



Haramaya University
College of Computing and Informatics
Department of Information Technology
Model Exam (100%)

I. Event-Driven Programming (ITec3054)

1. Which one of the following is not the correct mapping of the Dot Net Data Provider?
 - A. Data Provider for SQL Server-> System.Data.MySqlClient
 - B. Data Provider for Oracle->System.Data.OracleClient
 - C. Data Provider for OLEDB->System.Data.OleDb
 - D. Data Provider for ODBC->System.Data.Odbc
2. When we use the MySqlConnection object to retrieve, insert, update and delete data in database connectivity in ADO.NET?
 - A. When we want to connect to the Oracle database.
 - B. When we want to connect to the Sql server database
 - C. When we want to connect to Microsoft Access database
 - D. When we want to connect to the MySQL server database
3. Which method is used, when you want to perform an Insert, Update or Delete operation and the return type is Object and we can cast it to any type the object?
 - A. ExecuteScalar()
 - B. ExecuteReader()
 - C. ExecuteNonQuery()
 - D. ExecuteQuery()
4. Which one of the following use when a method wants to return more than one value?
 - A. Value parameter
 - B. reference parameter
 - C. Out parameter
 - D. Array parameter
5. What is the output of the following C# program after expected (run)?

```
public class Calculator {  
    public static void main(String[] args){  
        int a = 10;
```

```
Console.WriteLine(++a*++a);  
}  
}
```

A. 121

B. 144

C. 132

D. 100

6. What is the output of the following C# program after expected (run)?

```
public class Calculator{  
public static void main(String[] args){  
    int a = 5;  
    a =a+5;  
    switch(a){  
        case 5: Console.WriteLine ("5");  
        break;  
        case 10: Console.WriteLine ("10");  
        break;  
        default: Console.WriteLine ("0");  
    }  
}  
}
```

A. 10

B. 510

C. 5100

D. 100

7. How many times 'Hello' is printed

```
public class Print {  
public static void main(String[] args){  
    for(int i = 0; i<5; i=5 )  
    {  
        Console.WriteLine("Hello");  
    }  
}
```

```
}  
}  
}
```

- A. 5
- B. 4
- C. 2
- D. 1**

II. Object-Oriented Programming and Advanced Programming in Java

8. Which pillars of OOP is nothing but hiding the internal detail of the methods?
- A. Encapsulation
 - B. Abstraction**
 - C. Inheritance
 - D. Polymorphism
9. Which type of inheritance does not supported by Java?
- A. Single inheritance
 - B. Multiple inheritances**
 - C. Hierarchical inheritance
 - D. Hybrid Inheritance
10. Which pillars of OOP is nothing but one task performs in different way?
- A. Polymorphism**
 - B. Inheritance
 - C. Abstraction
 - D. Encapsulation
11. When we have Student table which have firstName, surName, gender, studId and cgpa attributes on Haramaya database. And also, the table has 10 rows data that stored on Student tables. Since, we need to fetch

data from our database Student table so, which one of the following java.sql class used to store the data that fetched from our database table?

- A. Statement
- B. StatemetSets
- C. Result
- D. ResultSet**

12. JDBC drivers are an interface that enables you to open database connections and to interact with it by sending SQL or database commands then receiving results with Java. Therefore which JDBC driver is 100% pure Java driver that is also called a thin drive and it requests directly to the database using its native protocol. It can be used directly on platform with a JVM and the most efficient since requests only go through one layer. Therefore it is a simplest driver to deploy since no additional libraries or middle-ware required?

- A. Type IV driver**
- B. Type I driver
- C. Type III driver
- D. Type II driver

13. If you want to use your JDBC driver you must first register it with the DriverManager object, which has a driver-registration method. However, we have some techniques are available for registering JDBC drivers. The forName() method of Class is one technique used to register the driver class. This method is used to dynamically load the driver class. Therefore, according to driver loading aspects, which one of the following is not correct about driver loading to connecting the respective data source?

