

MINISTRY OF SCIENCE AND HIGHER EDUCATION OF THE RUSSIAN FEDERATION
VOLGA REGION STATE TECHNOLOGICAL UNIVERSITY

I APPROVE

Dean of the RTF

I APPROVE /A.N. Dedov/

(Full name of the dean (director of the institute))

11.03.2024

WORKING PROGRAM OF THE DISCIPLINE (MODULE)

B.1.2.14 Administration in information systems

(code and name of the discipline according to the curriculum)

Direction of training
(speciality)

09.03.02 Information systems and technologies

Graduate qualifications

Bachelor

(bachelor/master/specialist)

Direction

Intelligent information systems and
technologies

Well 2
Semester 4

Distribution of study time

Workload according to the curriculum	108 / 3	hours/credits
Lectures	18	hours
Laboratory work	-	hours
Practical classes	36	hours
Other contact work	-	hours
Total contact work (excluding copies)	54	hours
Contact work for the exam	-	hours
Course project (work)	-	semester
Independent work of students		
(excluding copies)	54	hours
Independent work in preparation for the exam	-	hours
Exam	-	semester
Credit	-	semester
BRK, DZ	4	semester

2024

(year)

The program is compiled in accordance with the requirements of the Federal State Educational Standard of Higher Education in the field of training (specialty) 09.03.02 Information Systems and Technologies

The program was compiled by:

Associate Professor with a PhD

candidate of sciences

(job title)

RTIS

(department)

AGREED

A.V. Zuev

(I.O. Surname)

CONSIDERED and APPROVED at a meeting of the department to which the discipline Department of Radio Engineering and Communications is assigned

(name of department)

31.01.2024

(date)

Protocol No.

12

Head of Department

AGREED

N.V. Ryabova

(I.O. Surname)

The work program is AGREED with the faculty (institute), graduating department(s).

COMPLIES with the current OP.

Head of Department

AGREED

N.V. Ryabova

(I.O. Surname)

Chairman of the methodological commission of the faculty (institute), which includes the graduating department

AGREED

A.N. Dedov

(I.O. Surname)

Expert(s): Svetlana Gennadievna Pashukova, director of the branch in RME PJSC Rostelecom

The work program was checked and registered in the Training and Methodological Center on March 12, 2024. Specialist of the Training and Methodological Center

APPROVED T.A. Smirnova /T.A. Smirnova/

Section 1. PURPOSE OF MASTERING THE DISCIPLINE

The purpose of mastering the discipline is to achieve the planned learning outcomes corresponding to the indicators of achievement of competencies established in the OPEP:

Code and Name competencies	Code and name achievement indicator competencies	Learning Outcomes
1. PC-1 Ability conduct research at all stages vital cycle software funds	PC-1.1. Know technologies and principles conducting experimental research, as well as development methods, analysis and design software provision for models and methods informational systems and technologies	knowledge: Know the technologies and principles conducting experimental studies, as well as methods of development, analysis and software design for models and methods of information systems and technologies skills: skills:
	PC-1.2. Be able to apply theoretical knowledge and modern computer tools for existing technical solutions constructions informational systems of various appointments.	knowledge: skills: Be able to apply theoretical knowledge and modern computer tools for existing technical solutions for building information systems for various purposes. skills:
	PC-1.3. Have skills collection and possessions analysis of scientific technical information on research topic and methods experimental research with subsequent processing and presentation results.	knowledge: skills: skills: Have skills in collecting and analyzing scientific and technical information on the research topic and methods of experimental research with subsequent processing and presentation of the results.

<p>2. PC-2</p> <p>Ability fulfill work on maintenance software and software hardware by means networks and infocommunications</p>	<p>PC-2.1. Know the general principles functioning hardware, software and software-hardware administered networks, architectures hardware, software and software- hardware administered networks, as well as the general basis for the solution practical tasks on working with the installed BD</p>	<p>knowledge: Know the general principles the functioning of hardware, software and software- hardware of the administered network, the architecture of hardware, software and software- hardware of the administered network, as well as the general principles of solving practical problems in working with the installed database</p> <p>skills: skills:</p>
	<p>PC-2.2. Be able to configure peripheral and subscription software-hardware devices, and also prevent main threats DB security</p>	<p>knowledge:</p> <p>skills: Be able to configure peripherals and subscriber software and hardware devices, as well as prevent the main threats to database security</p> <p>skills:</p>
	<p>PC-2.3. Have skills installations and settings software provision, regulations for conducting preventive works on administered infocommunication and system as well as identifying threats security at the level BD</p>	<p>knowledge:</p> <p>skills:</p> <p>skills: Have installation and configuration skills software, regulations for carrying out preventive maintenance on the administered information and communication system, as well as identifying security threats at the database level</p>

Section 2. PLACE OF DISCIPLINE IN THE STRUCTURE OF OPOP

The discipline is one of the elective disciplines (modules) of the OPEP.

