

UGC NET CS December 2013 Paper III solved

Q1. If the primal Linear Programming problem has unbounded solution, then it's dual problem will have

- (A) feasible solution
- (B) alternative solution
- (C) no feasible solution at all
- (D) no bounded solution at all

Ans: (C)

Q2.

Given the problem to maximize $f(x)$, $X = (x_1, x_2, \dots, x_n)$ subject to m number of inequality constraints. $g_i(x) \leq b_i, i = 1, 2, \dots, m$ including the non-negativity constraints $x \geq 0$.

Which of the following conditions is a Kuhn-Tucker necessary condition for a local maxima at \bar{x} ?

- (A) $\frac{\partial L(\bar{X}, \bar{\lambda}, \bar{S})}{\partial x_j} = 0, j = 1, 2, \dots, m$
- (B) $\bar{\lambda}_i [g_i(\bar{X}) - b_i] = 0, i = 1, 2, \dots, m$
- (C) $g_i(\bar{X}) \leq b_i, i = 1, 2, \dots, m$
- (D) All of these

Ans: (D)

Q3. The following Linear Programming problem has:

Max $Z = x_1 + x_2$

Subject to

$x_1 - x_2 \geq 0$

$3x_1 - x_2 \leq -3$

and $x_1, x_2 \geq 0$

- (A) Feasible solution
- (B) No feasible solution
- (C) Unbounded solution
- (D) Single point as solution

Ans: (B)

Q4. Given a flow graph with 10 nodes, 13 edges and one connected components, the number of regions and the number of predicate (decision) nodes in the flow graph will be

- (A) 4, 5
- (B) 5, 4
- (C) 3, 1
- (D) 13, 8

Ans: (B)

Q5. Function points can be calculated by

- (A) UFP * CAF
- (B) UFP * FAC
- (C) UFP * Cost
- (D) UFP * Productivity

Ans: (A)

Q6. Match the following:

List-I		List-II	
a.	Data coupling	i.	Module A and Module B have shared data
b.	Stamp coupling	ii.	Dependency between modules is based on the fact they communicate by only passing of data
c.	Common coupling	iii.	When complete data structure is passed from one module to another
d.	Content coupling	iv.	When the control is passed from one module to the middle of another

Codes:

	a	b	c	d
(A)	iii	ii	i	iv
(B)	ii	iii	i	iv
(C)	ii	iii	iv	i
(D)	iii	ii	iv	i

Ans: (B)

Q7. A process which defines a series of tasks that have the following four primary objectives is known as

1. to identify all items that collectively define the software configuration.
2. to manage changes to one or more of these items.
3. to facilitate the construction of different versions of an application.
4. to ensure that software quality is maintained as the configuration evolves over time.

- (A) Software Quality Management Process
- (B) Software Configuration Management Process
- (C) Software Version Management Process
- (D) Software Change Management Process

Ans: (B)

Q8. One weakness of boundary value analysis and equivalence partitioning is

- (A) they are not effective.
- (B) they do not explore combinations of input circumstances.
- (C) they explore combinations of input circumstances.
- (D) none of the above.

Ans: (B)

Q9. Which one of the following is not a software myth?

- (A) Once we write the program and get it to work, our job is done.

(B) Project requirements continually change, but change can be easily accommodated because software is flexible.

(C) If we get behind schedule, we can add more programmers and catch up.

(D) If an organization does not understand how to control software projects internally, it will invariably struggle when it outsources software projects.

Ans: (D)

Q10. Match the following with respect to relationship between objects and classes:

List-I		List-II	
a.	State diagram	i.	Useful for both abstract modelling and for designing actual program
b.	Object diagram	ii.	Describes object classes
c.	Class diagram	iii.	Useful for documenting test cases
d.	Instance diagram	iv.	Describing the behaviour of a single class of objects.

