

National system of testing, experience and achievements. Role of an estimation of knowledge in increase of a level of preparation of teachers. (Biology)

T.M. Eybatov, T.A. Mamedhanly

*** Per 1992-1994 in system of test tasks for IV group (medicine, biology, an agriculture) the share of questions in biology made 15 (12,5%) of 120.**

*** In the further the number of questions has been increased up to 30 (25%), at factor (3). The first years the great bulk of questions concerned to factology, and only a little bit to calculated test tasks.**

*** The most unsuccessful system of drawing up of test tasks in biology was appeared 1993. Complication of test tasks by authors was understood on - to the : this year it has been thought up erroneous (first of all from the point of view of psychology) system of questions when one test task included simultaneously from 3 up to 5 independent factology questions demanding very long and vast answers. As a result such test tasks included more than 30 lines with answers. The entrant, reading the third answer, forgot, about what there was a speech in the first answer. And it in spite of the fact that has been proved by psychologists: the person starts to forget about that is written in the first line, starting to read the thirteenth line.**

**Examples of such test tasks used on introductory
Examinations in 1993:
Section Biochemistry.**

47. Find a right answer on questions: how settled down rather each other strings of DNA when the double spiral is formed, what forces keep their number?

- A)** The nitrogenous bases of one circuit " join the nitrogenous bases another, between them there are hydrogen communications ($A=C$, $T\equiv G$); against A always rises C, against T - rises G; at such combination nucleotide it is provided formation of two-spiral structure
- B)** The nitrogenous bases of one circuit " join the nitrogenous bases another, between them there are hydrogen communications ($A=G$, $T\equiv C$); against A always rises G, against T - rises C; at such combination nucleotide it is provided formation of two-spiral structure
- C)** The nitrogenous bases of one circuit " joint with the nitrogenous bases another, between them Arise covalent communications ($A=T$, $G\equiv C$); against A always rises T, against G- rises C; at such combination nucleotide it is provided formation of two-spiral structure
- D)** The nitrogenous bases of one circuit "joint with the nitrogenous bases another, between them there are hydrogen communications ($A=T$, $G\equiv C$); against A always rises C, against T - rises G; at such combination nucleotide it is provided formation of two-spiral structure
- E)** The nitrogenous bases of one circuit " joint with the nitrogenous bases another, between them here are hydrogen communications ($A\equiv T$, $G=C$); against A always rises C, against T - rises G; at such combination nucleotide it is provided formation of two-spiral structure

Has undressed Blood and blood circulation.

43. In what from undermentioned Variants are correctly specified a structure, functions and the place of generation of leukocytes?

- A)** Have no constant form, colourless, have a nucleus, are formed in yellow bone brain, lymphatic units, function - to transfer O_2 to bodies
- B)** Have no constant form, are painted, have no nucleus, are formed in red bone brain, spleen and lymphatic units, function - absorption and digestion alien particles
- C)** Have no constant form, colourless, have a nucleus, are formed in a spleen, function - absorption and digestion of alien particles
- D)** Have no constant form, colourless, have nucleus, are formed in red, bone brain, spleen and lymphatic units, function - absorption and digestion of alien particles
- E)** Have no constant form, colourless, have no nucleus, are formed in lymphatic units, function - absorption and digestion of alien particles

*** In 1994 we managed to get rid of such practice of drawing up of test tasks. Since 1995, the basic attention began to be given questions on logic both to extensive and deep generalizations within the limits of the school program. In the further the preference has been rendered to calculated tests (up to 10 questions), to tests for generalization (up to 15 questions), an explanation, the forecast and offered activity. The share of factology has been reduced up to 5 questions. Terminological test tasks stably have been presented only by one task.**

Questions and answers became shorter, laconic and during too time needing deep generalizations.

For example:

What statement is true?