- A. The Class.forName("sun.jdbc.odbc.JdbcOdbcDriver") driver loading is used to connecting to Microsoft Access database

- B. The `Class.forName("com.cloudscape.core.JDBCdriver")` driver loading is used to connecting to Cloudscape database
- C. The `Class.forName("com.mysql.jdbc.Driver")` driver loading is used to connecting to SQL server database
- D. The `Class.forName("oracle.jdbc.driver.OracleDriver")` driver loading is used to connecting to oracle database
14. The Java Database Connectivity (JDBC) API provides universal data access from the Java programming language. Since, when we need to access virtually any data source, from relational databases to create parameterized statements such that data for parameters can be dynamically substituted and Only the no parameters versions of `executeUpdate()` and `executeQuery()` are allowed. So, which of the following class/interface is used to Precompiling SQL statements to avoid repeated compiling of the same SQL statement?
- A. `ResultSet`
- B. `DriverManager`
- C. `Statement`
- D. `PreparedStatement`
15. Which one of the following is primitive data type?
- A. `Integer`
- B. `Array`
- C. `Class`
- D. `List`
- E. `None`
16. Which one of the following correct sequences of execute and interpreted in java?
- A. Class loaded -> Default constructor -> static variables -> non static variables and methods
- B. Main method -> Class loaded -> Parameterized constructor
- C. Class loaded -> static variables and methods -> constructor -> non static variables and methods

- D. Class loaded - > Instance Variables - > constructor - > non static variables and methods
 - E. A and C
 - F. C and D
17. Which of the following compiler generates the stub and skeleton object from the remote Interface?
- A. javac
 - B. javarmic
 - C. rmi
 - D. rmic
 - E. None
18. Which one of the following is Not True about the functionality of Skeleton objects in Remote method Invocation System?
- A. Is an object act as getaway for the client side
 - B. It read the parameter for the remote method and Unmarshals it
 - C. It communicate directly with the stub objects
 - D. All the incoming requests are routed through it.
 - E. A and C
 - F. A and D
19. In desktop application, which of the following is/are the basis to contain other user interface components like Label, Button, text Fields etc. in java Graphical User Interface (GUI) that is not contained another window.
- A. Panel
 - B. Frame
 - C. java.awt
 - D. javax.swing
 - E. all
20. When we need to display "Hello GUI" text on the content of our Graphical User Interface, so which one of the following is correct?
- A. new JFrame("Hello GUI")

- B. JFrame frame = new JFrame("Hello GUI")
 - C. frame.setText("Hello GUI")
 - D. A and B**
 - E. All
21. Which of the following is server side gateway which writes and transmits the response to the client machine?
- A. remote Object
 - B. stub
 - C. skeleton**
 - D. rmic
 - E. All

III. Mobile application Development

22. Which operating system is advantageous for corporate customers since it allows synchronization with Microsoft Exchange, Novell GroupWise email, Lotus Domino, and other business software?
- A. BlackBerry OS**
 - B. Symbian OS
 - C. Harmony OS
 - D. Bada OS
23. An automated build system, with which we can define a build configuration that applies to all modules in our application?
- A. OpenGL
 - B. Android Runtime
 - C. Gradle**

D. Manifests

24. Which of the following does not involve developing a mobile app strategy to determine how your organization might benefit from one during the mobile app development process?

A. Determine the target audience for your app.

B. Examine the competition.

C. Establish the app's aims and objectives.

D. Identifying the talents required for your app development initiative.

25. Android application has go through a different stages in their life cycle. In which state activity start interacting with the user that means user can see the functionality and designing part of an application on the single screen.

A. onCreate()

B. onResume()

C. onStart()

D. onPause()

26. Which of the following Android components has the primary goal of ensuring that the application remains active in the background so that the user can run many applications at the same time?

A. Service

B. Content providers

C. Broadcast receiver

D. Implicit Intent

27. Android provides several ways to store and share data. Which of the following can be a way of storing and retrieving key-value pairs of data that can be used to store user settings or application configuration data?

