

Wachemo University (Durame Campus)



College of Engineering and Technology

Department of Information Technology

2015 Model Examination for IT 4th year students

Date: 26-07-2015E.C

Total: 100% Time allowed: 2 Hour

Name _____ ID No. _____

Introduction

The Ministry of Education of Ethiopia has announced the implementation of exit exam for all undergraduate program students (public and private), beginning with the 2022/2023 academic year, in order to improve the quality of graduates produced by higher learning institutions. The exit exam aimed at checking whether students have acquired the required knowledge, skills and attitudes or not. To implement this, it requires determining competency areas for a specific program, which is already completed. Based on the competency areas prepared, it needs to plan the construction of tests.

Φ Instructions:

- Switch-off your mobile phone
- Cheating or an attempt to cheat is strictly forbidden!
- Attempt all the questions
- Don't try to detach any paper from the exam sheet!!

DURAME, ETHIOPIA

Choose the best answer from the given alternatives (100pts)

1. Which one of the following is **not true** about SDLC?
 - A. It is a conceptual model that describes the stages involves in system development.
 - B. It enables to create high quality software as quickly, safely and cost
 - C. It involves mostly 5-7 phases of stages.
 - D. None
2. In which one of the following phase of SDLC, you meet customers or prospective customers, analyzing market requirements and features that are in demand. You also find out if there is a real need in the market for the software product you are trying to develop.
 - A. Planning
 - B. Requirement Gathering
 - C. Analysis and design
 - D. Implementation
3. Which one of the following is **not true** about UML?
 - A. Is a graphical language for visualizing, specifying, constructing, and documenting the artifacts of a software-intensive system?
 - B. It offers a standard way to write a system's blueprints.
 - C. UML is a programming language used to model technical and graphical specification.
 - D. None
4. Which one of the following diagram is used to analyze the system's high-level requirements using actors and relationships?
 - A. Activity diagram
 - B. Sequence diagram
 - C. Use case diagram
 - D. Class diagram
5. Which one of the following UML diagrams is **not** behavioral diagram?
 - A. Activity diagram
 - B. Sequence diagram
 - C. Use case diagram
 - D. Class diagram
6. Which SDLC modeling technique arranges all the phases sequentially so that each new phases depend upon the outcome the previous phase and the system is ready only after the last phase is over?
 - A. Agile
 - B. Waterfall
 - C. Spiral
 - D. Iterative

7. Which one of the following modeling technique is a way of breaking down the software development of a large application into smaller pieces?
- A. Agile
 - B. Waterfall
 - C. Spiral
 - D. Iterative
8. Which one the following is **correctly** matched according to the sections of a class in a class diagram?
- A. Upper section – class name
 - B. Middle section – methods name
 - C. Lower section – attributes name
 - D. ALL
9. Which one of the following protocol is used for communicating over a network and designed explicitly as addressing protocol which divides any message into series of packets?
- A. HTTP
 - B. TCP/IP
 - C. FTP
 - D. DHCP
10. Which one of the following is **true about** Static websites?
- A. Its web pages are coded in HTML, CSS and JavaScript.
 - B. Prebuilt content is same every time the page is loaded.
 - C. The content is only changed when someone publishes and updates the file.
 - D. all
11. Which one of the following is **not true** about HTML?
- A. Stands for Hypertext Markup Language.
 - B. It's a programming language.
 - C. HTML describes the structure of a web page semantically
 - D. HTML file must have an htm or html file extension.
12. Which one of the following is the **correct** sequence of tags in the structure of html document?
- A. body, head, html, title
 - B. title, head, body, html
 - C. html, head, title, body
 - D. head, body, html, title
13. Which of the following is the **correct** way to create a hyperlink in html?
- A. `SECOND`

- B. `<hyperlink href= "second.html">SECOND</hyperlink>`
 - C. `SECOND`
 - D. `<link = "second.html" name= "SECOND">`
14. Which one the following is the **correct** about CSS syntax?
- A. Selector `{property= "value"}`
 - B. Selector `{property: value;}`
 - C. Selector `"property=value"`
 - D. Selector `{property: value }`
15. Which of the following is the **correct** way to use external CSS in the html head section?
- A. `<link rel="stylesheet" type="text/css" src="mycss.css">`
 - B. `<external rel="stylesheet" type="text/css" src="mycss.css">`
 - C. `<link rel="stylesheet" type="text/css" href="mycss.css">`
 - D. `<style rel="stylesheet" type="text/css" href="mycss.css">`
16. Which of the following is the **correct** way to use external JavaScript code in the html head section?
- A. `<script type="text/javascript" src="filename.js" ></script>`
 - B. `<javascript type="text/javascript" href= "filename.js">`
 - C. `<link src= "filename.js type="text/javascript"" >javascript</link>`
 - D. `<script type;text/javascript; , src:filename.js;></script>`
17. Which following program is run on a web server to generate dynamic web pages by creating a unique experience for each user?
- A. Client-side scripts
 - B. Server-side scripts
 - C. Front end scripts
 - D. Cascading scripts
18. Which one of the following is **not** the functionalities of server-side scripts.
- A. Manage data in a database
 - B. Send and receive cookies
 - C. Encrypt and validate data
 - D. Build Application Programming Interfaces (APIs)
19. Which one of the following is **not true** about PHP?
- A. PHP documents end with the extension .php.
 - B. A PHP document will output only HTML.