- A) All hormones - lipids**
- B) All enzymes - proteins**
- C) All lipids - fats**
- D) All vitamins -proteins**
- E) All carbohydrates - polisaccharides**

***Further the number of test tasks in biology has been changed (25 tests – 21%) and factors of answers in biology (2) and in connection with introduction of the additional block on the mathematician in IV group, the number of calculated test tasks has been reduced up to 6.**

***In previous years the basic attention was given interdark and intersubject communications as profile preparation of entrants was usually limited only by 4 subjects, and on other school subjects they did not turn attention. Therefore the preference was given questions on related subjects: Biogeography, Biophysics, Biochemistry, Biology-history, Psychology, etc.**

For last 5 years the share of prognosis test tasks and the tasks connected with an explanation has sharply increased.

*** After a trip to the USA (Princeton) in February, 2006 and acquaintances to an operational experience of American test commissions ETS and SAT a share of factology in test tasks in a subject the Biology again has been changed and now at examinations of factology test tasks cannot be more than 4 (from 0 up to 4) and in the subsequent with a writing of new textbooks is planned to reduce their quantity to zero.**

***The basic merit of national testing is connected with leaving from learning off pat of huge, badly systematized, become outdated and sometimes scientifically-is doubtfully interpreted material. Testology has a specific goal and it is directed on examination, skills and abilities of entrants. The statistical analysis of results of examinations in biology for the last period, specifies the precise tendency of increase of a level of knowledge, despite of the general tendency of complication of test tasks from year to year and sharp reduction of factology tests.**

*** In connection with that examinations are spent in two languages, Azerbaijan and Russian, the basic complexity in national testing problems of terminology and represent translation of test tasks from one language on another. The additional problem is created with leapfrog with school textbooks. They that become complicated, sharply become simpler. Almost every year there are new editions with a lot of scientific and technical mistakes. Translation of textbooks from one language on another, as a rule, the extremely unsuccessful. The translated editions on информативности are inadequate. Additional problems have arisen with an output of alternative textbooks in the General biology: they simply do not correspond to each other at all: different classification, different geochronology, various sequence of sections, etc.**

*** Preparation of the pedagogical staff includes two levels: preparation of the pedagogical staff for scientific testing and preparation of school teachers on corresponding branches of knowledge.**

*** Preparation of the pedagogical staff for drawing up of test tasks:**

- is one of the major components of the organization of scientific objective testing as before to learn to define a level of knowledge of entrants or schoolboys, it is necessary that first of all authors of test tasks possessed a sufficient level of regular knowledge on corresponding area of biology: were able precisely and laconically, in clear language for entrants to formulate questions of test tasks. Thus they should consider for each task its purpose, problems, as what skills of the entrant this test task come to light. Unfortunately it is very complex process demanding long preparation, wide experience and good knowledge at once two languages on which test tasks (Azerbaijan and Russian are made.) to solve this problem we have developed training seminars on drawing up of test tasks and scientifically-methodical seminars on which scientific aspects of testing and a problem of didactics are discussed.

*** The special attention after lead trainings in the USA (February, 2006) is given now to correct selection of distractions. That a sin to conceal, earlier in most cases composers of test tasks gave the basic attention to drawing up of a question and a right answer, as if to wrong answers (distractions) on them especially attention did not turn, and sometimes the most part of distractions carried any, unreasoned, formal and sometimes absurd character. Therefore in 2007 the significant part of distractions in test tasks has been reconsidered.**

*** Besides we make specialized advice: chemical groups, physical groups, separately biological divisions: botany, zoology, anatomy, the general biology**

***The special attention now is given philological examination and a problem of an ambiguity when one question can have absolutely other sense and an orientation.**

***The paramount problem of an education system rise of a level of knowledge and a level of teaching of biology in high school in a view of sharp strengthening propagation of pseudo-religious sense. If still transfers connected with Moslem doctrine: an islam and the koran try to find things in common of a science and religion it you will not tell about transfers and publications of other faiths which try to challenge primitive propaganda achievements of a biological science.**