NVS 2017 Computer science Question Paper

1. Which of the following symbol is used to create a link to a named anchor in HTML?

A. &

B. @

C. #

D. $

2. Which of the following CSS tag is best suited to change the appearance of an entire section of the web page?

A. <H1>

B. <DIV>

C. <SPAN>

D. <P>

3. Observe the HTML code given below and identify the line that will be ignored and not displayed by the browser:

<HTML>

<TITLE>Browser Test</TITLE>

<BODY>

<I>Test</I>

<!--testing -->

<B>Website</B>

</BODY>

</HTML>

A. <TITLE>Browser Test</TITLE>

B. <B>Website</B>

C. <!--testing -->

D. <I>Test</I>

4. An element in an XML DTD having no content is known as.

A. unrestricted element

B. Container element

C. Empty element

D. Null element

5. Pick out the invalid element naming rule for an XML element from the following rules :

A. Names can start with a number or punctuation character.

B. Names can contain letters, numbers, hyphens, underscores and periods.

C. Names cannot contain spaces

D. Names must not start with the letters.

6. Choose the compulsory attribute of the XML declaration statement from the following attributes :

A. Version

B. Encoding

C. Standalone

D. Doctype

7. The element content model of a DTD uses the '+' symbol to indicate that the element.

A. Occurs one or multiple times

B. Occurs zero or multiple times

C. Occurs one or not at all

D. Occurs only once

8. Observe the given DTD:

<?XML version ="1.0"?>

<!DOCTYPE SITES[

<!ELEMENT SITES (SITES +)>

<!ELEMENT SITE (ADDRESS UTILITY)>

<!ELEMENT ADDRESS (#PCDATA)>

]>

Choose the statement that is true about the above DTD.

A. The SITE element is optional.

B. Element ADDRESS and UTILITY both are to be present in specified order.

C. Root element is SITE which in turn contains two sub-elements.

D. ADDRESS AND UTILITY elements are empty elements.

9. Identify which of the following is not a predefined internal entity in XML specification :

A. ' (to display the 'symbol)

B. & (to display the & symbol)

C.   (to display the 'symbol)

D. " (to display the "symbol)

10. IPv6 has _____ bit address.

A. 32

B. 64

C. 128

4. Variable

11. Identify the incorrect statement about XML parser :

A. A parser is a software program that checks the syntax used in an XML file.

B. A validating passer ensures that the XML document is well formed but not valid.

C. Validating passer checks syntax as well as compares the structure of the XML document .

D. Non-validating parser only checks for structure problems with the XML code.

12. In the _____ method, after the station finds the idle, it sends or refrains from sending based on probability.

A. Non-persistent

B. One-persistent

C. P-persistent

D. Non-validating

13. What is the main function of transport layer?

A. Node to node delivery

B. Synchronization

C. Updating and maintenance of routing tables.

D. Process to process message delivery.

14. Observe the two statement given below and then answer the following question :

ItemName=new Array ("Chromebook", "IPad", "Mobile";)

Which of the following statement is true about the two given statements?

A. Both statements have exactly the same effect.

B. Both statements are different as they declare different types of variables.

C. Both statements are different as one is only declaring while other is declaring and initializing .

D. Both statements are different as they declare arrays of different sizes.

15. Shreya is adding links to her school website. She wants that the link colour should change as soon as the visitor's mouse pointer is over the link and then the original colour of the link should be restored when the mouse points anywhere else on the page. which of the following two event handlers will be required for the script to achieve thi effect ?

A. onMouseDown and onMouseUp

B. onMouseIn and onMouseOut

C. onMouseOver and onMouseOut

D. onMouseOver and onMouseUp

16. Study the following three statements carefully :

Statement 1 : JavaScript support 3 primitive data types - integer, string and boolean.

Statement 2 : JavaScript support 2 composite data types - arrays and objects.

Statement 3 : JavaScript support 2 special data types - null and undefined.

Choose the option below that is absolutely correct about the above three statements.