- A. for (int i = 99; i >= 0; i / 9)
- B. for (int i = 7; i <= 77; i += 7)
- C. for (int i = 20; i >= 2; - i)
- D. for (int i = 2; i <= 20; i = 2* i)

28. What will be the output of the following program?

```
int values[ ] = { 1,2,3,4,5,6,7,8,9,10};
for(int i=0;i< Y; ++i)
System.out.println(values[i]);
```

- A. 1
- B. 12345678910
- C. 10
- D. error

29. Which one of the following is bytecode in java?

- A. Code generated by java compiler
- B. Block of codes written in java class
- C. Extension of java code
- D. Name of a library that contain bytes

30. Which one of the following is a template for creating different objects?

- A. Array
- B. Class
- C. Method
- D. Interface

31. Which one of the following is **true** about Rapid Application Development (RAD)?

- A. Uses minimal planning in favor of rapid prototyping
- B. Is a methodology that focuses on developing applications rapidly through frequent iterations and continuous feedback
- C. Provides Prototyping and early, reiterative user testing of designs
- D. It reduced development time
- E. All

32. Which one of the following is **not true** about .NET?

- A. Is a software framework which is designed and developed by Microsoft.
- B. It's a programming language
- C. .NET Framework supports more than 60 programming languages
- D. Consists of developer tools, programming languages, and libraries to build desktop and web applications.

33. Which one of the following is the runtime environment that manages and executes the code written in any .NET programming language.
- A. Common language runtime
 - B. Framework Class Library
 - C. Base class library
 - D. .ADO
34. The CLR compiles the source code of applications developed using .NET compliant languages into ____.
- A. Source code
 - B. MSIL
 - C. Bytecode
 - D. Machine code
35. Every code written in C# have the extension of ____.
- A. .cpp
 - B. .cc
 - C. .cs
 - D. .c#
36. Which one the following is not element of GUI in event-driven programming?
- A. Button
 - B. Dialog boxes
 - C. Event
 - D. Menu
37. What is the outcome of the following configuring the router?
- ```
R1(config)#line vty 0 4
R1(config)#password checkit
R1(config)#login
```
- A. Creating local user account for logging into a router or switch
  - B. Requires checkit to be entered before configuration can be saved
  - C. Set the password to be used for connecting to this router via telnet
  - D. Assure that the password is entered before entering user EXEC mode
38. Where the start-up configuration does is stored when configuring switch or router?
- A. Startup config.txt
  - B. DRAM
  - C. NVRAM
  - D. ROM
39. The default administrative distance of RIP'S is equal to
- A. 15
  - B. 128
  - C. 120
  - D. 30
40. Which one of the following command used to display RIP routing updates?
- A. Debug ip rip
  - B. Show ip rip
  - C. en ip rip
  - D. exit ip rip

41. A router with a valid operating system contains a configuration file stored in NVRAM. The configuration file has an enable secret password but no console password. When the router boots up, which mode will display?
- A. global configuration mode
  - B. setup mode
  - C. Privileged EXEC mode
  - D. user EXEC mode
42. Which command is used to encrypt all passwords in a router configuration file?
- A. Router\_A (config)# enable secret <password>
  - B. Router\_A (config)# service password-encryption
  - C. Router\_A (config)# enable password <password>
  - D. Router\_A (config)# encrypt password
43. Why is it difficult for routing loops to occur in the network in the link-state routing?
- A. Routers use hold down times to prevent routing loops.
  - B. Each router builds complete and synchronized views of the network
  - C. Each router builds a simple view of the network based on hop count.
  - D. Routers flood the network with LSAs to discover routing loops
44. Which one of the following statements is true about VLAN configuration?
- A. The switch must be in the VTP server or Transparent mode before you can configure a VLAN
  - B. The switch must be in the config-vlan mode before you configure an extended Vlan
  - C. Dynamic inter-VLAN routing is supported on the VLAN2 through VLAN 4064
  - D. A switch in VTP transparent mode saves the VLAN database to the running configuration only.
45. Which one of the following is a relational database technology that's used most often when the developer requires an embedded database in a small android application system?
- A. SQLite B. MySqLite C. SQLite D. ODBLite
46. Which one of the following is an expression in an android app's manifest file that specifies the type of intents that the component would like to receive?
- A. bindService B. Intent filter C. Intent Service D. StartActivity
47. SQLiteOpenHelper class provides the functionality to create a database and calls a function that can be overridden by the derived class and its constructor accepts all the following arguments **Except**.
- A. Version B. Context C. Factory D. Name E. Service