A. SQLite

B. Preferences

C. Internal Storage

D. External Storage

28. The Android framework provides a number of listeners, each of which has a set of callback methods. Which of the following manages an event in which the user maintains the touch over a view for an extended period of time?
- A. onTouch()
 - B. onFocusChange()
 - C. onLongClick()**
 - D. onClick()

IV. Information Technology Project Management

29. Which one of the following methods used for selecting project in certain organization?
- A. Considering the broad need of the organization
 - B. By categorizing the project based opportunity, directive and problem.
 - C. Weighing score method
 - D. All.**
30. Which one of the following is the advantage of following formal project management system in project management?
- A. Bad control of financial, physical, and human resources
 - B. Improved customer relations**
 - C. Longer development times
 - D. Higher costs
31. Which one of the following is **true**?
- A. scope, time, cost, and quality are facilitating knowledge area
 - B. scope, time, cost, and quality are the key knowledge area**
 - C. project integration management is facilitating knowledge area
 - D. All.
32. Configuration management in the project management that includes _____
- A. Products and their descriptions

- B. Control changes, record and report changes and audit the products to verify conformance to requirements
- C. Record and report changes, and audit the products to verify conformance to requirements.

D. All

33. Which one is false about the function of Earned Value Analysis

- A. Measure a project's progress
- B. Forecast its completion date and final cost
- C. Provide schedule and budget variances along the way

D. Having actual project information periodically is not mandatory to use EVM

34. In project management project team should aware of modern quality management complements in project management. Which one can be characteristics of modern quality management?

- A. Requires customer satisfaction
- B. Prefers to inspection to prevention

C. Unaware of management responsibility for quality

D. None.

35. Among described below which one of the following quality management process related with evaluating overall project performance to ensure the project will satisfy the relevant quality standards?

A. Quality planning

B. Quality assurance

C. Quality control

D. All.

V. System and Network Admin

36. Which of the following is a hierarchical database that stores information about objects on a network and makes this information available to users and administrators?

- A. Windows Registry
 - B. Windows Active Directory
 - C. Domain Name System (DNS)
 - D. Lightweight Directory Access Protocol (LDAP)**
37. You are setting up a new network for a small business and need to configure routing between different subnets. You want to ensure that traffic flows smoothly and securely between the subnets. Which of the following protocols is commonly used for this purpose?
- A. Border Gateway Protocol (BGP)**
 - B. Transmission Control Protocol (TCP)
 - C. User Datagram Protocol (UDP)
 - D. Internet Protocol (IP)
38. Which of the following types of proxies or gateways is commonly used for filtering and controlling internet access in a network?
- A. Virtual Private Network (VPN)
 - B. Reverse Proxy
 - C. Content Filter Proxy**
 - D. Load Balancer
39. If you are a system administrator for a small business that has multiple remote sites and you want to be able to remotely manage the servers at these sites and perform routine maintenance tasks, which of the following tools will you use?
- A. Remote Desktop Connection
 - B. Virtual Private Network (VPN)
 - C. Telnet**
 - D. File Transfer Protocol (FTP)
40. You are responsible for managing a Linux mail server that is used by your organization. You want to configure the server to send and receive email securely. Which of the following protocols will you use to encrypt email transmissions?
- A. SMTP
 - B. POP3
 - C. IMAP
 - D. TLS**
41. Which of the following is NOT a security best practice for Linux systems?
- A. Regularly updating software and security patches
 - B. Disabling unnecessary network services

C. Running processes with root privileges

D. Configuring a firewall

42. Which of the following file systems is commonly used for managing storage on a Linux system?

A. FAT32

B. NTFS

C. **Ext4**

D. HFS+

VI. Fundamentals of Database System and Advanced Database System

43. Which of the following is false about constraints?

A. The DEFAULT constraint defines the initial value in a column: the value that will appear if you don't insert anything.

B. Constraints are used to enforce data integrity in a relational database.

C. **Each column in the table has a specific data type, so it's possible to insert text into a column with INT type or a decimal number into a column with BOOLEAN type data.**

D. None of the above

44. Which of the following is false?

A. Formally the relational algebra and relational calculus are equivalent to each other. For every expression in the algebra, there is an equivalent expression in the calculus

B. In non-procedural query language user instructs the system to produce the desired result without telling the step-by-step process

C. In procedural query language, user instructs the system to perform a series of operations to produce the desired results.