A. Only statement 2 and statement 3 are true.

B. Only statement 1 and statement 3 are true.

C. Only statement 1 and statement 3 are true.

D. All the statements are true.

17. Study the code given below:

```
<HTML>
<HEAD>
<SCRIPT LANGUAGE = "JavaScript">
function start ()
{
alert ("Event Occured")
}
</SCRIPT></HEAD>
```

</BODY onLoad = "Start()">

<h1> Guess the event </H1>

</BODY></HTML>

How many times will the function Start () be called ?

A. Once every time the system starts.

B. Once every time the web page is refreshed.

C. Only once when the window is opened.

D. Will not be called as the event handler is wrong.

18. identify the statement that is equivalent to the given statement : document. white ("Hello! Welcome to JavaScript")

A. window .document.white ("Hello! Welcome to JavaScript")

B. body.document.white. ("Hello! Welcome to JavaScript")

C. location .document.white ("Hello! Welcome to JavaScript")

D. document.writeln ("Hello! Welcome to JavaScript")

19. Sankjukta created a smiley face in flash and then converted it into a symbol to be stored in the flash library. which of the following statements is false about this graphic symbol named "Smiley" ?

A. Simley is a stage level object.

B. Simley is a overley level object.

C. Many instances of this graphic can be created and used on stage.

D. This object will operate in sync with the timeline of the main movie.

20. What will be the output of the following script command ?

document.write (2+5+"8");

A. 258

B. Error

C. 78

D. 7

21. To delete unwanted parts of an image which are not required in the final output, one has to :

A. Blur unwanted parts

B. Change the canvas size to exclude parts

C. Use the crop tools

D. Use the sponge tool

22. The part of RAM in a computer to hold the graphics information for one frame consisting of colour values for every pixel on the screen is known as.

A. Pixel buffer

B. image buffer

C. Frame buffer

D. Video buffer

23. identify and frame the photoshop feature that is a set of instructions built into the program to apply special effects to pictures with options such as.

COMEIMAGE

A. Feathering

B. Filters

C. Channels

D. Layers

24. Which of the following is not a valid layer mode in flash ?

A. Hidden mode.

B. Outline mode

C. Current mode

D. Stack mode

25. Identify the feature/panel of flash interface which is the lower portion of the interface and has two views : graphical view and list view.

A. Property inspector

B. Tools panel

C. Scene Panel

D. Layers Panel

26. From the following statements pick out the incorrect statement with respect to shape tweening in flash:

A. Upto 26 shape hints can be added to the objects in a shape tween.

B. To shape tween a whole word, put each letter on a separate layer and create each tween separately.

C. In shape tweening, a blank keyframe is inserted in last frame because content is completely different from previous keyframe.

D. Shape hints create uneven and rough morphs.

27. Which of the following is NOT an advantage of star topology compared to other standard topology ?

A. Easy to connect new nodes or devices

B. Require less cable length

C. All nodes are directly connected to the server.

D. Isolation of faulty node is easy.

28. Distribution of flash movies may either be through _____ for viewing on the internet or it may be _____ into another file format.

A. Publishing, Exporting

B. Exporting, Publishing

C. Previewing, Exporting

D. Exporting, Previewing

29. In this switching technique entire data is sent as a complete unit from the sender Node and delivered to the recipient Node via a number of intermediate Nodes:

A. Message switching

B. Packet switching

C. Circuit switching

D. Data switching

30. Referential integrity controls relationship between

A. Operations in database

B. Instances of a class

C. tables in database

D Attributes in a table.

31. An electronic device used to connect different types of topologies having same protocol.

A. Repeater

B. Router

C. Bridge

D. Switch

32. Error detection at data link layer is achieved by.

A. Equalization

B. Bit stuffing

C. Hamming codes

D. Cyclic Redundancy code.

33. Which data communication method is used to transmit the data over a serial communication link in both directions at the same time ?'

A. Simplex

B. Half-duplex

C. Full -duplex

D. Four fire circuit

34. A Firewall is

A. Only a software

B. only a hardware

C. necessarily both software and hardware

D. a software with or without hardware

35.

