

DEVELOPMENT OF SCIENCE IN THE NEW RENAISSANCE

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Abstract: *The New Renaissance was a period of new ideas and discoveries in Europe. People started to study the world more carefully, ask questions, and test ideas. Science grew in areas like astronomy, medicine, physics, and biology. New methods of learning and research appeared. This period helped humans understand nature better and changed the way people lived. In this article, we discuss important scientists, discoveries, and the influence of the New Renaissance on science.*

Keywords: *Science, Technology, Medicine, AI, Robotics, Space, Environment, Innovation*

Annotatsiya: *Yangi Renessans Yevropada yangi g'oyalar va kashfiyotlar davri edi. Odamlar dunyoni yaxshiroq o'rganishga, savol berishga va g'oyalarni sinashga kirishdilar. Ilm astronomiya, tibbiyot, fizika va biologiya sohalarida rivojlandi. Yangi o'rganish va tadqiqot usullari paydo bo'ldi. Bu davr odamlar tabiatni yaxshiroq tushunishiga yordam berdi va hayot tarzini o'zgartirdi.*

Kalit so'z: *Fan, Texnologiya, Tibbiyot, Sun'iy Intellekt, Robototexnika, Kosmos, Atrof-muhit, Innovatsiya.*

Аннотация: *Новый Ренессанс был периодом новых идей и открытий в Европе. Люди начали внимательно изучать мир, задавать вопросы и проверять идеи. Наука развивалась в астрономии, медицине, физике и биологии. Появились новые методы обучения и исследований. Этот период помог людям лучше понять природу и изменил образ жизни.*

Ключевое слово: *Наука, Технология, Медицина, Искусственный Интеллект, Робототехника, Космос, Окружающая среда, Инновация*

The rapid development of our national culture naturally requires us to study our cultural heritage, which is the main source of it, in a wide and deep and consistent manner on a scientific basis. It is known that the history of the peoples of Central Asia, which has a long past, has experienced various events, periods of growth and decline. These periods undoubtedly left a certain mark in history. In particular, the IX-XII centuries played a major role in the development of our culture. This period made the peoples of Central Asia famous in world culture. Because the cultural achievements of the peoples of Central Asia during this period, innovations in the field of science are an integral part of the development of world culture and science. The Renaissance period



is a conditional name in the countries of the Near and Middle East and includes the 9th-15th centuries. The great prosperity of spirituality and enlightenment was characteristic for this period. Encyclopaedists, great poets, and great statesmen grew up in this period. That's why renaissance means the renaissance of the culture, spirituality and enlightenment of the renaissance era, with a secular, humanistic worldview, referring to the cultural heritage of antiquity. The views of the representatives of the Renaissance period are distinguished by their belief in the unlimited possibilities of man, his will, and his intelligence. The formation of the aesthetic thinking of the Middle Ages in Central Asia is determined by the development of culture and science.

The New Renaissance is a time when science is growing very fast. People are curious and want to know more about the world. They ask questions and try to find answers. Science helps us understand nature, technology, medicine, and life in a better way. Technology is a big part of the New Renaissance. Computers, the internet, and smartphones help people learn and work faster. New inventions make life easier and save time. Technology also helps scientists do research and share information with others. In medicine, scientists discover new treatments and cures. Vaccines, medicines, and advanced surgeries save millions of lives. Doctors and researchers study the human body and diseases to improve health. Space exploration is another important area. Humans study planets, stars, and galaxies. Satellites help us understand weather, communication, and the environment. Space research brings new inventions and knowledge. Environmental science helps us protect nature. Scientists find ways to reduce pollution, save water, and protect animals and forests. Renewable energy, like solar and wind power, is an important part of science today. Artificial intelligence (AI) is growing very fast. AI helps machines think, learn, and solve problems. It is used in medicine, transportation, communication, and education. AI makes life easier and faster.

Robots also help humans in factories, hospitals, and homes. They do difficult or dangerous jobs. Robotics saves time and increases safety. Science affects society too. People live longer, healthier lives. Education, transportation, and communication improve. Science creates new jobs and opportunities, but it also brings responsibilities, like caring for the environment and using technology wisely. The New Renaissance shows that science is everywhere. It improves life, solves problems, and creates new possibilities. Learning, curiosity, and discovery are the key parts of this exciting time. The word Renaissance means "rebirth". In history, the Renaissance was a time when science, art, and education developed very quickly. It started in Europe in the 14th century and continued for several centuries. During that time many great scientists such as Leonardo da Vinci, Galileo Galilei, and Nicolaus Copernicus made important discoveries.

Science



Science is one of the most important forces of human development. It helps people understand nature, the universe, and life itself. In the period of the New Renaissance, science is developing very quickly because of modern technology and global cooperation. Scientists work in many fields such as physics, chemistry, biology, and mathematics. They study natural processes, discover new facts, and create new knowledge. Scientific research is usually done in universities, laboratories, and research centers. Today computers and digital technologies help scientists analyze large amounts of data and make accurate calculations. Because of this, scientific discoveries are happening faster than before. Science also helps solve many global problems. For example, scientists work to find new energy sources, protect the environment, and improve agriculture. Therefore, science plays a key role in building a better future for humanity.