48. If the service is designed with a client-server interface, you can bind to the service from another component by passing an Intent to \_\_\_\_\_.
- A, startService()    B, bindService()    C, startActivity()    D, onActivityResult()
49. Which one of the following is asynchronous messages which allow application components to request functionality from other Android components and allows you to interact with components from the same applications as well as with components contributed by other applications.
- A. Service    B. Activity    C. Intent    D. SQLite Database
50. Which one of the following is a core android library that provides applications with access to standard operating system services including messages, system services and inter-process communication?
- A. android.content    B. android.os    C. android.app    D. database
51. Which one of the following is the component of the android application help to play music in the background while the user is in a different application?
- A. Activities    B. Content Providers    C. Fragments    D. services    E. Broadcast Receivers
52. Which one of the following software **is not** categorized into mobile operating system?
- A. Android OS    B. Apple OS    C. iOS    D. windows OS    E. Symbian OS
53. Which one of the following is **not** android application framework?
- A. SGL,SQLite,surface manager, SSL,freeType,LibWebCore
- B. USB Driver, camera Driver, display Driver,wifi Driver, Bluetooth Driver
- C. Package Driver, content provider, Window Manager, Location Driver
- D. Email, Calander, media player, camera, alarm, calculator
54. Which one of the following is **not** true about the bootstrap?
- A. It is a small program that located on the BIOS chip, which resides on the system board.
- B. Program that must be loaded into the Random Access Memory of the computer for the Operating system to run.
- C. Used to test the computer hardware and to locate the operating system into RAM
- D. Small program that it launches, when a computer is first turned on.
- E. all    F, none of above

55. Which one of the following can be taken as source of Electromagnetic Interference?  
 A. Human body      B. climate      C. Natural event      D. all
56. Power Protection Devices that constantly supplies power to the computer during blackouts & brownouts and Gives the user of the computer enough time to safely shutdown the computer.  
 A. Uninterruptible Power Supply      C. Standby Power Supply  
 B. surge suppressor      D. ALL
57. Which one of the following is **odd** from other?  
 A. Review security, software, and driver updates.  
 B. Update virus definition files.  
 C. Scan for viruses and spyware.  
 D. Remove unwanted programs.  
 E. Repair or replace any components that show signs of excess wear
58. Which one of the following correct about troubleshooting process  
 A. Establish a theory of probable cause → Identify the problem → test the theory to determine cause → Establish a plan of action to resolve the problem and implement the solution → verify full system functionality → document funding.  
 B. Establish a theory of probable cause → Identify the problem → test the theory to determine cause → verify full system functionality → Establish a plan of action to resolve the problem and implement the solution → document funding.  
 C. Identify the problem → Establish a theory of probable cause → test the theory to determine cause → Establish a plan of action to resolve the problem and implement the solution → verify full system functionality → document funding.  
 D. Identify the problem → Establish a plan of action to resolve the problem and implement the solution → Establish a theory of probable cause → test the theory to determine cause → verify full system functionality → document funding.
59. Which one of the following is **not** cause the CPU to go fail?  
 A. High voltage spike      B. Age      C. Voltage regulator      D. overclocking

60. Which one of the following is functions of Primary Memory:
- A. It holds the OS instructions while the computer is booting.
  - B. It temporarily holds the input instructions from the input devices while the data is being input and processed.
  - C. It stores the results temporarily until it is transferred to the respective output devices.
  - D. All of the above
61. Which one of the following is the require consideration when upgrading RAM module?
- A. How much RAM does the system currently have?
  - B. How much RAM can the system use?
  - C. Which type and speed of RAM does the system have?
  - D. All of the above.
62. All of the following are importance of Multiple Partitions of disk **except**
- A. Install more than one OS on your hard disk;
  - B. Make the most efficient use of your available disk space;
  - C. Physically separate disk so that it is easy to find files and back up data.
  - D. Make your files as secure as possible;
63. Which one of the following **not** functions of file system
- A. Fetch instruction for execution may need operands from memory.
  - B. tracking allocated and free space,
  - C. maintaining directories and file names,
  - D. Tracking where each file is physically stored on the disk.
  - E. None of the above
64. Which one of the following keys are used to establish a relationship between two tables?  
(Choose two.)
- A. candidate
  - B. foreign
  - C. super key
  - D. local
  - E. primary
65. Which one of the following is characteristics of file based data management system?
- A. Decentralized
  - B. Each program defines and manages its own data.
  - C. Redundancy of data
  - D. Doesn't use programming language
  - E. All are correct except D