D. **In non-procedural language users tell what data to be retrieved from database and how to retrieve it.**

45. To convert ER Diagram to Relational Tables in case of one-to-many cardinality.

- A. Create a new table (which is the associative entity) and post primary key or candidate key from each entity as attributes in the new table along with some additional attributes
 - B. Post the primary key or candidate key from the “one” side as a foreign key attribute to the “many” side.
 - C. All the attributes are merged into a single table. Which means one can post the primary key or candidate key of one of the relations to the other as a foreign key.
 - D. None
46. If a transaction transfers 100 birr from account A to account B, which is located at another site. What type of transaction is this?
- A. Global transaction
 - B. Parallel transaction
 - C. Local transaction
 - D. None
47. It is a loosely-coupled architecture optimized for applications that are inherently centralized and require high availability and performance
- A. Shared nothing
 - B. Parallel DBMS
 - C. Shared disk
 - D. Multi-database system
48. Where several tuples can have the same apparent key value but have different attribute values for users at different classification levels.
- A. Filtering
 - B. Poly-instantiation
 - C. Fragmentation
 - D. Concurrency control
49. Which of the following is the correct ways for handling recovery?
- A. Steal/No-Force (Redo/Undo)
 - B. No-Steal/Force (Undo/No-redo)
 - C. Force/Steal (No-undo/Redo)

D. No-Steal/Force (No-undo/No-redo)

50. Which of the following true about relation fragmentation?

- A. A vertical fragment is produced by specifying a predicate that performs a restriction on the tuples in the relation.
- B. A horizontal fragment is defined using the Projection operation of the relational algebra
- C. In vertical fragmentation all schemas must contain a common candidate key (or superkey) to ensure lossless join property

D. Horizontal fragmentation is a subset of a relation which is created by a subset of columns.

51. Two operations in a schedule are said to be conflict.

- A. If the operation belongs to different transaction
- B. If the operation accesses the same data item X
- C. If at least one of the operation is a write_Item(X)
- D. All

52. Which of the following is false about Mandatory Access Control(MAC)

- A. MAC implements zero-trust principles with its control mechanisms.
- B. It considered the strictest of all levels of access control systems.
- C. Manual configuration of security levels and clearances requires constant attention from administrators.
- D. Users can configure data access parameters without administrators

VII. Internet Programming-I and II

53. HTML tables allow web developers to arrange data into rows and columns. Then

which one of the following is **true** about html table?

- A. In tables, header cells are centred by default and the data cells are right-aligned.
- B. In the case of character formatting the tag <TW> is used for typewriter-like text

C. Unordered list starts with and ends with

D. <SUPR> tag is used for superscripts text

54. Application programs and computing devices are having a communication with each other by exchanging a message using a communication standard called transmission control protocol. The followings are then true about transmission control protocol **except**

A. TCP organizes data so that it can be transmitted between a server and a client.

B. It guarantees the integrity of the data being transmitted over the network

C. Compared to user datagram protocol, transmission control protocol establishes a low latency between applications

D. TCP can be an expensive network tool as it includes absent or corrupted packets

55. In a web based technology, a security vulnerability allows an attacker to inject HTML code into web pages that are viewed by other users. In order to have Confidentiality, Integrity and Availability of information, the followings are the mechanisms to be considered **except**

A. HTML encryption to ensure web content cannot be accessed by unauthorized users

B. The use of digital certificates to validate a domain and ensure the content is coming from a trusted location

C. Encryption of content as it travels from the server to the client and back again

D. Using a cookies both at client and server to encrypt all further communication

56. In JavaScript, a **primitive** value or data type is data that is not an object and has no methods or properties. Which one of the following is true about primitive data type?
- A. Variable used in the code doesn't exist
 - B. Variable is not assigned to any value
 - C. Property does not exist.
 - D. All
57. Which one of the following is wrong about session and cookies?
- A. Session is a small file that the server is embedding on the user's computer
 - B. It is recommended to check if cookie is set or not before trying to access its values
 - C. Session_destroy() function is the function used to destroy a session without using any arguments
 - D. None of the above
58. Which one of the following fragment of HTML code is the correct method to display the formula of $a^2 = a*b^2 + c^2$?
- A. `<p>a=a*b<sup>2</sup>+c<sup>2</sup></p>`
 - B. `<p>a<sup>2</sup>=a*b<sup>2</sup>+c<sup>2</sup></p>`
 - C. `<p>a<sub>2</sub>=a*b<sub>2</sub>+c<sub>2</sub></p>`
 - D. `<p>a<sup>2</sup>=a*<sup>b2</sup>+<sup>c2</sup></p>`
59. The data sent by POST method goes through HTTP header so security depends on HTTP protocol. By using Secure HTTP you can make sure that your information is secure. What is \$_POST?
- A. An associative array
 - B. A PHP variable

