ..... . Curriculum is therefore defined very broadly to include the subjects a school teaches, the choices it makes within those subjects, the means (42) ..... , but also the attitudes, relationships and beliefs (43) ..... . In putting forward an argument for greater cross-curricular and creative elements in our primary and secondary curricula, it is suggested that many current curricula (44) ..... .

We are constantly being reminded of the unprecedented rates of change we will experience (45) ..... . It has been suggested that 75 percent of the scientific knowledge we will need in order to address life in the middle of this century (46) ..... . Such illustrations of the exponential growth of knowledge, the development of technology, nanotechnology, micro-biology, artificial intelligence and the rest, (47) ..... . Almost undoubtedly our children will have to face the realities of global warming, rising sea levels, pandemics, etc. Taking a more optimistic view, (48) ..... , a more equitable sharing of the earth's resources and the science and technology to address such challenges. Either way, today's children are already living in a century of unparalleled global transformation (49) ..... . What is our education system doing to address this? Can we establish a curriculum of Hope?

## TASK 9

(1 point per item; total: 6 points)

Read the text and decide which of the options A – D in items 50 – 55 is correct:

We live in an age of constant scientific discovery — a world shaped by revolutionary new technologies. More and more, scientific and technological issues dominate national discourse, from environmental debates on ozone depletion and acid rain, to economic threats from climate change and invasive species. Understanding these debates has become as basic as reading. All citizens need to be scientifically literate to appreciate the world around them and make informed personal choices.

Scientists and educators should be accountable for providing everyone with the background knowledge to help us cope with the fast-paced changes of today and tomorrow. What is scientific literacy and why is it important?

In my opinion, scientific literacy is a mix of concepts, history, and philosophy that help you understand the scientific issues of our time. Scientific literacy is rooted in the most general scientific principles and broad knowledge of science. If you can understand scientific issues in magazines and newspapers then you are scientifically literate.

Admittedly, this definition does not satisfy everyone. Some academics argue that science education should expose students to mathematical rigor and complex vocabulary. They want everyone to experience this taste of “real” science. But I feel strongly that those who insist that everyone must understand science at a deep level are confusing two important but separate aspects of scientific knowledge: doing science and using science. Logically, scientific literacy concerns only the latter.

Interestingly, intense study of a particular field of science does not necessarily make one scientifically literate. Indeed, I am often amazed at the degree to which working scientists are often uninformed in scientific fields outside their own field of professional expertise. I once asked a group of twenty-four Ph.D. physicists and geologists to explain the difference between DNA and RNA. I found only three colleagues who could do so, and they did research in areas where this knowledge was useful. Unfortunately, the education of professional scientists is often just as narrowly focused as the education of any other group of professionals, so scientists are just as likely to be ignorant of scientific matters outside their own specialty as anyone else.

50. According to the author
- A: national debate should be more focused on science.
  - B: scientific issues in magazines are difficult to understand.
  - C: people should participate more in discussing scientific issues.
  - D: scientific literacy is the responsibility of scientists and educators.
51. The definition provided by the author has been
- A: developed by the author himself.
  - B: understood with difficulty.
  - C: accepted by academics / generally accepted.
  - D: taken from mass-media.
52. In the author’s view, the defined term is linked to
- A: using science.
  - B: doing science.
  - C: experiencing real science.
  - D: deep understanding of science.
53. The author believes that
- A: narrow focus of science education is an advantage.
  - B: science education should be more interdisciplinary.
  - C: some aspects of scientific knowledge are confusing.
  - D: studying a scientific field leads to scientific literacy.
54. The majority of the scientists interviewed by the author
- A: demonstrated a high degree of scientific literacy.
  - B: did research in DNA and RNA outside their field.
  - C: found the information about DNA and RNA useful.
  - D: were ignorant of scientific issues outside their specialty.
55. The best title for the text is
- A: Education of professional scientists.
  - B: The level of professional expertise in science.
  - C: What does it mean to be scientifically literate?
  - D: Why is scientific literacy discussed in magazines?







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## KEY

## LISTENING

(maximum: 10 points)

### TASK 1

(1 point per item; total: 10 points)

Source: <http://edge.org/conversation/the-physics-that-we-know>

Length: 03:54

1. changes
2. impact/impacts
3. expectations
4. valid
5. infrastructure
6. measure/model
7. frequency
8. ambitious
9. properties
10. predictable

# GRAMMAR & VOCABULARY

(maximum: 25 points)

## TASK 2

(1 point per item; total: 4 points)

11. What does zero in questionnaire A correspond to?
12. What / Which articles / Which of his articles / What articles... contributed to his fame?
13. Whose / Which / Which authors' contributions have resulted in an impressive book?
14. Who does not interpret his research data appropriately? Which student does not...?

## TASK 3

(1 point per item; total: 4 points)

15. have chosen/have studied
16. would be prepared
17. in joining
18. to study

## TASK 4

(1 point per item; total: 3 points)

19. D
20. D
21. B

## TASK 5

(1 point per item; total: 8 points)

*Source:* Adapted from (Ward, Ted W., Understanding Teaching and Learning as Inseparable Processes. Common Ground Journal . Fall2012, Vol. 10 Issue 1, p45-61. 17p.)

22. criterion
23. initial
24. comprises
25. evaluation
26. switch
27. persist
28. rapport
29. conceptual

## TASK 6

(1 point per item; total: 6 points)

30. analyses
31. hypothetical/hypothetic
32. verification
33. effectively
34. assumption
35. memorize/memorise

# READING

(maximum: 20 points)

## TASK 7

(1 point per item; total: 5 points)

Source: **Adapted from** (Ward, Ted W., Understanding Teaching and Learning as Inseparable Processes. Common Ground Journal . Fall2012, Vol. 10 Issue 1, p45-61. 17p.)

36. **transmits**
37. **dictated**
38. **acquired**
39. **grasp**
40. **inquiry**

## TASK 8

(1 point per item; total: 9 points)

Source: Adapted from (Barnes, J. *Cross-Curricular Learning*. Sage: 2007.)

41. **D**
42. **C**
43. **F**
44. **H**
45. **A**
46. **I**
47. **B**
48. **G**
49. **E**

## TASK 9

(1 point per item; total: 6 points)

Source: Adapted and abbreviated from <http://www.actionbioscience.org/newfrontiers/hazen.html>

Number of words: 350

50. **D**
51. **A**
52. **A**
53. **B**
54. **D**
55. **C**