The discipline is elective

To continue developing the stated competencies, knowledge of the previous disciplines is required: Information technologies in the infocommunications industry (PC-2); practitioner: Educational practice. Introductory practice (PC-1)

The studied discipline is the basis for continuing the formation of the specified competencies in the following state final certification in the form of: Implementation and

defense of the final qualifying work (PK-1), Completion and defense of the final qualifying work (PK-2)

Section 3. DESCRIPTION OF EDUCATIONAL TECHNOLOGIES

To develop the stated competencies, methodological technologies are used that implement activity-based, personality-oriented, and practice-oriented approaches.

The main strategic technologies are: lectures, practical classes

The applied tactical technologies are aimed at achieving specific learning objectives: classical lecture

Section 4. CONTENT OF THE DISCIPLINE

4th semester

Types and topics of classes	Quantity hours	Formable competencies
Creating the simplest local networks	36	PC-1, PC-2
Lecture. Introduction to the main devices of local communication networks	2	
Lecture. The simplest network of two computers	2	
Lecture. Tree topology of connections	2	
Practical Lesson: Hub-Based Network	4	
Practical lesson. Network based on a second-level switch	4	
Practical exercise. Creating backup links between switches	4	
Tasks for independent work, including the completion of Preparation for classes	18	
Setting up router models	36	PC-1, PC-2
Lecture. Routing Protocol RIP	2	
Lecture. Loopback connections with routers	2	
Lecture. Setting parameters in the router models window	2	
Practical lesson. Network model with a router	4	
Practical lesson. Network model with a router and two switches	4	
Practical exercise. Network model with two routers	4	
Tasks for independent work, including the completion of Preparation for classes	18	
Configuring serial port settings	36	PC-1, PC-2
Lecture. Using a clock generator in local communication networks	3	
Lecture. Symmetrical connection of routers	3	
Practical lesson. Setting up a serial communication channel	6	

Practical lesson. Network based on symmetric connection of routers	6
Tasks for independent work, including the completion of Preparation for classes	18
Other contact work:	0

Section 5. METHODOLOGICAL INSTRUCTIONS FOR STUDENTS ON MASTERING THE DISCIPLINE

It is recommended to begin studying the discipline with familiarization with the work program, its structure and the content of the sections. The educational material is structured, the study of the discipline is carried out in thematic sequence. Lecture-type classes provide systematized knowledge on the discipline, focus on the most complex and important issues. During lectures, it is recommended to take notes on the educational material; pay attention to the formulations and categories that reveal the essence of the problem, phenomenon or process; record conclusions and practical recommendations. Preparation for seminar-type classes includes familiarization with the plan practical classes; work with lecture notes, homework, work with educational and educational-methodological literature, scientific publications and electronic educational resources recommended by the working program of the discipline

Content independent work is determined by the course work program, assessment and methodological materials, assignments and instructions of the teacher. Independent work can be carried out in the classroom and outside the classroom. An effective means of implementing independent work is the electronic information and educational environment of the university, which provides access to the educational program, the course work program, electronic library systems, professional databases and information reference systems.

The frequency of implementation, forms of current monitoring of academic performance, and the system of assessing the progress of mastering disciplines are presented in the work program. The form of midterm assessment for the discipline is point-rating control.

Chapter 6. MATERIAL, TECHNICAL AND EDUCATIONAL-METHODOLOGICAL ENFORCEMENT OF DISCIPLINE

6.1. Educational and methodological support

No p/p	List of used literature	Quantity copies of printed editions available in library, or publication email address (resource) on the Internet
EDUCATIONAL, EDUCATIONAL-METHODOLOGICAL AND SCIENTIFIC PUBLICATIONS		
1. S	makin, Igor Gennadievich. Fundamentals of Algorithmization and Programming [Text] : textbook : for educational organizations average professional education in the specialties "Information systems and programming", "Network and system administration", "Ensuring information security of automated	24