66. Which one of the following is DBMS facility which helps the database administrator to control the database access and usage?
- A. Data manipulation language
  - B. Data definition language
  - C. Data control language
  - D. Data dictionary
67. Which one of the following is correctly matched?
- A. Conceptual design-> description of the data, data type, relationship between data and constraints on the data
  - B. Logical design -> with selected data model
  - C. Physical design -> internal storage and file structure will be considered
  - D. None
68. Which of the following is **correctly** describes the meaning of terminology associated?
- A. Network data model – relationship between parent and child is one-to-many
  - B. Hierarchical data model - relationship between parent and child is one-to-many
  - C. Relational data model - Stores information or data in the form of tables
  - D. B and C are correct
69. Which of the following is **not** advantage of normalization in logical design of database
- A. Increasing access speed
  - B. Avoiding duplicate data
  - C. Minimize insert, update and delete anomalies
  - D. All are correct
70. Which one of the following attribute type can get its value by calculating from other attributes?
- A. Composite
  - B. Derived
  - C. Simple
  - D. Multi-valued
71. If A and B are attributes in table R, the expression  $A \rightarrow B$  shows \_\_\_\_\_
- A. If we know A then we know B
  - B. If we know B then we know A
  - C. A is functionally dependent on B
  - D. B is functionally dependent on A
  - E. A and D are correct
72. Which one of the following does **not** causes conflict?
- A. read(Q),read(Q).
  - B. read(Q),write(Q).
  - C. write(Q),read(Q).
  - D. write(Q),write(Q).

73. Which one of the following is purpose of concurrency control in the database transaction?
- A. To leave the database in inconsistent state
  - B. To resolve read-write and write-write conflicts.
  - C. To enforce Isolation
  - D. B and C
74. When does we say the database transaction is well-formed transaction?
- A. Not lock an already locked data items and it must not try to unlock a free data item.
  - B. Lock the data item before it reads or writes
  - C. Lock already locked item
  - D. A and B
75. Which one of the following statement is **CORRECT** about lock manager approach to handle conflict based on timestamp?
- A. In wait-die, an older transaction is allowed to wait on a younger transaction
  - B. In wound-wait, A younger transaction is allowed to wait on an older one
  - C. The lower the timestamp, the higher the transaction's priority
  - D. All
76. Assume A1 created two base relations **EMPLOYEE** and **DEPARTMENT**. Which one of the following is possible in the above assumption?
- A. A1 will be the owner of the objects
  - B. A1 can grant privilege on the two relations
  - C. A1 can revoke privilege granted on these two relations
  - D. All
77. Which one of the following SQL statement used to **GRANT UPDATE ON EMPLOYEE (SALARY) TO A4;**
- A. Grantee is A4
  - B. Grantor is A4
  - C. Granted privilege Update
  - D. A and C
78. If there is user for a DBMS, one of the following can be **true**
- A. Authentication is checked next to Authorization
  - B. Authorization is checked next to Authentication
  - C. Both are checked at the same time
  - D. Authorization is related to level of the user
79. Which one of the following determine the measure of query cost?
- A. Average block seek cost
  - B. Average block read cost
  - C. Average block write cost
  - D. All of the above

80. Which one of the following **not** uses of redirect request of servlet?
- A. Redirects to indicated URL
  - B. Immediately terminate the current program
  - C. Use relative path to locate resources
  - D. None
81. Which of the following code retrieves the value of a request parameter?
- A. `Header.getParameter(name);`
  - B. `response.getParameter(name);`
  - C. `request.getParameter(name);`
  - D. None of the above
82. When does `doGet()` method of servlet gets called?
- A. A GET request results from a normal request for a URL
  - B. The `service()` method checks the HTTP request type as GET and calls `doGet()` method
  - C. A and B
  - D. None of the above
  - F. A and C
83. Which One of the following is **true** about `destroy ()` method of java servlet life cycle?
- A. Called when service is initiated
  - B. Called whenever request is received
  - C. Called when server shut down
  - D. Band C
84. Which one of the following **correctly** ordered?
- A. Java application-> JDBC->Driver->Database
  - B. JDBC->Driver->Database ->Java application
  - C. Database ->Java application-> Driver-> JDBC
  - D. None
85. Which one of the following is parameter of socket object on the client side?
- A. Port number
  - B. Ip address
  - C. Socket and Server
  - D. A and B
86. Which one of the following can cause the thread to be blocked ?
- A. When join method is invoked
  - B. When sleep method is invoked
  - C. When wait method is invoked
  - D. All of the above
87. When two or more threads are accessing a common resource (method) in a way that causes a conflict. This problem, known as a \_\_\_\_\_ and managed by \_\_\_\_\_ consecutively
- A. Race condition , using synchronized keyword to the method
  - B. Sleep, wait keyword to the method
  - C. Join, lock keyword to the method
  - D. None of the above