- C. A data structure containing all the form variables
- D. All of the above

60. The web server does not know who you are or what you do when you work with an application. But there is a way to store information to be used across multiple pages without storing on users computer. So, which of the following way holds information?

A. Session

B. cookies

C. Request

D. Post

E. All

61. A web browser will automatically send the cookies set by a server back to the server for all http requests to the server. Why?

A. Otherwise, the server could never see if it set a cookie on the browser

B. Otherwise, the server would have to send a separate request when it needed to check a cookie value

C. The browser initiates all contact with the server, the server cannot send a request to the browser

D. All of the above are true

62. Which of the following is not a PHP function used to interface with MySQL?

A. mysql_post

B. mysql_select_db

C. mysql_connect

D. mysql_query

E. mysql_fetch_data

63. What is an interpreted language which is used to manage the dynamic content of the website?

A. Server Scripting language

B. Java Scripting Language

C. Hypertext Preprocessor

- D. A and c
- E. A and B
- F. All

64. Which of the following is a symbol in PHP scripting Language, which is used to perform operations on variables or values?

- A. function
- B. variable
- C. Operation
- D. operators
- E. All
- F. None

65. Which of the following methods is used to open a file using PHP scripting language?

- A. `openfile()`
- B. `fileOpen()`
- C. `openf()`
- D. `fopen()`
- E. All
- F. None

VIII. Information Security

66. A security manager needs to be able to regularly determine when operating system files change what kind of tool is needed for this risk?

- A. Event logging
- B. Intrusion detection tool
- C. File system integrity monitoring tool
- D. Log analysis tool

67. If Transport Layer Security is used to secure data (e.g. web pages) between a client and server, **TLS uses:**

- A. Public key algorithms for data confidentiality and MD5 or SHA1 for data integrity.

- B. Symmetric key algorithms for key exchange and message authentication codes for authentication
 - C. Message authentication codes for data integrity and symmetric key algorithms for data confidentiality.
 - D. Public key algorithms for key exchange and Diffie-Hellman for data integrity.
68. Using symmetric key encryption to successfully provide authentication relies upon:
- A. The sender encrypting with a private key
 - B. The sender encrypting with a public key
 - C. The sender sending an encrypted copy of the shared secret key
 - D. The recipient being able to identify messages encrypted with the wrong key
69. What is the best statement for taking advantage of a weakness in the security of an IT system?
- A. Threat
 - B. Attack
 - C. Exploit
 - D. Vulnerability
70. If your friend want to hack contacts of your phone or E-mails and attempts to acquire your password is classified as:
- A. Spamming
 - B. Bugging
 - C. Spoofing
 - D. Phishing

71. A security manager is setting up resource permission in application .The security manager has discovered that he can establish object that contains accesses control model that most closely resembles is:
- A. Access matrix
 - B. Mandatory access control (MAC)
 - C. Discretionary access control (DAC)
 - D. Role based access control (RBAC)**
72. A security officer has declared that information system must be certified before it can be used. This is belongs for:
- A. The system must be evaluated according to established evaluation criteria**
 - B. A formal management decision is required before the system can be used
 - C. Penetration tests must be performed against the system
 - D. A code review must be performed against the system

IX. Computer Maintenance And Technical Support

73. Which memory is known by the name cache memory?
- A. Dynamic random access memory (DRAM)
 - B. Static random Access memory (SRAM)**
 - C. Programmable read only memory (PROM)
 - D. Electric erasable read only memory (EEROM)
74. An instrument that allows a laptop computer to be more like a desktop system.
- A. Printer
 - B. Docking station**
 - C. Ultra power saver
 - D. Router
75. One of the following is incorrect about performing computer components cleaning (preventive maintenance).