	systems", Ensuring information security of telecommunication systems". Review registration number 195 dated June 20, 2017. FGAU "FIRO" / I. G. Semakin, A. P. Shestakov. 2nd ed., reprinted. Moscow: Academy, 2018. - 300, [1] p. ISBN 978-5-4468-6228-3. Copies: total 24.	
2.	Dyugurov, D.V. Network security based on Microsoft server products [Electronic resource] / D. V. Dyugurov 2nd ed. Moscow: INTUIT, 2016. - 74 p.	https://e.lanbook.com/book/100488
3.	Ivans, K. Microsoft Windows Administration Server 2003 [Electronic resource] / Ivens K. 2nd ed. Moscow: INTUIT, 2016. - 486 p.	https://e.lanbook.com/book/100554
4.	Hunt, Craig. TCP/IP. Network administration [Text]: [trans. from English] / K. Hunt. 3rd ed. St. Petersburg: Symbol-Plus, 2004. - 814 p. ISBN 5-93286-056-1. Copies: 8 in total.	8
5.	Vaswani, Vikram. MySQL [Text]: usage and administration / Vikram Vaswani; [translated from English by V. Ivanov]. SPb.: Piter, 2011. - 362 p. ISBN 978-5-459-00264-5. Copies: total 10.	10
ELECTRONIC EDUCATIONAL RESOURCES		
1.	Scientific electronic library eLIBRARY.RU	http://elibrary.ru
PROFESSIONAL DATABASES AND INFORMATION REFERENCES SYSTEMS		
1.	Reference and legal system Consultant+	http://www.consultant.ru
2.	Information and legal portal Garant	http://www.garant.ru
3.	Professional reference systems TechExpert	http://www.cntd.ru

6.2. Material and technical base and software

No p/p	Audiences for testing conducting training sessions, independent work you and the holding of the state final certifications	List of main equipment	Software security
1.	333b (III)	Laboratory stand "Digital Mic electronics " 1060x256x654 (1), Enterprise, Monitor 19" Samsung 940N (KSB) legal TFT system Silver. Round Simple (3), "Consultant Monitor 19" Plus", Samsung 940N (LKSB) Microsoft Office TFT (2), Monitor LG LCD 19" Standard, Dr.Web Agent, L1919S-SF (1), Projector Kit GUARANTEE-multimedia Hitachi CP-Master, Software package X2514WN (1), Athlon system unit for solving basic 64 3500/512Mb*2/160Gb/FDD/DVD- user tasks RW keyboard.mouse.carpet. (2), System block Core 2Duo E6320/2Gb/320Gb/512Mb keyboard mouse (2), System block AMD3000+(512*2)/160Gb/DVD+RW Wrkfd/+mouse+pad+keyboard. (1),	Microsoft Windows Help system Plus", Office d, Dr.Web Agent, Kit GUARANTEE-Software package solving basic 64 user tasks RW

	block RAY P360.3, keyboard, mouse optical, rug + monitor 19" ViewSonic VA916 (1), AMD System Unit*2 4000/2*512 MB/160Gb/512 MB/ (1), Wall screen 200*200cm Braun Roll Vision (1), Set of educational furniture (1)	
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Section 7. FORMS OF CONTROL OF DISCIPLINE MASTERY/ASSESSMENT TOOLS FUND

The criteria for assessing indicators of achievement of competencies are aimed at:

- assimilation of theoretical material (volume of knowledge, depth of assimilation) provided for by the work program;
- the ability to present material (clarity, literacy of presentation of material, accuracy and completeness of reproduction of educational material);
- the ability to apply theoretical knowledge when solving practical tasks. The assessment scale is presented below.

Level formation elements competencies	Evaluation criteria	Scale assessments
Threshold level	The student has knowledge of the basic material, demonstrates the ability to present it logically, but may make inaccuracies in the presentation of the material, insufficiently correct formulations, and experiences difficulties in completing practical tasks.	Satisfy-verbally
Advanced level	The student has a firm knowledge of the program material, presents it competently and to the point, does not allow significant inaccuracies in answering questions, correctly applies theoretical principles when solving practical issues and problems, and has the necessary skills and techniques for their implementation	Fine
High level	The student has thoroughly and firmly mastered the program material, presents it competently and logically, gives comprehensive answers to the questions posed. The answer closely links theory with practice, while the student does not find it difficult to answer when the task is modified, freely copes with tasks, questions and other types of application of knowledge, demonstrates familiarity with monographic literature, periodicals, correctly justifies the decisions made, freely possesses diverse skills, techniques for performing practical work	Great

7.1. Current monitoring of academic performance

Current monitoring of academic performance ensures the assessment of the course of mastering the discipline (module) and is carried out using the rating control technology in accordance with the technological map of the discipline. The procedure for drawing up the technological map and the algorithm for carrying out the procedure for assessing the types of activities of students,

aimed at mastering knowledge, skills, abilities and/or work experience, according to the cumulative system in points, established by the regulation on the RITM system at the Federal State Budgetary Educational Institution of Higher Education "PSTU"

7.2. Interim assessment of students

Interim assessment of students is aimed at assessing the learning outcomes in a discipline (module) and is carried out using assessment tools.