88. Which type of hacker represents the highest risk to your network?
- A. Black-hat hackers
  - B. Grey-hat hackers
  - C. Script kiddies
  - D. Disgruntled employees
89. A digital signature is a mathematical technique which validates
- A. Authenticity
  - B. Integrity
  - C. Non-repudiation
  - D. All of the above
90. Which term refers that change must be done by authorized entity through authorized way.
- A. Confidentiality
  - B. Integrity
  - C. Authentication
  - D. Nonrepudiation
91. What we call the existence of weakness in a system or network?
- A. Attack
  - B. Exploit
  - C. Vulnerability
  - D. Threat
92. Which of the following can minimize the chance of data disclosure?
- A. Steganography
  - B. Chorography
  - C. Cryptography
  - D. Authentication
93. The purposes of a protocol are how it is communicated, defines what is communicated, and when it is communicated. The protocol elements that work respectively are
- A. Syntax, semantics, and timing
  - B. semantics, timing, and syntax
  - C. syntax, timing and semantics,
  - D. semantics, syntax and timing
94. which one of the following network transmission media bits are transmitted as a pulse of light
- A. Twisted pair cable
  - B. Coaxial
  - C. Fibre optic
  - D. Radio wave
95. Which one of the following is transmission mode can transmit data in both direction but transmits in only one direction at a time
- A. Semi-duplex
  - B. Simplex
  - C. Fully duplex
  - D. Half Duplex
96. Which one of the following layer in the TCP/IP stack is equivalent to the transport layer of the OSI model?
- A. Network access
  - B. Internet
  - C. Host-to-Host
  - D. Application
97. Assume you want to implement mechanism that automate the IP configuration, including ip address, subnet mask, default gateway, and DNS information. Which protocol will you use to accomplish this?
- A. HTTP
  - B. ARP
  - C. FTP
  - D. DHCP

98. Which one of the following OSI layer helps to uniquely hosts beyond the subnets and define the path which the packet will follow or be route to reach the destination?

A. Transport layer B. Data link Layer C. Network Layer D. Physical layer

99. Which one of the following protocol is not application layer protocol?

A. DNS

D. HTTP

B. SMTP

E. Telnet

C. UDP

100. In OSI model, which one of the following layer transforms information from machine format into that understandable by user?

A. Application layer B. session layer C. presentation layer D. physical layer



**Wachemo University, Durame campus**  
**Collage of Engineering and Technology**  
**Department of Information Technology**  
**Exit Exam Modal Examination Answer Sheet**

**Name:**\_\_\_\_\_ **ID:**\_\_\_\_\_

|     |     |     |      |
|-----|-----|-----|------|
| 1.  | 2.  | 3.  | 4.   |
| 5.  | 6.  | 7.  | 8.   |
| 9.  | 10. | 11. | 12.  |
| 13. | 14. | 15. | 16.  |
| 17. | 18. | 19. | 20.  |
| 21. | 22. | 23. | 24.  |
| 25. | 26. | 27. | 28.  |
| 29. | 30. | 31. | 32.  |
| 33. | 34. | 35. | 36.  |
| 37. | 38. | 39. | 40.  |
| 41. | 42. | 43. | 44.  |
| 45. | 46. | 47. | 48.  |
| 49. | 50. | 51. | 52.  |
| 53. | 54. | 55. | 56.  |
| 57. | 58. | 59. | 60.  |
| 61. | 62. | 63. | 64.  |
| 65. | 66. | 67. | 68.  |
| 69. | 70. | 71. | 72.  |
| 73. | 74. | 75. | 76.  |
| 77. | 78. | 79. | 80.  |
| 81. | 82. | 83. | 84.  |
| 85. | 86. | 87. | 88.  |
| 89. | 90. | 91. | 92.  |
| 93. | 94. | 95. | 96.  |
| 97. | 98. | 99. | 100. |