Essay

$$$001
Types of blendend learning technology
$$$002
Application of innovative methods in teaching computer science
$$$003
Methods of gamification strategy in stimulating students
$$$004
Gamification in Online Education
$$$005
Features of instructional design in online learning
$$$006
Purpose of using LMS systems in Instructional design
$$$007
The role of STEM technology in education
$$$008
The role of STEM in the formation of computational thinking of students
$$$009
Application of SMART technologies in the educational process
$$$010
Educational platforms for the preparation of interactive didactic materials in an online environment
$$$011
Multimedia technologies for processing and presenting information.
$$$012
My role in the digital society.
$$$013
Educational platforms used in teaching computer science
$$$014
In the internet education system
$$$015
Forms of organizing and conducting distance learning
$$$016
Virtual world and virtual reality in education.
$$$017
The use of interactive video, mobile applications in education
$$$018
Efficiency of using massive open online courses in the educational process
$$$019
Prospects of using artificial intelligence in education
$$$020
The role of computer science in education in the XXI century.

Questions

###001
Methodological system of teaching computer science and the relationship of its components.
###002
Information culture and media literacy of students. Concepts of algorithmic culture, computer literacy, information culture, information competence.
###003
Structure of computer science education in the 12-year school curriculum
###004
Documents regulating the teaching of computer science. Description of SSO RK
###005
The name of the sections containing the goals, objectives and content of the curriculum for the study of the subject "Computer Science" for grades 5-9 at the level of basic secondary education
###006
Methods, forms, and means of teaching computer science at school. Information and communication educational environment, methods of productive training in computer science. Implementation of modular technology in computer science education
###007
Computer Science cabinet and organization of its work and software. The composition of the software of the school computer science course, the information and educational environment of the school, the software of the interactive whiteboard
###008
Methods of monitoring and evaluating students ' knowledge in computer science
###009
Additional forms of computer science education. Additional education. Basic concepts. Organization of Olympiads and scientific works in computer science.
###010
Types, goals, tasks, functions, and content of extracurricular computer science classes. Features of the organization of extracurricular work in computer science. Methods of conducting extracurricular activities
###011
Participation in the IT-STARTUP, description of the Crowdfunding platform, explanation of the methods of creating advertising (infographics, videos) in marketing
###012
Development of STEM education, STEAM STREM. Methods of project preparation for sections of computer science courses and in connection with other disciplines
###013

Working with educational platforms in the educational process: Bilim.Land, Daryn.online, Member.Daryn.online, Kundelik.kz, Openu.kz, Opiq.kz and their activities

###014

Categories of learning goals in the cognitive sphere according to B. Bloom's taxonomy

###015

Analyze the capabilities of ActivInspire environments, using the learning functions for an interactive friend

###016

DSP, SSP, KSP in the organization of training in school computer science.. The design of lesson planning when teaching computer science at school. KSP structure

###017

Learning objectives in the standard curriculum for the updated content of the discipline "Informatics", its code features

###018

Sections and subsections containing the basic content of the social and humanitarian direction in the academic discipline "Informatics"

###019

Pedagogical methods and methods used in teaching computer science. Effective training and learning methods. Use of active learning methods. Dialogic learning

###020

Pedagogical methods and techniques used at the stages of the lesson in the process of teaching computer science. Differentiated training.

###021

Principles of criteria-based assessment. Content of the criteria-based assessment system

###022

Preparation of formative assessment tasks

###023

The algorithm for composing summative assessment tasks by sections. Algorithm for composing summative assessment tasks for a quarter

###024

Features of teaching ICT in primary classes according to the updated program, general topics

###025

Training based on research on the updated program. Research-based approaches to teaching and learning.

###026

Planning a series of consecutive lessons.

###027

Methods of assessing the quality of training

###028

7 modules of the third level program.

###029

Description of mechanisms for entering data binding elements into the Arduino UNO microcontroller.

###030

The use of modern mechatronic and micromechatronic systems in the Lego mindstorms education ev3 collection.

###031

Intelligent robot control systems: basic principles of control system organization, visual information processing (segmentation, object recognition methods) Description.

###032

Intelligent control systems: the basic principles of the organization of the control system, the tasks of building a trajectory, building a map of the area and its binding.

###033

Development of robotic prototypes for use in various spheres of human activity; work on the creation, development and implementation of new educational methods using robotics, etc.

###034

Teaching talented and gifted students

###035

The use of information and communication technologies in teaching and learning

###036

A brief history of the development of computer networks. Classification of computer networks. Local and global networks.