Codes:

	a	b	c	d
(A)	iv	i	ii	iii
(B)	ii	iii	iv	i
(C)	iii	iv	ii	i
(D)	ii	iv	i	iii

Ans: (A)

Q11. Match the following style rules for reusability:

List-I		List-II	
a.	Keep methods coherent	i.	Write a method to get the last element of a list
b.	Keep methods small	ii.	Maintain parallel structure when possible

c.	Keep methods consistent	iii.	Breaking a method into smaller parts
d.	Provide uniform coverage	iv.	Performs a single function or a group of closely related functions.

related functions.

Codes:

a b c d

- (A) iv iii ii i
- (B) ii i iv iii
- (C) iii iv ii i
- (D) ii iii iv i

Ans: (A)

Q12. Which is the protocol for performing RPCs between applications in a language and system independent way?

- (A) Hyper Text Transmission Protocol (HTTP)
- (B) Simple Network Management Protocol (SNMP)
- (C) Simple Object Access Protocol (SOAP)
- (D) Simple Mail Transfer Protocol (SMTP)

Ans: (C)

Q13. The document that is used by XSLT to indicate, how to transform the elements of the XML document to another format is

- (A) HTML page
- (B) DOC type procedure
- (C) Style sheet
- (D) Stored procedure

Ans: (C)

Q14. Which of the following concepts means adding new concepts to a program as it runs?

- (A) Data hiding

- (B) Dynamic loading
- (C) Dynamic typing
- (D) Dynamic binding

Ans: (B)

Q15. Which of the following correctly describes overloading of functions?

- (A) Virtual polymorphism
- (B) Transient polymorphism
- (C) Ad-hoc polymorphism
- (D) Pseudo polymorphism

Ans: (C)

Q16. Match the following with respect to programming languages:

List - I

- a. Structured Language
- b. Non-structured Language
- c. Object Oriented Programming Language
- d. Interpreted Programming Language

List - II

- i. JAVA
- ii. BASIC
- iii. PASCAL
- iv. FORTRAN

Codes:

a b c d

- (A) iii iv i ii
- (B) iv iii ii i
- (C) ii iv i iii
- (D) ii iii iv i

Ans: (A)

Q17. The compiler converts all operands upto the type of the largest operand is called

- (A) Type Promotion
- (B) Type Evaluation
- (C) Type Conversion
- (D) Type Declaration

Ans: (A)

Q18. C++ actually supports the following two complete dynamic systems:

- (A) One defined by C++ and the other not defined by C.
- (B) One defined by C and one specific to C++
- (C) Both are specific to C++
- (D) Both of them are improvements of C

Ans: (B)

Q19. Important advantage of using new and delete operators in C++ is

- (A) Allocation of memory
- (B) Frees the memory previously allocated
- (C) Initialization of memory easily
- (D) Allocation of memory and frees the memory previously allocated.

Ans: (D)

Q20. Match the following control strategies of prolog:

List-I		List-II	
a.	Forward movement	i.	Variable can be done with a constant, another variable or a function.
b.	Unification	ii.	The entire conjunctive goal is executed.
c.	Deep backtracking	iii.	Previous sub goal to find alternative solutions.
d.	Shallow backtracking	iv.	Chooses sub goal with possible unifier.

Codes:

	a	b	c	d
(A)	iv	i	ii	iii
(B)	ii	iv	i	iii
(C)	iii	i	iv	ii

(D)	ii	iii	iv	i
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Ans: (A)

Q21. Given the following statements:

S1: The grammars $S \rightarrow asb \mid bsa \mid ss \mid a$ and $S \rightarrow asb \mid bsa \mid a$ are not equivalent.

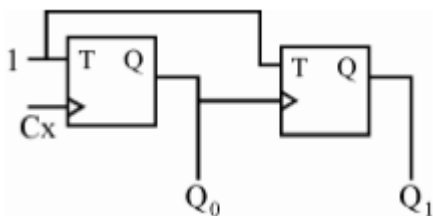
S2: The grammars $S \rightarrow ss \mid sss \mid asb \mid bsa \mid \lambda$ and $S \rightarrow ss \mid asb \mid bsa \mid \lambda$ are equivalent.

