**DEBRE MARKOS UNIVERSTY BURIE CAMPUS DEPAREMENTS OF COMPUTER SCIENCE MODEL EXAM**

1. Which one of the following are the general tasks in almost all code generators?

A) Instruction selection B) Register allocation and assignment

C) Instruction ordering D) All

2. A transaction in which either all of the database actions occur or none of them does is called

A) Atomicity B) Consistency C) Isolation D) Durability

3. The degrees of success of the agent is measured by

A) Its Perception B) Its Performance measure C) Its action D) Its prior kowled

4. Among the following one helps to resolve internet name into IP Address.

A) Domain Name System B) Address Resolution Protocol

C) User Datagram Protocol D) Transmission Control Protocol

5. You have been asked to create a subnet that supports 24 hosts. What subnet mask you use?

A) 255.255.255.224 B) 255.255.255.248

C) 255.255.255.240 D) 255.255.255.252

6. Which one of the following is the smallest meaningful sequence of characters of interest in source program

A) Pattern B) Lexemes C) Tokens D) All

7. Assume you are asking to establish a network using 50(fifty) computers in mesh topology. How many cables required to establish a network?

A) 2225 B) 1225 C) 1450 D) 2450

8. It is a method used to synchronize the I/O device with the microprocessor

A) Interrupt B) Handshaking C) Interface D) None

9. If database modifications occur while the transaction is still active, the transaction is said to use the \_\_\_\_\_\_\_\_\_\_\_technique. A) Deferred-Update B) Late-modification

C) Immediate-Update D) Undo

10. The component of Expert system which provide interaction between user expert system and Expert system

A) Kowledge base B) Inference engine

C) User interface D) Human expert

11. Which one of the following instructions is incorrect?

A) MOV AL, BP B) INC CX

C) DEC CX D) All

12. Which one of the following is incorrect about Map data structure?

A) Allow duplicate keys B) Cannot be traversed

C) Allow duplicate values D) None of the above

13. A register used to indicate the condition of the microprocessor is

A) SI B) FLAG C) DI D) EIP

14. Which one of the following instructions is correct

A) MOV DS, 20 B) MOV ES, 40 C) MOV SS, 60 D) None

15. A register used to address the next instruction in a section of memory is

A) RSP B) CS C) RIP D) SS

16. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_is requirement elicitation techniques that is used to gather the requirements using day-to-day working observation and notes made of the actual tasks.

A) Use case B) Ethnography C) Scenario D) Interview

17. An ER model of a database consist of entity types A and B. These are connected by the relationship R which does not have its own attribute. Under which one of the following conditions, can the relational table for R be merged with that of A?

A) Relationship R is one –to –many and the participation of A in R is Total.

B) Relationship R is one –to –many and the participation of A in R is Partial.

C) Relationship R is many –to –one and the participation of A in R is Total.

D) Relationship R is many –to –one and the participation of A in R is Partial.

18. Which one of the following is more related to effective management of software complexity?

A) Modularity B) Reusability C) Extensibility D) All

19. A DHCP enabled computer on the network has been unplugged from the network for a week. In the meantime, several other computers were added to the network. When plugging the computer back into the network the computer is unable to reach network resources. Which of the following is the MOST likely cause?

A) the IP address lease has expired on the DHCP server.

B) the DHCP scope needs to be redefined.

C) the DHCP pool limit has been reached.

D) the DHCP server needs to be restarted.

20. Which one of the following testing required knowledge about internal structure, design and implementation of the system?

A) Black box Testing B) White box testing

C) Alpha testing D) Beta testing

21. A TCP/IP protocol for mapping an Internet Protocol address (IP address) to a physical machine address (MAC) that is recognized in the local network.

A) Address Resolution Protocol B) Domain Name System

C) Revers Address Resolution Protocol D) Internet Control Messaging Protocol

22. One of the following is false the characteristics of controlled access in datalink layer.

A) Only one station is transmit at a time.

B) There will be a chance of collision.

C) Devices wishing to transmit must wait their turn.

D) Some deterministic networks use token passing.