- A. Using denatured alcohol for cleaning rubber rollers, such as those found inside printers
 - B. Using Urethane swabs to clean between the keys on a keyboard.
 - C. Spraying or pour liquid on computer components.
 - D. Power off and unplug the computer power before performing preventive maintenance.
76. _____ is a method of using hard disk space as if it were RAM.
- A. Random access memory
 - B. Virtual memory
 - C. Cache memory
 - D. Read only memory
77. Which one of the following is not the function of power supply?
- A. Converting AC to DC
 - B. Distributes lower voltage DC power to components throughout the computer,
 - C. Provides cooling through the use of a fan located inside the power supply.
 - D. Preventing electrostatic discharging by absorbing the static electricity
78. How could SCSI termination be performed?
- A. By installing a jumper
 - B. By installing a terminator plug
 - C. By using software
 - D. All are the answers
79. A place every software and hardware configuration is stored in a database, such things stored as folder and file property settings, port configuration, application preferences, and user profiles is:
- A. Windows registry
 - B. Windows help center
 - C. My document

- D. Windows recovery folder
80. Which one of the following is a bad habit when performing computer hardware maintenance?
- A. Using Antistatic devices (antistatic mat and antistatic wrist strap).
 - B. Using magnetized screw drivers while disassembling a HDD.
 - C. Keeping paper and pen nearby for note taking and diagramming.
 - D. When removing adapters, do not stack the adapters on top of one another
81. A _____ is a software program that intercepts the printer's request to print, instead of going directly to the printer, it sends data to the hard drive, and then it controls the data from the hard drive going to the printer.
- A. A primary corona
 - B. A fuser cleaning pad
 - C. A Print spooler
 - D. A print writer
82. If a computer beeps once then three times, then four times, then three more times during POST and the computer has a Phoenix BIOS, what is a possible suspect component?
- A. Keyboard
 - B. BIOS
 - C. Memory (RAM)
 - D. Video

X. Data Communication and Device Configurations

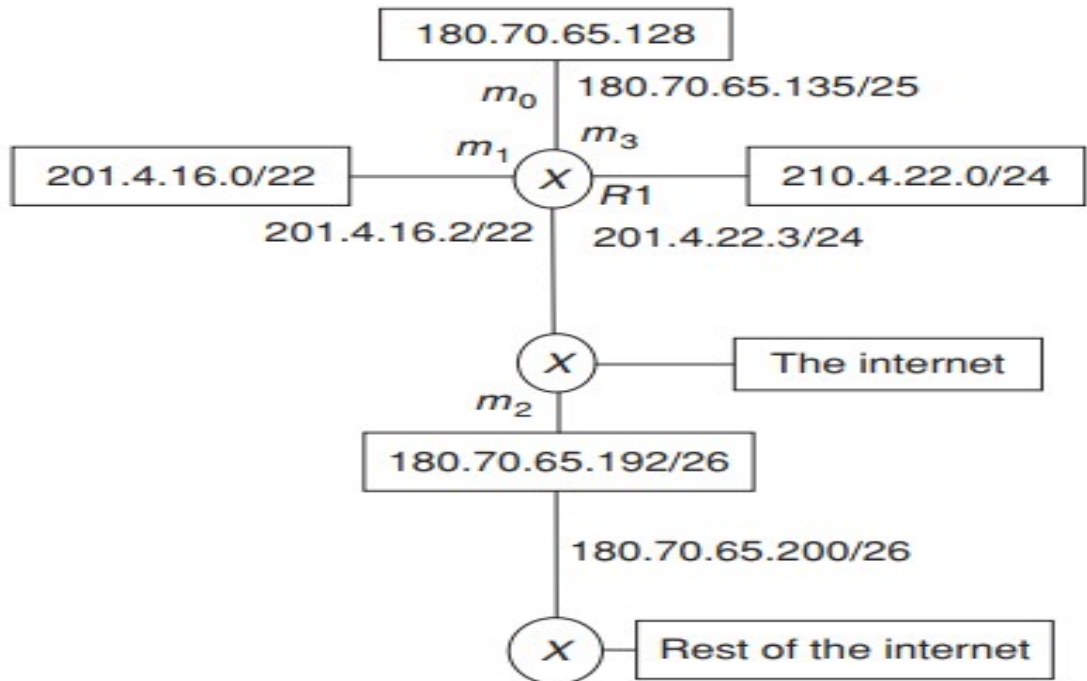
83. In the following pairs of OSI protocol layer/ sub-layer and its functionality the INCORRECT pair is:-
- A. Network layer and Routing