Which of the following is true?

- (A) S1 is correct and S2 is not correct.
- (B) Both S1 and S2 are correct.
- (C) S1 is not correct and S2 is correct.
- (D) Both S1 and S2 are not correct.

Ans: (A)

Q22. What are the final values of Q1 and Q0 after 4 clock cycles, if initial values are 00 in the sequential circuit shown below:



- (A) 11
- (B) 10
- (C) 01
- (D) 00

Ans: (D)

Q23. High level knowledge which relates to the use of sentences in different contexts and how the context affect the meaning of the sentences?

- (A) Morphological
- (B) Syntactic

- (C) Semantic
- (D) Pragmatic

Ans: (D)

Q24. The objective of _____ procedure is to discover at least one _____ that causes two literals to match.

- (A) unification, validation
- (B) unification, substitution
- (C) substitution, unification
- (D) minimax, maximum

Ans: (B)

Q25. If h^* represents an estimate of the cost of getting from the current node N to the goal node and h represents actual cost of getting from the current node to the goal node, then A* algorithm gives an optimal solution if

- (A) h^* is equal to h
- (B) h^* overestimates h
- (C) h^* underestimates h
- (D) none of these

Ans: (C)

Q26. The mean-end analysis process centers around the detection of differences between the current state and goal state. Once such a difference is isolated, an operator that can reduce the difference must be found. But perhaps that operator cannot be applied to the current state. So a sub-problem of getting to a state in which it can be applied is set up. The kind of backward chaining in which operators are selected and then sub goals are set up to establish the precondition of operators is called

- (A) backward planning
- (B) goal stack planning
- (C) operator subgoaling
- (D) operator overloading

Ans: (C)

Q27. In alpha-beta pruning, _____ is used to cut off the search at maximizing level only and _____ is used to cut off the search at minimizing level only.

- (A) alpha, beta
- (B) beta, alpha
- (C) alpha, alpha
- (D) beta, beta

Ans: (B)

Q28. If A and B are two fuzzy sets with membership functions

$$\mu_A(x) = \{0.2, 0.5, 0.6, 0.1, 0.9\}$$

$$\mu_B(x) = \{0.1, 0.5, 0.2, 0.7, 0.8\}$$

Then the value of $\mu_{A \cap B}$ will be

- (A) {0.2, 0.5, 0.6, 0.7, 0.9}
- (B) {0.2, 0.5, 0.2, 0.1, 0.8}
- (C) {0.1, 0.5, 0.6, 0.1, 0.8}
- (D) {0.1, 0.5, 0.2, 0.1, 0.8}

Ans: (D)

Q29. The height $h(A)$ of a fuzzy set A is defined as

$$h(A) = \sup_{x \in A} \mu_A(x)$$

$$x \in A$$

Then the fuzzy set A is called normal when

- (A) $h(A) = 0$
- (B) $h(A) < 0$
- (C) $h(A) = 1$
- (D) $h(A) < 1$

Ans: (C)

Q30. An artificial neuron receives n inputs x_1, x_2, \dots, x_n with weights w_1, w_2, \dots, w_n attached to the input links. The weighted sum _____ is computed to be passed on to a non-linear filter ϕ called

activation function to release the output.

- (A) $\sum w_i$
- (B) $\sum x_i$
- (C) $\sum w_i + \sum x_i$
- (D) $\sum w_i \cdot x_i$

Ans: (D)

Q31. Consider the formula in image processing

$$R_D = 1 - \frac{1}{C_R}$$

$$\text{Where } C_R = \frac{n_1}{n_2}$$

CR is called as compression ratio n_1 and n_2 denotes the number of information carrying units in two datasets that represent the same information. In this situation R_D is called as relative _____ of the first data set.

- (A) Data Compression
- (B) Data Redundancy
- (C) Data Relation
- (D) Data Representation

Ans: (B)

Q32. Find the false statement:

- (A) In Modern Cryptography, symmetric key algorithms use same key both for Encryption and Decryption.
- (B) The symmetric cipher DES (Data Encryption Standard) was widely used in the industry for security product.
- (C) The AES (Advanced Encryption Standard) cryptosystem allows variable key lengths of size 56 bits and 124 bits.
- (D) Public key algorithms use two different keys for Encryption and Decryption.