23. Which organization structure all team members are responsible for all software development life cycle phase?

A) Functional B) Project C) Democratic D) Chief programmer

24. Which capability maturity model level an organization must master the requirements management software quality assurance, and software project planning

A) Repeatable level B) Initial level C) Defined level D) Managed level

25. Which of the following occurs when a transaction cannot proceed for an indefinite period while other transactions in the system continue normally?

A) Starvation B) Dead block C) checkpoint D) lock point

26. Which Terminology of Natural language processing study about meaning full components of word

A) Phonetics B) Phonology C) Morphology D) Pragmatics

27. All are the advantages of functional format structure, except

A) Ease of staffing B) Production of good quality documents

C) No need job specialization D) Efficient handling manpower turnover

28. Among the following well known port number of TCP the port number of HTTP is:

A) 80 B) 25 C) 21 D) 110

29. An Internetworking concepts it must have at least one connection with an external network.

A) Internet B) Extranet C) intranet D) All

30. Which one of the following are the specific character strings that make up a token?

A) Token B) Lexemes C) Lexical units D) Pattern

31. The Intel’s first true 32-bit microprocessor is

A) Pentium B) 80486 C) 80286 D) 80386

32. A technician is dispatched to a remote office to install a new NIC in a client computer. After successfully installing and configuring the operating system to recognize the device, the computer still cannot access the network. Which of the following would MOST likely be the problem?

A) the CAT5 cable is defective B) the NIC is disabled in BIOS

C) The NIC is disabled in Device Manager D) The RJ11 jack is defective

33. Class B private IP address space ranges:

A) 10.0.0.0-----------19.255.255.255 B) 128.12.0.0--------191.24.255.255

C) 172.16.0.0--------172.31.255.255 D) 192.168.0.0------192.168.255.255

34. The atom constructor can represent the following basic atomic values except.

A) Integers B) Real Numbers C) Strings D) Array

35. Variables within a class but outside any method are?

A) Instance variables B) Local variables C) Class variables D) Static variables

36. Which one of the following operations that have no commutative properties

A) Union B) Join C) Intersection D) None

37. Which testing should focus on testing the functionality of objects or methods?

A) Integration testing B) White box testing

C) Black box testing D) Unit testing

38. The content of BH is 10, AL is 8, CL is 4 how much is the content of AX after MUL BH

A) 40 B) 80 C) 32 D) 320

39. Among the protocol one is used to provide remote access to servers and networking devices.

A) HTTP B) SMTP

C) Telnet (terminal emulation protocol) D) FTP

40. Which one of the following sending a message to an object is correct?

A) obj.add B) obj.add.obj

C) obj.add() D) obj.add().obj

41. Which of the following views represents the interaction of the user with the software but tells nothing about the internal working of the software?

A) Use case diagram B) Activity diagram

C) Class diagram D) Sequence diagram

42. Which one of the following is different from the others?

A) MOVS B) LODS C) XCHG D) INC

43. The function of protocols in transport layer (TCP and UDP) includes following except,

A) Segment upper-layer application data. B) Establish end-to-end operations.

C) Provide flow control D) Addressing packets

44. Assume you are software engineer, which software developing life cycle model follow where user requirements are not complete and technical issues are not clear.

A) Incremental model B) Prototype model

C) Spiral model D) Waterfall model

45. The process of binding both attributes and methods together within a class is?

A) Inheritance B) Encapsulation

C) Polymorphism D) Overriding

46. The application area of AI which focus on recognize objects based on patterns in the same way as the human visual system does.

A) Expert System B) Speech recogition

C) Computer vison D) Robotics

47. Which one of the following are the program properties that can be checked at run time?

A) Static checking B) Dynamic semantics

C) Other Static Checks D) None

48. Assume you are asked to connect your main campus debremarkos university to your branch burie agricultural campus. What kind of network you are expected to establish?

A) Local Area Network B) Metropolitan Area Network

C) Personal Area Network D) Wide Area Network

49. What is the purpose of a sequence diagram?

A) To show the interactions between actors and a system

B) To show the behavior of objects in a system

C) To show the flow of activities in a system

D) To show the order and timing of interactions between objects

50. From steps of problem solving which one is concerned on looking various sequence of action which lead to the goal state, evaluate it and chose the sequence of optimal action?