1. It has much greater bandwidth' than other transmission media.

2. It allows for longer transmission distance.

3. It is immune to electromagnetic interference.

4. It is much thinner and lighter than the other cable media.

All of the above characteristics are attached to

A. Optical fiber .

B. Twisted pair cable

C. Coaxial cable

D. CAT 5/CAT 6 cable

36. Binary Equivalent of (BAD)16 is

A. 1111 1010 1101

B. 1011 1010 1101

C. 1011 1010 1111

D. 1011 1110 1101

37. Which of the following is used to execute CPU instruction ?

A. Personal Computer

B. Program Counter

C. Protection Check

D. Parameter Combination

38. Which of the following bus of a computer system is responsible for carrying information?

A. Databus

B. Address bus

C. Logical bus

D. Control bus

39. This is a smaller, faster memory which stores copies of the data from frequently used main memory locations.

A. Main memory

B. Cache memory

C. Semiconductor based memory

D. DRAM

40. In computers, this is the processing of program instructions by dividing them among multiple processors with the objective of running a program in less time

A. Multiprogramming

B. Parallel processing

C. Time sharing

D. Batch processing

41. A binary search tree whose,left subtree and right subtree differ in height by at most one is called.

A. Strictly binary tree

B. Red-black tree

C. AVL tree

D. Complete binary tree

42. Which cycle refers to the process where one instruction is fetched and executed?

A. Fetch cycle

B. Instruction cycle

C. Decode cycle

D. Execute cycle

43. This system software provides an interface to a hardware device, enabling the operating system to access that hardware.

A. Control Panel

B. Device Drive

C. Program installer

D. Program installer

44. Following is an example of an Operating System developed in India.

A. BeOS

B. BOSS

C. Haiku

D. OpenBSD

45. Which of the following is NOT an example of scheduling algorithms ?

A. First Come First Serve [FCFS] scheduling

B. Shortest Job First [SJF] Scheduling

C. Priority Scheduling

D. Random

46. Which of the following is non-linear data structure.

A. Stack

B. Queue

C. String

D. Tree

47. Which data structure is used in breadth-first search of a graph to store nodes ?

A. Array

B. Stack

C. Queue

D. Tree

48. A thread in Operating System is a

A. Task

B. Program

C. Process

D. light weight process

49. Which of the following Boolean Expression is illustrated in the truth table's column F?

X	Y	F
0	0	1
0	1	0
1	0	0
1	1	1

A. XY' + X

B. X'Y + XY'

C. XY + XY'

D. XY + X'Y'

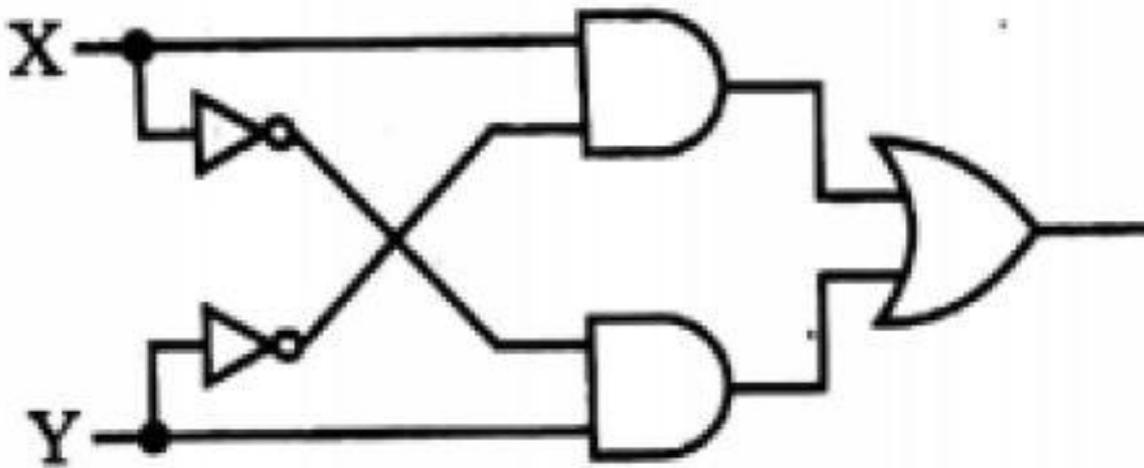50. Find missing term in the following Boolean Expression

X ⊖ ____ = 1

A. 1

B. X

C. X'

D. 0

51. Observe the following circuit and find which operation interprets it appropriately.

A. XOR

B. NOR

C. XNOR

D. NAND

52. Which Boolean law is represented below?

P + Q R = (P + Q) (P + R)

A. De Morgan's law

B. Associative law

C. Commutative law

D. Distributive law

53. Given two sorted lists of size m and n respectively. The number of comparisons needed in the worst case by the merge algorithm will be.