Ans: (C)

Q33. The message 11001001 is to be transmitted using the CRC polynomial $x^3 + 1$ to protect it from errors. The message that should be transmitted is

- (A) 110010011001
- (B) 11001001
- (C) 110010011001001
- (D) 11001001011

Ans: (D)

Q34. _____ comparisons are necessary in the worst case to find both the maximum and minimum of n numbers.

- (A) $2n - 2$
- (B) $n + \text{floor}(\lg n) - 2$
- (C) $\text{floor}(3n/2) - 2$
- (D) $2 \lg n - 2$

Ans: (C)

Q35. Let A and B be two $n \times n$ matrices.

The efficient algorithm to multiply the two matrices has the time complexity

- (A) $O(n^3)$
- (B) $O(n^{2.81})$
- (C) $O(n^{2.67})$
- (D) $O(n^2)$

Ans: (B)

Q36. The recurrence relation $T(n) = mT(n/2) \tan 2$ is satisfied by

- (A) $O(n^2)$
- (B) $O(n \lg m)$
- (C) $O(n^2 \lg n)$
- (D) $O(n \lg n)$

Ans: (---)

Q37. The longest common subsequence of the sequences $X =$ and $Y =$ has length

- (A) 2
- (B) 3
- (C) 4
- (D) 5

Ans: (C)

Q38. Assuming there are n keys and each key is in the range $[0, m - 1]$. The run time of bucket sort is

- (A) $O(n)$
- (B) $O(n \lg n)$
- (C) $O(n \lg m)$
- (D) $O(n + m)$

Ans: (D)

Q39. A _____ complete subgraph and a _____ subset of vertices of a graph $G = (V, E)$ are a clique and a vertex cover respectively.

- (A) minimal, maximal
- (B) minimal, minimal
- (C) maximal, maximal
- (D) maximal, minimal

Ans: (D)

Q40. Pumping lemma for context-free languages states:

Let L be an infinite context free language. Then there exists some positive integer m such that any $w \in L$ with $|w| \geq m$ can be decomposed as

$w = uvxyZ$ with $|vxy|$ _____

and $|vy|$ _____ such that uv^zxyz

$Z \in L$ for all $z = 0, 1, 2, \dots$

- (A) $\leq m, \leq 1$
- (B) $\leq m, \geq 1$
- (C) $\geq m, \leq 1$

(D) $\geq m, \geq 1$

Ans: (B)

Q41. The Greibach normal form grammar for the language $L = \{a^n b^{n+1} \mid n \geq 0\}$ is

(A) $S \rightarrow aSB, B \rightarrow bB \mid \lambda$

(B) $S \rightarrow aSB, B \rightarrow bB \mid b$

(C) $S \rightarrow aSB \mid b, B \rightarrow b$

(D) $S \rightarrow aSb \mid b$

Ans: (C)

Q42. Given the following statements:

S1 : Every context-sensitive language L is recursive.

S2 : There exists a recursive language that is not context sensitive.

Which statement is correct?

(A) S1 is not correct and S2 is not correct.

(B) S1 is not correct and S2 is correct.

(C) S1 is correct and S2 is not correct.

(D) S1 is correct and S2 is correct.

Ans: (D)

Q43. What is the bit rate for transmitting uncompressed 800×600 pixel colour frames with 8 bits/pixel at 40 frames/second?

(A) 2.4 Mbps

(B) 15.36 Mbps

(C) 153.6 Mbps

(D) 1536 Mbps

Ans: (C)

Q44. In IPV 4, the IP address 200.200.200.200 belongs to

(A) Class A

(B) Class B

(C) Class C

(D) Class D

Ans: (C)

Q45. Which layer of OSI reference model is responsible for decomposition of messages and generation of sequence numbers to ensure correct re-composition from end to end of the network?