Examples of typical control tasks from the database of assessment tools for the educational program.

Question No. 1

What is the principle used in MPLS technology?

Split Routing Principle

Delivery (forwarding) principle

The principle of separation of routing and delivery (forwarding)

The principle of signaling information processing

Question #2

LDP users are

LDP Switching Routers

Transit nodes

OSPF Protocol

LSR Switching Routers

Question #3

LDP messages include:

Opening/closing a communication session

Discovery, to notify neighboring LSR ("Hello")

Create/delete/modify a label

All answers are correct

Question No. 4

What function do transit nodes perform?

Provide subscribers with access to a multi-service network

They perform the function of transfer and switching

Perform functions of processing signaling information, managing calls and connections

Allows connection to traditional communication networks (SSOP, SPD, SSPS)

Question No. 5

What function do end (boundary) nodes perform?

They perform the function of transfer and switching

Perform functions of processing signaling information, managing calls and connections

Allows connection to traditional communication networks (SSOP, SPD, SSPS).

Provide subscribers with access to a multi-service network

Question No. 6

What function do alarm controllers perform?

Perform functions of processing signaling information, managing calls and connections

They perform the function of transfer and switching

Provide subscribers with access to a multi-service network

Allows connection to traditional communication networks (SSOP, SPD, SSPS)

Question No. 7

What function do gateways perform?

Provide subscribers with access to a multi-service network

They perform the function of transfer and switching

Allows connection to traditional communication networks (SSOP, SPD, SSPS)

Perform functions of processing signaling information, managing calls and connections

Question No. 8

What does the term route mean?

Choosing the shortest path first

Reducing the load on transit stations

The relationship between dial-up and connection

A set of pairs of numbers that are network numbers and distances to them in hops

Question #9

What is meant by "distance vector"?

Checks the correctness of the network address and mask specified in the message

Finding optimal routes using the resulting graph

The relationship between dial-up and connection

A set of pairs of numbers that are network numbers and distances to them in hops

Question #10

What is the main quality of OSPF protocol?

OSPF was designed to efficiently route IP packets in large networks with complex topologies including loops, and is based on a link-state algorithm that is robust to changes in network topology.

When choosing a route, OSPF routers use a metric that takes into account the bandwidth of the underlying networks.

The OSPF protocol allows storing multiple routes to the same network in the routing table if they have equal metrics, which allows the router to operate in route load balancing mode.

All answers are correct

Question No. 11

How long does it take for RIP to send response messages to a broadcast or multicast address?

Every 40 seconds

Every 45 seconds

Every 60 seconds

Every 30 seconds

Question #12

When a response message is received, for each element of the distance vector it contains, the RIP router module performs the following actions:

Checks if the network address and mask specified in the message are correct; checks if the metric (distance to the network) is greater than infinity

Ignores the invalid element if the metric exceeds; increases the metric by 1 if the metric is less than infinity

Searches for the network specified by the distance vector element in question in the route table

All answers are correct

Question #13

OSPF supports standard distance values for the bandwidth metric for many protocols. What is it for an Ethernet network?

1

100

65

10

Question No. 14

What is the maximum traffic value?

Traffic exceeding peak threshold

The maximum number of information blocks generated per unit of time

The average number of information blocks generated per unit of time

The ratio between the maximum and average traffic values

Question #15

What is defined as the ratio between the average and maximum values of service traffic?

Average peak duration

Coefficient of packet density

Average session duration

Request intensity

Question No. 16

What forms of payment will be used as IP networks evolve?

Per-minute billing for mobile voice communications

Per megabyte billing for file transfers

Fixed cost for sending SMS

All answers are correct

Question #17

What method of effect evaluation is used in statistical multiplexing of the monoservice traffic transmission process?

The concept of effective transmission rate

Methods of economics and teletraffic of multiservice networks

Methods of packet receipt

Methods of teletraffic theory

Question #18

Provide an example of a synchronous technology that provides the user with the ability to transmit a message at fixed intervals with guaranteed quality.