B. Data Link Layer and Bit synchronization

C. Transport layer and End-to-end process communication

D. Medium Access Control sub-layer and Channel sharing

84. Consider below figure:



Then the network address, 180.70.65.130 goes through which of the following interface?

A. m_0

B. m_1

C. m_2

D. m_3

85. The transport layer protocols used for real time multimedia, file transfer, DNS and email respectively are

A. TCP, UDP, UDP and TCP

B. UDP, TCP, TCP and UDP

C. UDP, TCP, UDP and TCP

D. TCP, UDP, TCP and UDP

86. In one of the pairs of protocols given below, both the protocols can use multiple TCP connections between the same client and the server. Which one is that?
- A. HTTP, TELNET
 - B. FTP, SMTP
 - C. HTTP, FTP
 - D. HTTP, SMTP
87. Given an IP address and subnet mask of 192.168.20.39 and 255.255.255.240 then what is the broadcast address of this given IP?
- A. 192.168.20.63
 - B. 192.168.20.47
 - C. 192.168.20.41
 - D. 192.168.20.64
88. A service provider has given you the class C network range 209.50.1.0. Your company must break the network into as many subnets as possible as long as there are at least 7 clients per network. Which one of the following statement is true about this subnetting scenario?
- A. The network address of the second subnet is 209.50.1.8
 - B. The broadcast address of the first subnet is 209.50.1.7
 - C. The network address of the third subnet is 209.50.1.47
 - D. The broadcast address of the second subnet is 209.50.1.31
89. Suppose computers A and B have IP addresses 10.105.1.113 and 10.105.1.91 respectively and they both use the same net mask N. Which of the values of N given below should not be used if A and B should belong to the same network?
- A. 255.255.255.0
 - B. 255.255.255.128
 - C. 255.255.255.192
 - D. 255.255.255.224

90. Which OSI layer is responsible for encryption, compression and translation of packets sent from source to destination?
- A. Session layer
 - B. Presentation layer
 - C. Transport layer
 - D. Datalink layer
91. When a packet travels from router to router to its destination, what address continually changes from hop to hop?
- A. Source and destination Layer 2 address
 - B. Source Layer 3 address
 - C. Destination Layer 3 address
 - D. Destination port
92. Which statement best describes convergence on a network?
- A. The amount of time required for routers to share administrative configuration changes, such as password changes, from one end of a network to the other end
 - B. The time required for the routers in the network to update their routing tables after a topology change has occurred
 - C. The time required for the routers in one autonomous system to learn routes to destinations in another autonomous system
 - D. The time required for routers running disparate routing protocols to update their routing tables
93. Consider the following three statements about link state and distance vector routing protocols, for a large network with 500 network nodes and 4000 links.
- [S1] The computational overhead in link state protocols is higher than in distance vector protocols.
 - [S2] A distance vector protocol (with split horizon) avoids persistent routing loops, but not a link state protocol.
 - [S3] After a topology change, a link state protocol will converge faster than a distance vector protocol.

Which one of the following is correct about S1, S2 and S3?

- A. S1, S2 and S3 are all true
- B. S1, S2 and S3 are all false
- C. S1 and S2 are true, but S3 is false
- D. S1 and S3 are true, but S2 is false.

