

1	Describe stars and interstellar medium.	№1
2	Describe the birth of stars.	№1
3	Give definition and describe galaxies and quasars.	№1
4	Give definition and describe clusters of galaxies.	№1
5	Explain the use of physical laws to the study of space objects (stars, cosmic, plasma).	№1
6	Describe interaction of radiation with matter.	№1
7	Give definition and describe elementary bases of the interaction of matter and radiation.	№1
8	Describe radiative transfer equation and its simple solutions.	№1
9	Analyze physical processes in celestial sources of radiation.	№1
10	Give definition and describe nuclear reactions in stars.	№1
11	Analyze nuclear reactions in astronomical objects.	№1
12	Characterize the main interactions in stars.	№1
13	Explain the theory of weak interactions.	№1
14	Explain the theory of strong interactions.	№1
15	Explain the theory of electromagnetic interactions.	№1
16	Explain the theory of gravity interactions.	№2
17	Give the characteristics of the interactions and reactions of two-particle types.	№2
18	Energy and mechanisms of nuclear fission.	№2
19	Characterize the structure and properties of neutron stars, quasars.	№2
20	Describe the explosions of supernovae.	№2
21	Analyze modern theoretical ideas about the nature of stars and their systems.	№2
22	Explain modern problems of astrophysics.	№2
23	Analyze physical methods of research of space objects.	№2
24	Describe the use of the achievements of nuclear physics to the study of cosmic phenomena.	№2
25	Give the characteristics of nuclear reactions in astrophysical objects.	№2
26	Give the characteristics of databases on nuclear reactions.	№2
27	Give the characteristics of astrophysical observations.	№2
28	Give the characteristics of nuclear interactions in compact objects.	№2
29	Give the characteristics of physical observables in High Density astrophysical objects.	№2
30	Describe the latest discoveries and developments in the study of the universe in recent years.	№2
31	Explain Big Bang Theory (first five minutes).	№3

32	Describe first nuclear reactions in BBT	№3
33	Analyze formation and evolution of Stars	№3
34	Explain relic radiations	№3
35	Give definition and describe fundamental Interactions and Forces.	№3
36	Give definition and describe physics of Elementary particles	№3
37	Explain types of nuclear reactions that happen inside of stars	№3
38	Explain interstellar and stars medium.	№3
39	Explain the use of physical laws to the study of the universe as a whole.	№3
40	Give the characteristics of the explosions of quasars.	№3
41	Describe the periodic emissions of radiation waves from pulsars.	№3
42	Describe the explosions of neutron stars.	№3
43	Explain astrophysical observations.	№3
44	Analyze the latest discoveries and developments in the study of the universe in recent years.	№3
45	Physical methods of research of space objects.	№3