SDH

STM-1

QoS

STM-16

Question #19

What is used in VBR type connections?

Realization of a free resource distributed proportionally to the requests of all consumers

Transmission of information with strict limitations on cell losses

Transmission of information with strict limitations on delay and cell loss

Channel resource based on the analysis of the effective transmission speed of the information flow

Question #20

What functions do the TCP and UDP transmission control protocols implement?

Connecting

Informational

Transport

Measuring

Question #21

Highlight the levels of QoS (quality of service) support:

Management of the route of the information flow initiated by the provision of a service

Controlling the transmission of IP packets that make up user traffic

Administrative management of the user application service process

All answers are correct

Question #22

What protocol is used to operate the control component of MPLS-based solutions?

RSVP

ATM

QoS

There is no correct answer

Question #23

What characterizes the speed parameter of a service when implementing a service function?

The degree of destruction of a previously established connection

The degree of confidence in the performance of a function during a given observation period

Degree of correctness of the function execution

The amount of time it takes to execute a function, or the speed of execution

Question #24

Specify parameters for QoS and NP related to the application area of digital stations

Probability of incorrect routing

Probability of no signal

Probability of unacceptable transmission

All answers are correct

Question #25

What determines the semantic transparency of the network?

Probability of distortion of information bits

Repeating the message at the request of the receiver

Estimation of cell loss probabilities and waiting times in the buffer storage

The ability of a network to transport messages from a source to a destination with an acceptable number of errors

Question #26

Which service node is part of QoS?

SRF

CCF

GoS

SSF

Question #27

What does the first group of QoS parameters refer to?

Acceptable probability

Overload

Delayed dialing

Unavailability

Question #28

Specify the correct characteristic of the architectural concept of communication services, which defines the intelligent network

Invariance of methods for placing network functions in different physical objects

Standardized management of service logic

Modularity of network functions with reusability

All answers are correct

Question #29

Specify the correct correspondence between the architectural concept of an intelligent communication network and the structural diagram defining the QoS concept

Selection of methods for evaluating existing recommendations

The evolutionary nature of standardization

The boundary between the functional level and the level of distribution of functional objects

Relative independence of the methods for implementing the functions of the basic communication network and the functions of the superstructure

Question #30

What protocol level is observed when two user interfaces interact?

Session

Applied

Transport

All answers are correct

Question #31

Which of the protocol layers determine the features of the communication network operation when it serves users?

Network, transport and application

Physical, representative and networked

Transport, applied and physical

Physical, channel and network

Question #32

What functions does the router implement?

Providing heterogeneous networks

Switching

Dividing

Integration of information message types

Question #33

A communication network built in accordance with the NGN concept and providing an unlimited range of services is...

Multi-service network

Multiprotocol network

Infocommunication network

Access network

Question #34

What categories of networks is the unified telecommunications network divided into (Article 12 of the Federal Law "On Communications")?

Public telecommunications networks

Special purpose networks

Dedicated communication networks

All answers are correct

Question #35

Specify the functions of a mobile telecommunications switching center?

Connects mobile networks based on NMT-450 equipment

Provides control over movement from zone to zone

Serves a group of cells and provides all types of connections

Manages the distribution of mobile subscriber numbers

Question #36

Multiservice is...

Support of multiple services by software and hardware of one network

The process of gradual convergence of technologies with different purposes in order to unify equipment

Ability to deliver information independently of protocol data units

The ability of a network to transmit multi-component information

Question #37

Specify the correct composition of the NGN transport network

Transit and end nodes

Gateways and service control nodes

Service nodes and transit nodes

LDAP Protocols and End Nodes

Question #38

Which node is an element of the distributed platform of the intelligent communication network?

Service Management Node

Service Node

Transit hub

End node

Question #39

What are the categories of telecommunication services?

Subscription

Client

Urgent

Answers 1 and 2

Question No. 40

What characteristic unites the concepts of effectiveness, safety, security and ease of use?

Availability

Quality of functioning

Quality of service

Traffic Service Efficiency

Question No. 41

The ability of a telecom operator to provide a set of services and to assist the user in using them is...

Security

Availability

Continuity

Ease of use

Question #42

Which digital station is part of the mobile switching center MSC of the NMT-450 standard?

Digital station AXE-10

Base station BS

Mobile station MS

All answers are correct

Question #43

What is meant by quality management?