###037

Teaching critical thinking

###038

Analysis of the development and state of teaching the subject "Digital Literacy" in primary school

###039

The main goals and objectives of information security

###040

Development of the information security system, improvement of its organization

###041

The history of the IoT. The Three Driving Factors of IoT

###042

Teaching and learning in accordance with the age characteristics of students

###043

What is machine learning? How machines are trained

###044

Five advantages of machine learning and complexity

###045

Making decisions based on data. Traditional approaches. A machine learning approach.

###046

History and definitions, principles of instructional design

###047

Features of the development of electoronic courses

###048

5 stages of the development of educational material in instructional design. Models of instructional design.

###049

Tasks and modes of work of an instructional designer

###050

Instructional design for mobile courses and features of its methodology.

###001

Research conversation. Posing questions. To give an example from the educational subject "Digital literacy" for primary classes.

###002

Analysis of the development and structure of ICT training in primary classes.

###003

Determine the purpose and objectives of studying the subject "Information and communication technologies" in the beginning classes.

###004

Analyze the content of the educational subject "Information and communication technologies" for the beginning classes.

###005

Participation in the IT STARTUP, description of the Crowdfunding platform, explanation of methods of creating advertising (infographics, videos) in marketing.

###006

Show the specifics of the organization of the distance Olympiad, the possibility of registration, participation, and discussion of reports.

###007

Using Bloom's taxonomy to contain issues on topics of Informatics

###008

Analysis of formative assessment methods used to measure the success rate and level of knowledge related to the world

###009

Definition of views, goals, tasks, functions, maintenance of secondary jobs in Computer Science

###010

Analysis of goals and objectives of international research PISA

###011

Address the main areas of Pisa research

###012

Definition of structures, planning and ways to organize a format assessment

###013

Working with educational platforms in the educational process: Bilim.Land, Darwin.online, Member.Darwin.online, Kundelik.kz, Openu.kz, Opiq.kz and their activities

###014

Graphic formats, their features and characteristics.

###015

Imitation of graphic design techniques

###016

Use of modern systems in the collection Lego mindstorms education ev3

###017

Robots, their classification, basic systems. Classification of sensor systems implementation of analysis and evaluation.

###018

Development, analysis and presentation of a brief description of the main types of robot drives (electric, hydraulic, pneumatic).

###019

Organization and Classification of robot control systems. To tell about the role of scientists of the Republic of Kazakhstan in the development of new methods of education in the robot control system.

###020

Basic principles of building a control system for a group of robots. Formation of adaptive and intelligent control systems (views).

###021

Description of control systems of intelligent robots (basic principles of organization of control systems, processing of visual information).

###022

Write a Python program to create a triangle of stars.

###023

Write a Python program to test if a number is prime.

###024

The lengths of the three sides of the triangle are known. Calculate the perimeter of a triangle and the area using Heron's formula (use the *math* module and the *sqrt ()* function).

###025

A natural number is given. Determine if the number is even, multiple of 10.

###026

Real numbers *X* and *Y* are given. Calculate Z. $Z=\sqrt{X*Y}$ for $X>Y$, Z = ln (X + Y) otherwise.

###027

You are given real numbers *a, b* and the value $x \in [-3;3]$ with a step h = 2.

Calculate $y=\sin^3 x^3 - x/\sqrt{a^2+b}$.

###028

Given array A(10). Find the number of array elements equal to 5.

###029

Network architecture. Types of network architecture
###030
Network components. Physical and logical structures.
###031
Methods and means of information protection in communication channels
###032
Tasks of Instructional design
###033
Accounting for the TCP / IP protocol stack, Internet standards, and IP protocol address definition.
###034
Studying the Nat (Network Address Translation) project)
###035
Introduction of the methods of encryption of the public key of information protection in cryptographic systems and learning use of them.
###036
ADDIE is a model of Instructional design.
###037
Fundamentals of compositional visualization.
###038
Describe the capabilities of the MS Access DBMS
###039
List the objects included in the MS Access database file?
###040
What is the difference between working with database objects in MS Access: online mode, designer mode?
###041
Describe what types of data fields can have in MS Access. What is their maximum size?
###042
Methods of preparing graphic projects.
###043
Report on the role of RK scientists in the development of new methods of education in the system of robot control.
###044
Describe the purpose of the SQL language.
###045
What is a request? What is the difference between a sample request and a request with a parameter? How can I create a request?
###046
List the features of the LMS Moodle system
###047
List the resources and items in the LMS Moodle system
###048
Creating a course in the LMS Moodle system