(A) Physical

(B) Data-link

(C) Transport

(D) Application

Ans: (C)

Q46. A client-server system uses a satellite network, with the satellite at a height of 40,000 kms. What is the best-case delay in response to a request? (Note that the speed of light in air is 3,00,000 km/second).

(A) 133.33 m sec

(B) 266.67 m sec

(C) 400.00 m sec

(D) 533.33 m sec

Ans: (D)

Q47. The start and stop bits are used in serial communication for

(A) error detection

(B) error correction

(C) synchronization

(D) slowing down the communication

Ans: (C)

Q48. _____ is a type of transmission impairment in which the signal loses strength due to the resistance of the transmission medium.

(A) Attenuation

(B) Distortion

(C) Noise

(D) Decibel

Ans: (A)

Q49. Match the following:

List-1		List-2	
a.	Indexed Addressing	i.	is not used when an operand is moved from memory into a register or from a register to memory.
b.	Direct Addressing	ii.	Memory address is computed by adding up two registers plus an (optional) offset.
c.	Register Addressing	iii.	Addressing memory by giving a register plus a content offset.
d.	Base-Indexed Addressing	iv.	can only be used to access global variables whose address is known at compile time.

Codes:

	a	b	c	d
(A)	ii	i	iv	iii
(B)	ii	iv	i	iii
(C)	iii	iv	i	ii
(D)	iii	i	iv	ii

Ans: (C)

Q50. Which of the following is a design criteria for instruction formats?

- (A) The size of instructions
- (B) The number of bits in the address fields
- (C) The sufficient space in the instruction format to express all the operations desired.
- (D) All of these

Ans: (D)

Q51. Synchronization is achieved by a timing device called a _____ which generates a periodic train of _____.

- (A) clock generator, clock pulse
- (B) master generator, clock pulse
- (C) generator, clock
- (D) master clock generator, clock pulse

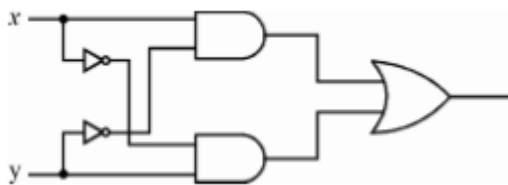
Ans: (D)

Q52. Serial access memories are useful in applications where

- (A) Data consists of numbers
- (B) Short access time is required
- (C) Each stored word is processed differently.
- (D) None of these

Ans: (D)

Q53. What will be the output of the following logic diagram?



- (A) $xORy$
- (B) $xANDy$
- (C) $xXORy$
- (D) $xXNORy$

Ans: (C)

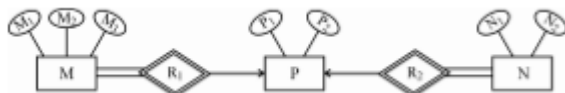
Q54. The essential difference between traps and interrupts is

- (A) traps are asynchronous and interrupts are synchronous with the program.
- (B) traps are synchronous and interrupts are asynchronous with the program.
- (C) traps are synchronous and interrupts are asynchronous with the I/O devices.

(D) None of these.

Ans: (B)

Q55. Consider the ER diagram:



The minimum number of tables required to represent M, N, P, R1, R2 is

- (A) 2
- (B) 3
- (C) 4
- (D) 5

Ans: (A)

Q56. Consider the following schemas:

Branch = (Branch-name, Assets, Branch-city)

Customer = (Customer-name, Bank name, Customer-city)

Borrow = (Branch-name, loan number, customer account-number)

Deposit = (Branch-name, Account number, Customer-name, Balance)

Using relational Algebra, the Query that finds customers who have balance more than 10,000 is

- (A) $\pi_{\text{customer-name}} (\sigma_{\text{balance} > 10000}(\text{Deposit}))$
- (B) $\sigma_{\text{customer-name}} (\sigma_{\text{balance} > 10000}(\text{Deposit}))$
- (C) $\pi_{\text{customer-name}} (\sigma_{\text{balance} > 10000}(\text{Borrow}))$
- (D) $\sigma_{\text{customer-name}} (\pi_{\text{balance} > 10000}(\text{Borrow}))$