A) Execute B) Goal Formulation

C) problem formulation D) Search

51. In OSI reference model, which one is responsible for the translation of incoming and outgoing data.

A) Presentation layer. B) Application layer.

C) Transport layer. D) Network layer.

52. The choice of one topology over the other has an impact on:

A) The capability of the network. B) The growth of the network.

C) The type of equipment that the network needs. D) All

53. Suppose your database system crashes again while recovering from a previous crash. Assume check pointing is not done by the database either during the transaction or during recovery. Which of the following is correct?

A) The same undo and redo list will be used while recovering again

B) The database will become inconsistent

C) All the transactions that are already undone and redone will not be recovered again

D) The system cannot any further

54. One of the following is half-duplex mode of transmission.

A) Walky-talky/policeman phone B) Television

C) Telephone D) One-Way Radio

55. Permissions of a file are represented by which of the following characters?

A) r,w,x B) e,w,x C) x,w,e D) e,x,w

56. A keyword used to have only a single piece of storage for a particular field is?

A) this B) object C) Final D) Static

57. VPN is abbreviated as

A) Visual Private Network B) Virtual Private Network

C) Virtual Protocol Network D) Virtual Protocol Networking

58. What represents the concept that data can only be manipulated in known, well-defined ways

A) Inheritance B) Information hiding

C) Polymorphism D) overloading

59. The rigorous two-phase locking protocol permits releasing all locks at the\_\_\_\_\_\_\_\_\_\_

A) Beginning of the transaction B) During the execution of transaction

C) End of transaction D) Never in the life-time of transaction

60. Which one of the following is incorrect about set data structure?

A) Unordered collection B) Duplicates are not allowed

C) null is not allowed D) None of the above

61. Which of the following diagram types is used to represent the static structure of a system?

A) Use case documentation B) Sequence diagram

C) Class diagram D) Activity diagram

62. Which one of the following is correct about list data structure?

A) Unordered collection B) Duplicates are not allowed

C) null is not allowed D) None of the above

63. In which of the following state of the transaction executes all its operations successfully and all the effects are now permanently saved on the database system?

A) Active B) Partial committed C) Committed D) Failed

64. Which one of the following is not the disadvantage of normalization?

A) Requires data to see problems B) May reduce system performance

C) Time consuming D) Reduce duplicate data

65. Given an IP address 192.168.20.0/27 how many subnets can be created?

A) 8 B) 16 C) 32 D) 64

66. Which is the following is the most important feature of the spiral model?

A) Efficiency management B) Time management

C) Quality management D) Risk management

67. Let transaction T1 has obtained a shared mode lock S on data item Y and transaction T2 has obtained an exclusive lock X on data item Z , according to the above statement which one is correct?

A) T1 can read Y but cannot write Y B) T2 can read Z but cannot write Z

C) T1 can read Z but cannot write Z D) T2 can read and write item Y

68. Which one of the following is incorrect about inheritance

A) Subclass inherits members of superclass

B) Constructors are not members

C) Constructors of superclass can be invoked from subclass

D) Constructors of superclass inherited by subclass

69. Which types of rule used in phonology to interpretation of the fluctuation in stress and intonation across the sentences?

A) Phonetic rule B) Phonemic rule

C) Prosodic rule D) Morpheme rule

70. Given an IP Address 172.16.28.252 with the subnet mask of 255.255.240.0 what is the correct network address?

A) 172.16.24.0 B) 172.16.28.0

C) 172.16.0.0 D) 172.16.16.0

71. One of the following is true about packet switching.

A) Packets travel around the network seeking out the most efficient route.

B) Packets should necessarily seek out the shortest route.

C) The message gets broken into small data packets.

D) All

72. One is true about One is true about the similarity of TCP/IP and OSI reference model.the similarity of TCP/IP and OSI reference model.

A) Both have application layers.

B) Both have comparable transport and network layers.

C) Both uses packet-switching instead of circuit-switching technology.

D) All

73. One of the following is network layer protocol.

A) HTTP B) FTP C) ARP D) TCP

74. Which one of the following is incorrect about abstract class?

A) It is a class containing abstract method B) Abstract method is incomplete

C) Used to construct objects D) None of the above

75. \_\_\_\_\_\_\_ is the process of writing down the user and system requirements in a requirements document. A) Feasibility study B) Requirements elicitation and analysis.