###049
Creating a system for evaluating educational results in LMS Moodle
###050
Specify the methods of implementing feedback with students in LMS Moodle
###001
Identify ways to develop a course in the Google Classroom learning management system
###002
To formulate the content of the topics and learning objectives for the academic subject "Information and Communication Technologies" of the section "Computers and Programs" in the long-term plan for the 2nd grade.
###003
To formulate the content of the topics and objectives of training in the subject "Information and Communication Technologies" of the section "Programming" in the long-term plan for grades 3-4.
###004
Propose a methodology for preparing a project in the field of robotics and mobile application development
###005
Basic principles of creating a control system for a group of robots.
###006
Teaching critical thinking. Development of effective questions in teaching computer science.
###007
Give examples of planning and organizing summative assessment on general topics in computer science
###008
Create a table describing the levels of training of a student in computer science
###009
Use of the rubricator in the criteria assessment. Providing a sample of the category based on the results of the summative assessment of the section.
###010
Analysis of the mechanism of grading in criteria-based assessment in the process of teaching computer science.
###011
Evaluation of organized extracurricular work in computer science based on the requirements of the criteria-based assessment system.
###012
Methods of monitoring and evaluating students ' knowledge in computer science. Types of test preparation. According to the section "Programming" of school computer science, it is necessary to make 4 test tasks (selection, determination of compliance, construction of the correct sequence, by types of additions).
###013
The purpose of the training: "6.1.1.2 explain the interaction of the main computer devices», level of thinking: "application", evaluation criteria: "shows the

connection of the main computer devices". Development of a formative assessment task with a descriptor that meets the requirements.

###014

The weight is specified in grams. Determine the weight in tons and kilograms. Write a Python program.

###015

A natural number is given. Determine if the number is odd, a multiple of 5. Write a Python program.

###016

You are given a one-dimensional array of numeric values with N elements. Swap the first and second halves of the array.

###017

Development and implementation of research methodology in the field of robotics.

###018

Independent planning, development, analysis and presentation of scientific papers in the field of robotics in written and oral form.

###019

Formation of initial knowledge and ideas in the field of specialization in the field of robotics.

###020

Technical and ethical assessment of the performance of intelligent control systems, as well as its relationship to a broad field of knowledge in the field of robotics.

###021

Develop an academic / research career in the field of intelligent robot management through presentations, publications, and the establishment of national and international scientific connections.

###022

User identification and authentication

###023

Analog standards. Digital standards.

###024

Development trends in the field of computer design.

###025

Independent analysis of research work in the field of robotics.

###026

You are given a one-dimensional array of numeric values with *N* elements. Swap the elements on even and odd places: A [1] ↔A [2]; A [3] ↔A [4]… ..

###027

You are given a one-dimensional array of numeric values with *N* elements. Construct two new ones from the elements of the original array. The first should only contain elements with positive values, and the second should only contain elements with negative values.

###028

Positive numbers are entered. Determine the sum of numbers divisible by a positive number *B* entirely. If you enter a negative number, finish the job.

###029

M lines of words are set, which are entered from the keyboard. Count the number of vowels in each of the given lines.

###030

Given array A(10). Find the product of the negative elements of the array. Arrange array elements in descending order.

###031

Process the elements of a rectangular matrix *A* with rows *N* and *M* columns. Find the smallest value among the arithmetic means for each row of the matrix.

###032

Given array D(4,4). Find the product of the positive elements of the array for each column of the matrix.

###033

Given array D(4,4). Write elements of a rectangular matrix to a one-dimensional array in the order of columns.

###034

Introduction to Ethernet technology, mastering.

###035

Ownership of X. 25 networks, Frame RELAY networks, TDM technologies, ATM networks

###036

Comparison of practical methods of information security

###037

Telephone networks and their use in data transmission.

###038

Organizational and engineering equipment of information security

###039

Why are forms used in databases? What sections are available in the form and why are they intended? How can I create a form?

###040

What controls can database objects have: form, report, data access page?

###041

What is the report for? What information is displayed in the report? What is the structure of the report? How can I create a report?

###042

What tools are used in the Microsoft Access database management system to automate operations with database objects? How do they differ?

###043

How can I automatically execute a macro or set of macros when opening a database?

###044

Why is the relationship between the tables established? What types of relationships between tables are possible?

###045

Symmetric cryptosystems. DES (Data Encryption Standard)

###046

Given array D(4,4). Find the smallest of the mean values of the elements of each column of the matrix.

###047

Technical and ethical assessment of the activities of intelligent management systems.

###048

Development of a scientific career in the management of intelligent robots, establishment of international scientific contacts.

###049

You are given a one-dimensional array of numeric values with N elements. Exclude elements from the array that belong to the interval [B; C].

###050

Array A (10) is given. Find the sum of the positive, even elements of the array. Arrange the elements of the array in ascending order.