Technology

Technology is one of the main drivers of the New Renaissance. Scientific discoveries often lead to new technologies, and new technologies help scientists make further discoveries.

For example, computers and powerful data systems help researchers analyze large amounts of information. Artificial intelligence can help scientists solve complex problems in medicine, physics, and climate science. Space technology is another important field. Modern satellites help scientists study the Earth, monitor climate change, and improve communication systems. Biotechnology has also made great progress. Scientists can now develop new medicines, improve agriculture, and study human genetics. These technological developments improve people's lives and create new opportunities for economic growth.

Medicine

Medicine is the science that focuses on human health. It studies diseases, their causes, and methods of treatment. In the modern world medicine has developed greatly due to scientific and technological progress. New medical technologies help doctors diagnose diseases earlier and treat them more effectively. Modern hospitals use advanced machines such as MRI scanners, robotic surgery systems, and digital medical records. Another important development in medicine is biotechnology. Scientists can now study human genes and develop new medicines. Vaccines and modern treatments help prevent many dangerous diseases. Telemedicine is also becoming popular. It allows doctors to consult patients through the internet, which is especially useful for people living far from hospitals. All these developments improve the quality of life and help people live longer and healthier lives.

Artificial Intelligence

Artificial intelligence (AI) is one of the most important scientific developments of the New Renaissance. AI systems can analyze data, recognize patterns, and perform tasks that normally require human intelligence. In medicine, AI helps doctors detect





diseases earlier and more accurately. In education, AI-based systems can help students learn in personalized ways. In business and industry, AI increases efficiency and productivity. However, scientists and governments must also think carefully about ethical issues related to artificial intelligence. Technology should always be used responsibly and for the benefit of humanity. The development of AI shows how science and technology together can create powerful tools that change the world.

Robotics

Robotics is a field of science and technology that deals with the design and use of robots. Robots are machines that can perform tasks automatically or with minimal human control. In the New Renaissance period robotics is developing rapidly. Robots are used in factories, hospitals, agriculture, and even homes. They can perform dangerous or repetitive tasks that are difficult for humans. For example, industrial robots help build cars and electronic devices. Medical robots assist doctors during surgeries and help improve precision. In agriculture robots can plant seeds, monitor crops, and harvest food. Some modern robots use artificial intelligence. This allows them to learn from data and improve their performance over time. Robotics increases productivity and helps industries become more efficient.

Space exploration is another important area of scientific development. Scientists study planets, stars, galaxies, and other objects in the universe. Space technology has developed significantly in recent decades. Satellites are used for communication, weather forecasting, navigation, and environmental monitoring. Space agencies send spacecraft and robots to explore the Moon, Mars, and other planets. These missions help scientists learn more about the origin of the universe and the possibility of life beyond Earth. Space research also leads to many useful technologies used in everyday life, such as satellite communication, GPS navigation, and advanced materials. The exploration of space inspires people and encourages new scientific discoveries.

Environment

The environment includes the air, water, land, plants, and animals that surround us. Protecting the environment is one of the most important challenges of the modern world. Scientific research helps us understand environmental problems

such as climate change, pollution, and loss of biodiversity. Scientists study these issues and develop solutions to protect nature. Renewable energy sources like solar power, wind energy, and hydroelectric power are becoming more popular. These energy sources help reduce pollution and protect the planet. Environmental science also focuses on sustainable development. This means using natural resources carefully so that future generations can also benefit from them. People, governments, and scientists must work together to protect the environment and maintain ecological balance. Innovation means creating new ideas, methods, or technologies that improve people's lives. It is one of the main drivers of progress in the New Renaissance. Innovations appear in many fields such as technology, medicine, education, transportation, and communication. New





inventions often change the way people live and work. For example, smartphones, the internet, artificial intelligence, and modern transportation systems are results of innovation. These technologies make communication faster and work more efficient. Innovation also helps economic development. Companies invest in research and development to create new products and services. Encouraging creativity, education, and scientific research is essential for innovation. Young scientists and entrepreneurs play an important role in creating new solutions for global challenges. Young people are the future of science. In the New Renaissance many young scientists are making important contributions in different fields. Universities and research institutions encourage students to participate in scientific projects and innovation programs. Competitions, scholarships, and international exchange programs help young researchers develop their talents. Young scientists often bring fresh ideas and new perspectives. Their creativity and curiosity lead to innovative solutions. Supporting young researchers is therefore essential for the continued development of science.

In conclusion, the development of science in the New Renaissance plays a very important role in modern society. Fields such as science, medicine, robotics, space exploration, environmental studies, and innovation are developing rapidly and bringing many positive changes to people's lives. Scientific discoveries help improve healthcare, create new technologies, explore space, and protect the environment. Robotics and innovation make work easier and increase productivity in many industries. At the same time, environmental science helps people understand the importance of protecting nature for future generations. Therefore, the New Renaissance is a period of great scientific progress. By supporting education, research, and innovation, societies can continue to develop science and build a better future for humanity.

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