A. min (m, n)

B. max (m, n)

C. m+n-1

D. mn

54. Out Of the following, which cannot be used as an identifier in C++ ?

A. Name2

B. Total

C. Class

D. Derived

55. The operator used to access member functions of a class from its object is

A. *

B. : :

C. :

D. '

56. In this programming methodology, common functionalities are grouped together into separate independent units. The whole program is divided into several units which interact through procedure calls.

A. Random Programming

B. Modular Programming

C. .NET Programming

D. Object Oriented Programming

57. The following is a computing industry standard for the consistent encoding, representation and handling of text.

A. EBCDIC

B. Unicode

C. ASCII

D. QRcode

58. The following is the correct interpretation of Hierarchical Inheritance

A. one base class with one derived class

B. more than one generation of classes

C. one base class with more than one derived classes

D. more than one base classes with one derived class

59. The postfix expression for * + ab - cd is

A. abed+-*

B. ab +-cd *

C. ab +cd *-

D. ab +cd-*

60. Which of the following is 11Q1 a type of inheritance in C++ ?

A. Parallel Inheritance

B. Single Level Inheritance

C. Multilevel Inheritance

D. Multiple inheritance

61. Which of the following is the default visibility mode while defining a class in C++ ?

A. private

B. personal

C. protected

D. public

62. Select the correct output of the following code :

char * = "AMAZING"

s+=3;

cout-xsecendl;

A. DMAZING

B. D

C. ZING

D. Z

63. A complete binary tree with leaf nodes can have _____.nodes of degree 2.

A. $\log_2 n$

B. n-1

C. n

D. 2^n

64. Only the process executing the critical section is allowed to access die shared variable and all other processes should be prevented from doing so until the completion of the critical section This is known as•

A. Interprocess communication

B. Semaphore

C. D,adlook

D. Mutual lusion

65. We can also call a table in a relational database.

A. Record

B. Attribute

C. Tuple

D. Relation

66. Find the output of the following : C++code:

int *P, A[ ]=(20, 90, 70, 10};

P=A; A[2]+=10; P+=2;

cout«*P«endl;

A. 70

B. 80

C. 90

D. 10

67. A table has more than one attributes each of which identify a tuple uniquely. All such keys are known as :

A. Primary keys

B. Alternate keys

C. Candidate keys

D. Foreign keys

68. Belady's anomaly occurs in_____ page replacement algorithm.

A. LRU

B. Optimal

C. Circular FIFO

D. FIFO

69. Which of the following cannot be used as a front-end software along with a database ?

A. Visual basic

B. Visual C++

C. Power Builder

D. MS PowerPoint

70. DROP TABLE statement

A. deletes only the structure of the table.

B. deletes all constraints in a table

C. deletes data of table

D. deletes data as well as structure of table.

Question 71 – 75

CLUB

MNO	NAME	FEE	TYPE	DOJ
1001	ARUNA ZAIDI	150000	LIFE	30/JAN/08
1010	KANIKA SEN	5000	MONTHLY	12/JUN/05
1015	TARIK AZAAD	30000	ANNUAL	23/MAR/15
1003	RAVI THAKUR	5500	MONTHLY	14/APR/12
1002	MANAV SINGH	30000	ANNUAL	15/OCT/12
1012	GARGI JHA	30000	ANNUAL	05/DEC/05
1009	TANIK BHOLA	120000	LIFE	01/JAN/05
1008	BANTA GEORGE	1000	GUEST	16/SEP/16
1014	ALIYA DAGA	5000	MONTHLY	15/SEP/10

