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WAYS TO INCREASE THE EFFICIENCY OF PRACTICAL EXERCISES

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ANNOTATION

This article focuses on the problems of improving the efficiency of practical exercisesin yardo physics b death. As a result of the subsequent development of this b death, new topics and the content of their corresponding practical workshopshave been developed. Practical workshops also outline ways to strengthen theoretical knowledge.

Keywords: atomic nuclei, radioactivity, nuclear reactions, bonding energy, efficiency of learning, pedagogy, methodology, practical exercise.

N practical workshops in physics in higher education include working on issues, laboratory classes and seminars. (Matthew 24:14 ; 28:19, 20) Jehovah's Witnesses would be pleased to discuss these answers with you. In this process, students develop practical and thinking methods, skills, and skills. In preparing to participate in creative work, in the development of thought, in independent work, and in the search for effective ways to improve the quality of the lesson, it is important to work on issues.

If it comes to planning to conduct a practical exercise, it will be increased as follows. Each teacher of the university has a calendar plan for each topic of practical workshops conducted in the following semester, where the name of the subject and the transition time will be displayed. In its development, the teacher is based on the instructions of the faculty's educational and methodological commission. The plan will show the numbers of issues for working, homework and independent work in the audience. Students will get acquainted with the calendar-theme plan stored at the department and will learn intelligently about the requirements imposed on them.

The process of conducting practical training. Experience has shown that the methodology for conducting practical workshops cannot be the same because it's a living process, it's a triannity, it's a different variationdepending on the situation will have to be inserted . This is because the qualifications and experience of teachers, the varying level of knowledge of students, prohibit this. But the following are some of the things that take place: students are invited to work on the issue; they work on the issue, and the teacher asks questions that direct their attention, helps students, and neitherviolence nor violence is causing them to do what they do. After the issue is worked on by most students, it will be analyzed and then switched to working on the next issue.

The disadvantages of such a methodology are:

1. Even if the teacher conducts ish with students, most of the group remains chewed from his point of view.
2. Students with a high level of knowledge may have to understand the way to work on the issue. The only way to learn how to work is to work independently, understanding it.

3. If a teacher's learning becomes connected to low-income students, training for strong students can be frustrating. (Matthew 24:14; 28:19, 20) Therefore, it is effective to approach them on a well-established basis , depending on the level of knowledge.

From the foregoing, let's focus on what needs to be done to make practical workshops effective in higher education. Working on issues from physics is a stage in the development of students' thinking.

In pedagogical higher education institutions, nuclear physics is taught as the b death of General Physics. Studies have shown that 1. A collection of issues from the General Physics Course (under the edition of M.S. Cedric), 2. V.S. Volkenstein. Issues t collection qmanuals are recommended from the general physics course. 1. Issues from the general course of physics (under the edition of M.S. Cedric) also provide issues related to the subjects of nuclear structure, the law of radioactive decomposition, nuclear reactions, and thermoelectric reactions. 2. V.S. Volkenstein. The set of issues from the general physics course also provides issues related to topics of radioactivity and nuclear reactions. Suggested literature as additional literature 3. A.G. Chertov, A.A. Voronsov. In a collection of issues from physics, the structure of atomic nuclei, radioactivity, dosimetry elements of ionized radiation, the bonding energy of mass defects and atomic nuclei, issues related to the topics of nuclear reactions. 4. Polvonov S.R., Kanakov Z. , Ruzimov Sh.M. In a collection of issues from atomic and nuclear physics, the main characteristics of the atomic nucleus, radioactivity, the interaction of nuclear radiation with mode, and the nucleus issues related to the topics of reactions.

The f an program in general physics was approved by the Council for the Coordination of Educational and Methodological Associations in Higher and Professional Education on August 14, 2020.

The Ministry of Higher and Secondary SpecialIzed Education of the Republic of Uzbekistan approved the approval of programs of science by the base higher educational institution on August 14, 2020 No. 418.

Topics for lectures from the general physics fan (Atomic, Nuclear and Elementary Particle Physics):

Structure of the atomic nucleus. Nuclear forces. Nuclear models. Radioactivity. Gamma radiation. Thermoelectric reaction. The effects of nuclear radiation with substances. Methods of recording nuclear radiation.