C) Requirements specification D) Requirements validation

76. Which directory implementation is used in most Operating System?

A) Single level directory structure B) Two level directory structure

C) Tree directory structure D) Acyclic directory structure

77. Which one of the following correct one?

A) A class file can contain any number of import statement

B) Import statement appears after the class declaration

C) Import statement appears before package statement

D) All of the above

78. Which register is a user-accessible register?

A) DX B) IR C) MBR D) MDR

79. Which one of the following are the secondary tasks for scanner?

A) Stripping out blanks, tabs, new lines B) Stripping out comments

C) Error reporting sD) All

80. Intelligent agents have the ability to understand Natural languages which approaches of AI it shows A) Thinking humanly B) Acting Humanly

C) Thinking rationally D) Acting rationally

81. Incremental model of software development is

A) A reasonable mode when requirements are well define

B) Good model when a working core product is required quickly

C) Good model for the projects with large development teams

D) Good model when user requirements are not complete

82. Which one of the following is the parse tree showing the values of attributes at each node?

A) Inherited attribute B) Synthesized attribute

C) Annotated parse tree D) A & B

83. Which register is found starting from Pentium processor?

A) EAX B) EIP C) R8 D) None

84. Which one is not correct?

A) In conservative 2PL, starvation may occur

B) The Wound-Wait scheme can prevent starvation problem

C) Deadlock can be prevented by wait-die

D) Some deadlock prevention methods may the cause for starvation

85. Concurrency control in DBMS is important for which of the following reasons?

A) To ensure data integrity when updates occur to the database in a single user environment

B) To ensure data integrity when reads occur to the database in a single user environment

C) To ensure data integrity when updates occur to the database in a multi user environment

D) To ensure data integrity when reads occur to the database in a multi user environment

86. Let you have two relations A and B, each table has 200 and 100 rows of records respectively. So after applying cross product on those tables, how many rows of records you will have?

A) 300 B) 20000 C) 2000 D) 100

87. Which one of the following is correct about narrowing casting?

A) Done by the programmer B) It is automatic

C) Done by the compiler D) All

88. From which components Intelligence is composed of

A) Reasoning B) Problem solving

C) Linguistic perception D) All

89. Which relationship are used when you have one use case that is similar to another, but does something slightly differently or something more.

A) Generalization B) Aggregation

C) Composition D) Association

90. How many cores are there in the core i7 processor?

A) 5 B) 4 C) 6 D) 7

91. An individual who involve in solving problems regarding a certain profession and are considered as knowledge providers in a certain field of study known as ---------------------

A) Domain Expert B) Knowledge Engineer

C) User D) All

92. What is an intelligent agent?

A) It is an agent which is both rational and Omniscient

B) It used only sensors and effectors to be effective

C) It is a combination of software and hardware agents

D) All

93. Consider a system with R resources and P transactions and deadlock occurs. The system use transaction termination to eliminate deadlock. Which of the following transaction termination method will clearly break the deadlock cycle

A) Abort all deadlocked transaction

B) Abort half of the deadlocked transaction

C) Aborting single deadlocked transactio

D) Aborting one transaction at a time until the deadlock cycle is eliminated

94. What is robotics?

A) It is application area of AI emphasis of creation of intelligent and Efficient robot

B) It is a multi disciplinary area of AI

C) It focus on Electrical, Mechanical and software part of robot

D) All

95. Which one of the following is incorrect about method overriding?

A) A method declared final cannot be overridden

B) Similar argument list is required

C) Constructors cannot be overridden

D) None

96. Which one of the following are translate the whole source program into object code.

A) Compiler B) Interprater C) Linker D) All

97. A movement between a register and memory location is

A) Direct addressing B) Immediate addressing

C) Register addressing D) None

98. One of the following is responsible for receiving and transmitting the signals across the physical media.

A) Datalink Layer B) Physical layer

C) Application Layer. D) Transport Layer.

99. One of the following is not a characteristic of SRAM

A) Fast B) Expensive C) Memory refreshing sD) None

100. Which one of the following can be applied directly after intermediate code generation to improve the intermediate representation?