Ans: (A)

Q57. Find the false statement:

- (A) The relationship construct known as the weak relationship type was defined by Dey, Storey & Barron (1999)
- (B) A weak relationship occurs when two relationship types are linked by either Event-Precedent sequence or Condition-Precedent sequence.
- (C) Conceptual model is not accurate representation of "Universe of interest".
- (D) Ternary, Quaternary and Quintary relationships are shown through a series of application scenario's and vignette's.

Ans: (C)

Q58. Consider the table Student (stuid, name, course, marks).

Which one of the following two queries is correct to find the highest marks student in course 5?

- Q.1. Select S.stuid
From student S
Where not exists
(select * from student e where
e course = '5' and e marks \geq s
marks)
- Q.2. Select s.stu.id
From student S
Where s - marks > any
(select distinct marks from
student S where s - course = 5)

- (A) Q. 1
- (B) Q. 2
- (C) Both Q. 1 and Q. 2
- (D) Neither Q. 1 nor Q. 2

Ans: (B)

Q59. Armstrong (1974) proposed systematic approach to derive functional dependencies. Match the following w.r.t. functional dependencies:

List-I		List-II	
a.	Decomposition rule	i.	If $X \rightarrow Y$ and $Z \rightarrow W$ then $\{X, Z\} \rightarrow \{Y, W\}$
b.	Union rule	ii.	If $X \rightarrow Y$ and $\{Y, W\} \rightarrow Z$ then $\{X, W\} \rightarrow Z$
c.	Composition rule	iii.	If $X \rightarrow Y$ and $X \rightarrow Z$ then $X \rightarrow \{Y, Z\}$
d.	Pseudo transitivity rule	iv.	If $X \rightarrow \{Y, Z\}$ then $X \rightarrow Y$ and $X \rightarrow Z$

Codes:

	a	b	c	d
(A)	iii	ii	iv	i
(B)	i	iii	iv	ii
(C)	ii	i	iii	iv
(D)	iv	iii	I	ii

Ans: (D)

Q60. Match the following:

List-I		List-II	
a.	Secondary Index	i.	Functional Dependency
b.	Nonprocedural Query Language	ii.	B-Tree
c.	Closure of set of Attributes	iii.	Relational Algebraic Operation
d.	Natural JOIN	iv.	Domain Calculus

Codes:

	a	b	C	d
(A)	i	ii	Iv	iii

(B)	ii	I	Iv	iii
(C)	i	iii	Iv	ii
(D)	ii	iv	I	iii

Ans: (D)

Q61. Which of the following is not true with respect to a trackball and/or spaceball?

- I. A trackball is a two dimensional positioning device while as a spaceball provides six degrees of freedom.
- II. Unlike the trackball a spaceball does not actually move.
- III. A trackball is a three dimensional positioning device while as a spaceball provides six degrees of freedom.

- (A) I & II
- (B) II & III
- (C) II only
- (D) III only

Ans: (D)

Q62. Which of the following statement(s) is (are) true?

- I. Two successive translations are additive.
- II. Two successive rotations are additive.
- III. Two successive scaling operations are multiplicative.

- (A) I and II
- (B) I and III
- (C) II and III
- (D) All the above

Ans: (D)

Q63. Given below are three basic rules:

- I. Squash and Stretch

II. Slow-in and Slow-out

III. To stage the action properly

These rules are applied in case of

- (A) Rendering
- (B) Morphing
- (C) Animation
- (D) All the above

Ans: (C)

Q64. Which of the following points lies on the same side as the origin, with reference to the line $3x + 7y = 2$?