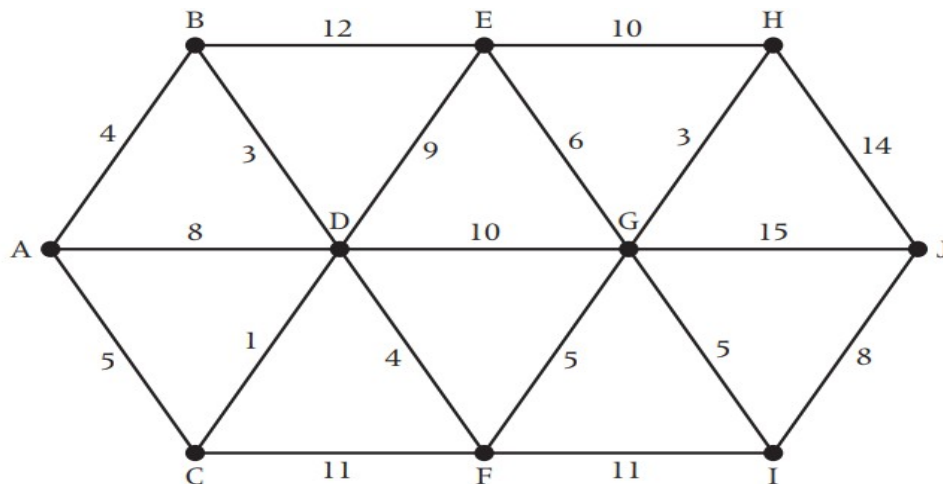
94. Consider the following statements about the routing protocols. Routing Information Protocol (RIP) and Open Shortest Path First (OSPF) in an IPv4 network.

- I: RIP uses distance vector routing
- II: RIP packets are sent using UDP
- III: OSPF packets are sent using TCP
- IV: OSPF operation is based on link-state routing

Which of the statements above are CORRECT?

- A. I and IV only
- B. I, II and III only
- C. I, II and IV only
- D. II, III and IV only

95. In the given network diagram below what is the best route from node A to node J using Dijkstra algorithm? Assume the source is at vertex A.



- A. ABEGHJ
- B. ADGJ
- C. ACFGJ

D. ACDFGIJ

96. With the following equipment list which of the following network scenario could be supported?
- Two IP subnets of 255.255.255.0
 - Seven 48 port switches
 - Two router interfaces
- A. 600 workstations, with 300 workstations in two broadcast domains and each workstation in its own collision domain
- B. 300 workstations, with 150 workstations in two broadcast domains and each workstation in its own collision domain**
- C. 300 workstations, with 150 workstations in two broadcast domains and all workstations in the same collision domain
- D. 300 workstations, in a single broadcast domains and each workstation in its own collision domain
97. Which command will allow host 192.168.144.25 to have telnet access to network 172.16.0.0?
- A. Access-list 15 permit TCP 192.168.144.25 0.0.0.0 172.16.0.0 0.0.255.255 eq 23
- B. Access-list 150 permit UDP 192.168.144.25 0.0.0.0 172.16.0.0 0.0.255.255 eq 23
- C. Access-list 150 permit TCP 192.168.144.25 0.0.0.0 172.16.0.0 0.0.255.255 eq 21
- D. Access-list 150 permit TCP 192.168.144.25 0.0.0.0 172.16.0.0 0.0.255.255 eq 23**
98. Which one of the following is TRUE about the interior gateway routing protocols-Routing information protocol (RIP) and Open Shortest Path First (OSPF)?
- A. RIP uses distance vector routing and OSPF uses link state routing**
- B. OSPF uses distance vector routing and RIP uses link state routing
- C. Both RIP and OSPF use link state routing
- D. Both RIP and OSPF use distance vector routing

99. Which of the below routing method always ensures the shortest path even though routers crash during course of routing?
- A. Dijkstra Routing
 - B. Flooding**
 - C. Distance Vector Routing
 - D. Link State Routing
100. You are the network administrator for your company. You want to restrict all ping attempts from outside your company from reaching internal hosts. Your internal network is using the IP network of 200 .15.24.0/24. Then which command should be executed on the corporate boundary router to accomplish the task?
- A. Router (config)#access-list 100 deny TCP any 200.15.24.0/24 eq echo
 - B. Router (config)#access-list 1 deny ICMP any 200.15.24.0 0.0.0.255 eq ping
 - C. Router (config)#access-list 100 deny TCP any 200.15.24.0 0.0.0.255 eq echo**
 - D. Router (config)#access-list 1 deny ICMP any 200.15.24.0 0.0.0.255 eq ping