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| 1 | Which interactions relate to fundamental? | №1 | 06.03.2014 20:11:56 |
| 2 | List the fundamental interactions in ascending order of the relative intensity. | №1 | 06.03.2014 20:12:06 |
| 3 | What is the gravitational waves and what are the possible sources of their nature? | №1 | 06.03.2014 20:12:17 |
| 4 | In whichphysical phenomena is weak interactions occur? | №1 | 06.03.2014 20:12:23 |
| 5 | Why weak interactionsare consideredas short-action? | №1 | 06.03.2014 20:12:36 |
| 6 | At what values of the interaction energy can we talk about merger of weak and electromagnetic interactions? | №1 | 06.03.2014 20:12:43 |
| 7 | Pions and gluons are two kinds of quanta in the strong interaction. | №1 | 06.03.2014 20:12:50 |
| 8 | Why neutrinos are an important source of information on thermonuclear processes inside the Sun and stars? | №1 | 06.03.2014 20:12:57 |
| 9 | How can register neutrinos? | №1 | 06.03.2014 20:13:04 |
| 10 | What is neutrino oscillations? | №1 | 06.03.2014 20:13:11 |
| 11 | What changes have been the concept of "rest mass" and "relativistic mass" in recent developments in particle physics? | №1 | 06.03.2014 20:13:19 |
| 12 | What is meant by the terms "technology" and "quantum" sensitivity limits in the physical experiment? | №1 | 06.03.2014 20:13:25 |
| 13 | "Colored" and "colorless" particles. | №1 | 06.03.2014 20:13:31 |
| 14 | What is the cumulative particle? | №1 | 06.03.2014 20:13:36 |
| 15 | What is the concept of "mass defect" and  how they define the "valley of stability"? | №1 | 06.03.2014 20:13:42 |
| 16 | What four groups divided presently known radioactive processes? | №1 | 06.03.2014 20:13:48 |
| 17 | How the model of "liquid drop" explains nuclear fission? | №1 | 06.03.2014 20:13:54 |
| 18 | Which nuclei characterized proton and double-proton radioactivity? | №1 | 06.03.2014 20:14:00 |
| 19 | What is a cluster radioactivity? | №1 | 06.03.2014 20:14:06 |
| 20 | How beams of accelerated radioactive nuclei are used to obtain and study of exotic isotopes? | №1 | 06.03.2014 20:14:14 |
| 21 | Specify the main features and characteristics of the interactions of charged particles. | №2 | 06.03.2014 20:14:29 |
| 22 | Specify the main features of the strong interaction. | №2 | 06.03.2014 20:14:35 |
| 23 | Describe the basic characteristics of the weak interaction. | №2 | 06.03.2014 20:14:42 |
| 24 | How to call the particles or field which creates interaction? | №2 | 06.03.2014 20:14:48 |
| 25 | How to call the particles that are elementary components of matter? | №2 | 06.03.2014 20:14:55 |
| 26 | What does mean quantum  number "color" for quarks? | №2 | 06.03.2014 20:15:01 |
| 27 | What is the difference of "gluons" and quarks? | №2 | 06.03.2014 20:15:23 |
| 28 | What means and describe Feynman diagrams? | №2 | 06.03.2014 20:15:29 |
| 29 | Planck's constant - quantum  of what quantity in physics? | №2 | 06.03.2014 20:15:35 |
| 30 | What is the physical meaning of indeterminacy? | №2 | 06.03.2014 20:15:40 |
| 31 | What an important role plays weak interaction  in the formation of our Universe? | №2 | 06.03.2014 20:15:46 |
| 32 | Why do we need high-energy particle accelerators? Why they can be used to understand the physics of the early Universe? | №2 | 06.03.2014 20:15:53 |
| 33 | What is the Large Hadron Collider? | №2 | 06.03.2014 20:16:05 |
| 34 | What is a cyclotron? Describe the basic principles of its operation. | №2 | 06.03.2014 20:16:16 |
| 35 | Yukawa potential and the Coulomb potential - describe their main characteristics and differences. | №2 | 06.03.2014 20:16:22 |
| 36 | Leptons. Give the types of leptons and  their characteristics. | №2 | 06.03.2014 20:16:29 |
| 37 | Spins of elementary particles. | №2 | 06.03.2014 20:16:35 |
| 38 | Pauli principle and structure of nuclei. Describe the construction of the electron orbits in atoms. | №2 | 06.03.2014 20:16:40 |
| 39 | Fermi and Bose particles. | №2 | 06.03.2014 20:16:46 |
| 40 | What are the properties of particles associated with quantum number "strangeness"? | №2 | 06.03.2014 20:16:53 |
| 41 | The binding energy of the nuclei. | №3 | 06.03.2014 20:17:13 |
| 42 | How to determine the binding energy of the nucleus, knowing the mass of the nucleus, the mass of the proton and neutron? | №3 | 06.03.2014 20:17:23 |
| 43 | Find a specific energy of a nucleus of a helium atom. | №3 | 06.03.2014 20:17:29 |
| 44 | Determine the total binding energy of a nucleus of uranium-238. | №3 | 06.03.2014 20:17:34 |
| 45 | Determine the total specific binding energyof a nucleus of molybdenum- 96. | №3 | 06.03.2014 20:17:40 |
| 46 | Determine the total binding energy of a nucleus of osmium -191. | №3 | 06.03.2014 20:17:46 |
| 47 | Describe the types of radioactivity of different nuclei. | №3 | 06.03.2014 20:17:52 |
| 48 | Describe the reaction of the alpha decay of nuclei. | №3 | 06.03.2014 20:17:58 |
| 49 | Describe the reaction of the beta decay of nuclei. | №3 | 06.03.2014 20:18:04 |
| 50 | Reaction of electron capture. | №3 | 06.03.2014 20:18:11 |
| 51 | Gamma and beta radiation of nuclei. | №3 | 06.03.2014 20:18:18 |
| 52 | The reaction of spontaneous fission of heavy nuclei. Describe the fission products. | №3 | 06.03.2014 20:18:24 |
| 53 | Principle of operation of nuclear reactors based on uranium fission. | №3 | 06.03.2014 20:18:30 |
| 54 | Fission chain reaction. | №3 | 06.03.2014 20:18:37 |
| 55 | The reaction of light nuclei. Write the fusion reaction of protons with form of deuterium nuclei. | №3 | 06.03.2014 20:18:42 |
| 56 | Burning the nuclei of hydrogen atoms on the Sun. | №3 | 06.03.2014 20:18:48 |
| 57 | Cycles of thermonuclear burning of hydrogen with form of helium nuclei. | №3 | 06.03.2014 20:18:55 |
| 58 | Which means "island of stability" for the nuclei of chemical elements? | №3 | 06.03.2014 20:19:01 |
| 59 | Properties of nuclei far from island of stability. Give examples. | №3 | 06.03.2014 20:19:07 |
| 60 | Abundances of chemical elements in nature. | №3 | 06.03.2014 20:19:14 |