Monitoring the status of all significant network elements in real time

Collection and analysis of statistical data on the functioning of all significant network elements

Collection of data on services provided

Development of measures to ensure confidentiality of user and proprietary technological information

Question #44

Delayed delivery is...

This is the interval between the start of transmission of a packet (frame) by the source and the end of reception by the receiver.

Probability of erroneous delivery of a ROD packet due to header corruption (with a sufficiently long observation time)!

The ability of a network to deliver information from a source to a destination with an acceptable level of errors for the service.

Model of delay time if the processing processes in switching devices and delivery in

individual links are statistically independent

Question #45

What is the peculiarity of the ATM method?

In the layer structure and definition of signaling protocols, establishment, disconnection and control of connections

In the implementation of the execution of two types of functions: plane management and level management

In the technology of transmission and switching of broadband digital network with integrated services

In adaptability to transport information of any service, regardless of the required transmission speed

Question #46

What is the structure of the level control plane?

Tetrahedral

Non-cyclical

Cyclic

Level

Question #47

Provide a definition for the following concept: multiple tags arranged in last-in, first-out order.

Label functionality

Labels Interface

Switching of labels

Label stack

Question #48

What are the characteristics of the TCP communication system?

Economical use of radio spectrum

The presence of one or more base radio stations and control systems

Possibility of access to other networks

All answers are correct

Question #49

The ability to distinguish the signal of a received station from various signals that differ in frequency is...

Sensitivity

Selectivity

Reflexivity

There is no correct answer

Question #50

Depending on the number of subscribers and the number of radio channels, determine the number of channels corresponding to the number of subscribers in the amount of 320.

21

11

6

25

Question #51

What should be considered as the advantages of TSR?

Flexible call system

Flexible numbering system

Short connection establishment time

All answers are correct

Question #52

What is MLPS technology?

To obtain subscriber authentication parameters

For the location of any mobile station

To provide a reference database of subscribers registered in the network

Multiprotocol Label Switching Technology

Question #53

What problem is solved in the second stage of assessing the throughput capacity of a multiservice network link?

Determining the volume of channel resources required to service a given traffic quality with the provided real-time service

Estimation of the channel resource size for servicing interactive data transmission services traffic

Resource calculation for error-prone data transfer services

There is no correct answer

Question #54

At what stage of the assessment of the throughput of a multiservice network link is the calculation of the resource for interactive data transmission services carried out?

Stage 3

Stage 2

Stage 1

Stage 4

Question #55

What concept is used to determine the maximum number of connections when transmitting information with the provision of real-time services?

Assessing the need for channel resources

Effective transmission speed

Data transfer services that allow errors

User data transfer rates (document download time)

Question #56

Specify the classification related to IP packet delivery proposed in accordance with ITU recommendations.

Delivery delays

Delivery Delay Variations

Percentage of packets transmitted with errors

All answers are correct

Question #57

Which class of service provides data transactions that are highly interactive (signaling)?

Class 0

Class 3

Class 2

Class 5

Question #58

The MPLS concept is...

Support for latency-sensitive real-time applications

The principle of building point-to-point connections with guaranteed quality of service

The principle of processing IP packets in accordance with a given class of service

Creation and use of virtual routes (tunnels) to information flow points

Question #59

A service organization scheme in which transmission packets are divided into separate queues according to the transmission rate requirement is...

Fair order

Priority service

Service according to service class

Weighted Fair Priority

Question No. 60

Specify the correct scheme for a packet from the buffer on the outgoing line in the Queueing and scheduling mechanism: packets are placed in a common queue and are serviced in the order in which they arrive.

Weighted fair queueing

Priority servicing

First In – First Out (FIFO)

Class-based queueing

List of questions for conducting interim assessment

1. What is DNS?
2. What two types of information does a DNS server link?
3. What is FQDN?
4. What is the main purpose of the DNS service?
5. What two components make up the FQDN domain name of an object?
6. What are the two ways to service domain name resolution requests?
7. For what purpose are reverse search zones used?
8. What network protocols does Windows Server support?
9. Which protocols support routing: ?
10. Which protocol is used to organize interaction with NetWare servers?
11. What is the order of "binding" protocols?
12. What does the order of protocol "binding" affect?
13. . If multiple protocols are used in a network, where should their "binding" be performed?
14. What is the subnet mask used for?
15. When is manual configuration of TCP/IP parameters required?
16. What protocol is used for internal interactions between Windows applications and network services?
17. What is the main purpose of a DHCP server?
18. What service program can I use to obtain information on current TCP/IP usage statistics?
19. What is a DHCP Scope?