A) Peephole optimization B) Constant Propagation

C) Dead code elimination sD) All

101. Which one of the following is analog to digital converter?

A) ADC080X B) DAC0830 C) 82C55 D) None

102. Network operating system runs on \_\_\_\_\_\_\_\_\_\_

A) Server B) every system in the network

C) both server and every system in the network D) None

103. Which one of the following regular expressions gives zero or one?

A) r + =rr\* B) r\* = r+ | ε C) r? =r|ε D) All

104. Which type of file system is used for Linux systems?

A) ext2 B) hpfs C) swap D) All

105. Among the following one is layer one device.

A) Router B) Switch C) Firewall D) Firewall

106. A data communication component that helps to convert data into transmittable signal.

A) Transmission media B) Transmitter

C) Receiver D) Data source

107. Among the following one is the responsibility of logical link control layer.

A) Identify the network layer protocol. B) Marking the beginning and ending of the frame.

C) Addressing the frame. D) All

108. One of the following is ODD

A) 192.257.10.0 B) 192.168.10.0

C) 172.16.1.1 D) 192.168.0.0

109. The most commonly used method to convert analog data to digital form.

A) Line coding scheme B) Data encoding

C) Pulse code modulation D) Demodulation

110. Which one of the following is not an example of checked exceptions?

A) Missing semicolons B) Array index out of bounds

C) Usage of undeclared variables D) File required not found

111. Firewall in computer network is

A) physical boundary of network B) an operating system of network

C) A system designed to prevent unauthorized access D) A web browsing software

112. Among the components of the DBMS, which one is responsible for keeping the isolation of transactions?

A) Recovery protocol B) Application programmer

C) Concurrency –control protocol D) Database administrator

113. Which one of the following is incorrect about Map data structure?

A) Allow duplicate keys B) Cannot be traversed

C) Allow duplicate values D) None of the above

114. \_\_\_\_\_\_\_\_\_Occurs when two transactions update the same data item, but both read the same original value before update

A) Dirty read B) Lost update C) Incorrect summary D) Unrepeatable read

115. Which of the following correctly shows Machine intelligence is deferent from Human intelligence.

A) Machine can figure out complete objects even some part is missed

B) Machines are Naturally intelligent

C) Store and Recall information with set of instruction

D) Take precepts from environment with pattern

116. One of the following is false about peer – to – peer network.

A) All computers are function as both a client and a server.

B) There is an administrator responsible for the entire network.

C) There is no a hierarchy among the computers.

D) In peer – to – peer network security is not an issue.

117. Which one of the following is not a multipurpose register?

A) AX B) BP C) SI D) SP

118. \_\_\_\_\_\_a software product is necessary to rectify the bugs observed while the system is in use.

A) Adaptive maintenance B) Corrective maintenance

C) Perfective maintenance D) Updatable maintenance

119. The top-level directory on a Linux system is represented as \_\_\_\_\_

A) / B) $ C) \* D) #

120. Which types of searching strategies is not grouped under blind search?

A) Breadth first search B) Uniform cost search

C) Constraint satisfaction search D) Depth limited search

121. Which one of the following are keeps information associated with all kinds of tokens?

A) Literal Table B) Symbol table

C) Hash table D) All

122. Which of the following protocols uses both TCP and UDP?

A) FTP B) SMTP C) Telnet D) DNS

123. One of the following is datalink layer device.

A) Switch B) Access point C) Hub D) A & B

124. Which of the following is true about propositional logic?

A) It doesn’t determine the truth value based on the given domain

B) It is predicate logic

C) It determines the true value of sentences even it contains variable

D) It contains quantifier

125. One of the following is true about OSI reference model.

A) It has fewer layer that TCP/IP model. B) It is used to build the network.

C) Used as a guide to help students or learners understand the communication process.

D) All

126. Which of the following views represents the interaction of the user with the software but tells nothing about the internal working of the software?

A) Use case diagram B) Activity diagram

C) Class diagram D) Sequence diagram

127. The types of dataset used during model development

A) Validation dataset

B) Train dataset

C) Test dataset

D) All

128. Which of the DBMS component ensures that the concurrent execution of multiple operations on the database results into consistent database state?

A) Log B) Buffer manager

C) File manager D) Transaction processing system