71. Based on table CLUB, which of the following SQL query will display earliest and latest DOJ under each TYPE?

A. SELECT MIN(DOJ), MAX(DOJ) FROM CLUB;

B. SELECT MIN(DOJ), MAX(DOJ) FROM CLUB GROUP BY TYPE;

C. SELECT MIN(DOJ), MAX(DOJ),TYPE FROM CLUB GROUP BY TYPE;

D. SELECT MIN(DOJ), MAX(DOJ), TYPE GROUP BY TYPE FROM CLUB;

72. Based on table CLUB, find out the most appropriate SQL statement from the following to display the total amount of FEE collected from monthly members till date :

A. SELECT SUM(MONTIIS_BETWEEN(SYSDATE, DOJ) * FEE)

FROM CLUB WHERE TYPE= "MONTHLY''

B. SELECT SUM(MONTH_BETWEEN (DOI,SYSDATE) * FEE)

FROM CLUB ;WHERE TYPE= "MONTHLY"

C. SELECT SUM(MONTH_BETWEEN (DOJ, SYSDATE) * FEE)

FROM CLUB WHERE TYPE= ''MONTHLY"

D. SELECT MONTHS_BETWEEN(SYSDATE, DOJ) • FEE

FROM CLUB WHERE TYPE= "MONTHLY''

73. Based on table CLUB, which of the following SQL statement will delete the information of those members, who are either ANNUAL members or those who are having DOJ on or after "01-JAN-2010".

A. DELETE FROM CLUB WHERE TYPE= "ANNUAL" AND DOJ > = "OI-JAN-10";

B. DELETE FROM CLUB WHERE TYPE= "ANNUAL" OR DOJ > "OI-JAN-10";

C. DELETE * FROM CLUB WHERE TYPE= "ANNUAL" OR DOJ > "OI-JAN-10";

D. DELETE FROM CLUB WHERE TYPE= "ANNUAL" OR DOJ > = "OI-JAN-10";

74. Based on table "CLUB", which SQL query will help us to know the number of "MONTHLY" members, who joined the club after "OI-JAN-07"

A. SELECT*, COUNT () FROM CLUB WHERE TYPE = "MONTHLY'' AND DOJ > = "OI-JAN-07";

B. SELECT FROM CLUB COUNT (*) WHERE TYPE = "MONTHLY" AND DOJ "OI-JAN-07";

C. SELECT COUNT (*) FROM CLUB WHERE TYPE = "MONTHLY" OR DOJ = "O 1- JAN-07"•;

D. SELECT COUNT (*) FROM CLUB WHERE TYPE = "MONTHLY" AND DOJ > "OI-JAN-0. 7"•;

75. Based on table CLUB, which of the following SQL command will display the output as given in the out putbox?

Images

A. SELECT SUBSTR (NAME, 2,3) FROM CLUB WHERE TYPE = "MONTHLY" OR TYPE= "ANNUAL";

B. SELECT SUBSTR (NAME, 2,3) FROM CLUB WHERE FEE > 5000 AND DOJ > = "OI• JAN-10";

C. SELECT SUBSTR (NAME, 2,3) FROM CLUB WHERE TYPE = "MONTIII.,Y" AND TYPE= ''ANNUAL'';

D. SELECT SUBSTR (NAME, 2,3) FROM CLUB WHERE FEE.> 5000 OR DOJ > = "OI-JAN-10";

76. To add sound and music on your webpage, you can either create a link to the sound file or you can embed the sound directly into the page. Keeping these facts in mind which of the following statements is false ?

A. The link method uses the <A> tag to link the current web page to the page where the sound file resides.

B. The embed method uses the <Embed> tag.

C. <Embed> method is more popular as it places the file on the page right where the tag is placed

D. The link method opens a small new window to start playing the file automatically without downloading.

77. Which of the following is not a valid value of the SCROLLING attribute of the <FRAME> tag ?

A. yes

B. No

C. Auto

D. None

78. Which is not the state of the process in OS?

A. vileged

B. Running

C. Ready

D. Blocked

79. Which of the following is mandatory attribute of <IMG> tag and <EMBED> tag ?

A. Border

B. HEIGHT

c. WIDTH

D. SRC

80. ROWSPAN attribute cannot be used with which of the following tag ?

A. <TR>

B. <TD>

C. <TH>

D. <TABLE>