- (A) (3, 0)
- (B) (1, 0)
- (C) (0.5, 0.5)
- (D) (0.5, 0)

Ans: (D)

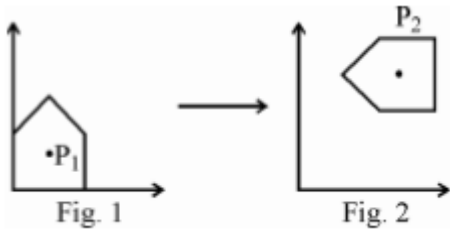
Q65. The transforming matrix required for conversion of CMY colour model to RGB colour model is given as:

- (A) $\begin{bmatrix} R \\ G \\ B \end{bmatrix} = \begin{bmatrix} C \\ M \\ Y \end{bmatrix} - \begin{bmatrix} 1 \\ 1 \\ 1 \end{bmatrix}$
- (B) $\begin{bmatrix} R \\ G \\ B \end{bmatrix} = \begin{bmatrix} C \\ M \\ Y \end{bmatrix} - \begin{bmatrix} 1 \\ 2 \\ 3 \end{bmatrix}$
- (C) $\begin{bmatrix} R \\ G \\ B \end{bmatrix} = \begin{bmatrix} 1 \\ 1 \\ 1 \end{bmatrix} - \begin{bmatrix} C \\ M \\ Y \end{bmatrix}$
- (D) $\begin{bmatrix} R \\ G \\ B \end{bmatrix} = \begin{bmatrix} C \\ M \\ Y \end{bmatrix} - \begin{bmatrix} 0.5 \\ 0.5 \\ 0.5 \end{bmatrix}$

Ans: (C)

Q66. What steps shall be required to rotate an object about the point P1 (as shown in Fig. 1) and its

placement such that what was at P2 (as shown in Fig. 2)?



- I. Translate P1 to origin
- II. Scale as required
- III. Rotate
- IV. Translate to the final position P2.

- (A) I, II and III
- (B) II, III and IV
- (C) I, III and IV
- (D) All of the above

Ans: (D)

Q67. In Unix, how do you check that two given strings a and b are equal?

- (A) test \$a -eq \$b
- (B) test \$a -equal \$b
- (C) test \$a = \$b
- (D) Sh -C test \$a = = \$b

Ans: (C)

Q68. In windows 2000 operating system all the processor-dependent code is isolated in a dynamic link library called

- (A) NTFS file system
- (B) Hardware abstraction layer
- (C) Microkernel
- (D) Process Manager

Ans: (B)

Q69. To place a sound into a word document, following feature of windows is used:

- (A) Clip board
- (B) Task switching
- (C) C Win App
- (D) OLE

Ans: (D)

Q70. Translation Look-aside Buffer (TLB) is

- (A) a cache-memory in which item to be searched is compared one-by-one with the keys.
- (B) a cache-memory in which item to be searched is compared with all the keys simultaneously.
- (C) an associative memory in which item to be searched is compared one-by-one with the keys.
- (D) an associative memory in which item to be searched is compared with all the keys simultaneously.

Ans: (D)

Q71. Simplest way of deadlock recovery is

- (A) Roll back
- (B) Preempt resource
- (C) Lock one of the processes
- (D) Kill one of the processes

Ans: (D)

Q72. The directory structure used in Unix file system is called

- (A) Hierarchical directory
- (B) Tree structured directory
- (C) Directed acyclic graph
- (D) Graph structured directory

Ans: (C)

Q73. Which statement is not true about process O in the Unix operating system?

- (A) Process O is called init process.
- (B) Process O is not created by fork system call.

(C) After forking process 1, process O becomes swapper process.

(D) Process O is a special process created when system boots.

Ans: (A)

Q74. Which of the following commands would return process_id of sleep command?

(A) Sleep 1 and echo \$?

(B) Sleep 1 and echo \$#

(C) Sleep 1 and echo \$x

(D) Sleep 1 and echo \$!

Ans: (D)

Q75. Possible thread states in Windows 2000 operating system include:

(A) Ready, running and waiting

(B) Ready, standby, running, waiting, transition and terminated

(C) Ready, running, waiting, transition and terminated

(D) Standby, running, transition and terminated

Ans: (B)

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