Approximately recommended topics of practical workshops:

1. Nuclear Structure
2. Radioactive parchalanish qonuni
3. Nuclear reactions
4. Termoyadro reaksiyalari

We know that students strengthen their theoretical knowledge in practical workshops. However, we can see from above that very few topics (hours) are allocated to practical workshops, so students find it a little difficult to master the content of the fan they face chiliks. To avoid these difficulties, it is necessary to carry out the following tasks:

1. Study and analysis of existing literature on issues from nuclear physics.
2. The sequence of studying nuclear physics selects issues in b

get and arrange, q create additional issues.
3. Solvingissues y-ways and strengthening theoretical material
enter questions for each issue.
4. Q additional learning assignments and
development of recommendations.
5. For students to evaluate themselves in the process of solving issues
develop recommendations for preparing and performing non-standard tasks.
6. Methodology for using the ACT ina wide range of k scales inthe process of solving issues development.
Research shows that pedagogy is a higher education
It is an important and necessary task for students of specialized training in institutions to effectively organize and improve the process of drilling in nuclear physics. In particular, improving practical workshops and developing its content is one of the most important tasks of the education system today .
The effectivenessof the development of nuclear physics in practical exercises
The following activities were carried out for the purpose of improvement:
1. Practical from nuclear physics in pedagogical higher education institutions
the conductof mash exercises was studied and analyzed.
2. Availablein the recommended republic for exercise
literature was studied and analyzed.
3. A textbook containing issues and their solutions has been prepared for practical workshops aimed at improving the efficiency of the developmentof nuclear physics.
4. Strengthening topics of practical exercises based on Blum taxonomy
and non-standard assignments were developed to evaluate students themselves.
In addition to the foregoing, it is recommended that you draw up new issues in the following order.
1. How many times ${}^{56}_{26}Fe$ is the radius of the iron nucleus ${}^{7}_{4}Be$ larger than the radius of the beryllium nucleus?
2. How long ${}^{27}_{13}Al$ is the radius of the iron ${}^{1}_{1}H$nucleus longer than the radius of the vodorot nucleus?
3. How many times ${}^{16}_{8}O$ longer is the radius of the oxygen ${}^{2}_{1}H$nucleus than the radius of the deytron nucleus?
4. How many times ${}^{24}_{11}Na$ longer is the radius of the iron ${}^{3}_{1}H$nucleus than the radius of the tritium nucleus?
5. The moonis 1.74 mm in diameter and the average density is 3350 kg/m^3. What would be its radius if the moon had density equal to the density of the nucleus with such a mass ?
6. Theearth'sng radius is 6.37 Mm, and the average density is 5518 kg/m 3. What would be its radius if the earth had density equal to the density of a nucleus with such a mass?
7. Marshasa radius of 3.38 mm and an average density of 3940 kg/m^3. What would be its radius if Mars had density equal to the density of a nuclear substance with such a mass?
8. In the sample ${}^{210}_{38}Bi$of radioactive vismut, there are 10 1 0 radioactive atoms that die 5.02 milk bduring the half breakdown period.

9. Identify $^{226}_{88}Ra$ the semi-decomposition doimi forradium. How many parts of the atoms of the beginning will break down in 3100 years? (corrected)

10. If radioactive decomposition products are continuously transported, $^{45}_{20}Ca$ how long will 25% of the atoms in the calcium sample be absorbed?

11. If the $^{226}_{88}Ra$ initial mass of the reni is 2 g, how long will its mass of 20 mg be broken down?

12. If$^{210}_{84}Po$ the radioactive isotope of iridium has a mass of 2 g at first, how many nuclei break down in 1 s, and how many atoms will remain after 60 months?

13. A radioactive sample with an activity of 3.7 10^{9} s^{-1} was put in a caloricalmeter with a heat insurance of 4.19 J/K. If this sample produces α5.3 MeV of energy-efficient particles, how much will the temperature inside the calometer rise in 1 hour?

These issues are similar to those in the aforementioned literature and serve as an additional resource for students to master science.

The Department of Nuclear Physics of Physics is distinguished from the rest of the departments by its interestingness, complexity, modernity, and high level of imagination to learn. The inadequacy of new materials covering the modern achievements of nuclear physics b death to students will serve as a time for students to understand, expand their imagination, and independently integrate innovations in this area . Undoubtedly, the newly improved and developed structure and content of practical workshops, the methodology for teaching it, and the curriculum created will undoubtedly help students develop their deep and strong knowledge of nuclear physics b death in pedagogical higher education institutions.

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