

*Board of Departmental Examination, Himachal Pradesh*  
**April 2017**

**Paper # 3: HPPSC & Others - Computer (Written)**

**Time Allowed: 2 Hours**

**Marks: 75**

**Note:** Attempt all questions;

No Reference Book Allowed

Please tick (✓) the correct option(s):

1. Where do we include the user lists for Form authentication?
  - a) < credential>
  - b) < authorization>
  - c) < Identity>
  - d) < authentication>
2. Which of the following is used to cache multiple responses for a single web form based on HTTP POST parameter or query string?
  - a) VaryByParams
  - b) VaryByHeaders
  - c) SetCacheability
  - d) SetVaryByCustom
3. Which of the following authentication is best suited for a corporate network?
  - a) Windows
  - b) Form
  - c) User
  - d) All
4. Which of the following is faster and consume lesser memory?
  - a) SqlDataReader
  - b) Data Set
5. Which of the following is not the way to maintain state?
  - a) View state
  - b) Cookies
  - c) Hidden fields
  - d) Request Objects
6. Which of the following is not a member of ADODBCommand object?
  - a) ExecuteScalar
  - b) ExecuteStream
  - c) ExecuteReader
  - d) Open
7. Caching type supported by ASP.Net
  - a) Output Caching
  - b) DataCaching
  - c) Both
  - d) None
8. What class does the ASP.NET Web Form class inherit from by default?
  - a) System.Web.UI.Page
  - b) System.Web.UI.Form
  - c) System.Web.GUI.Page
  - d) System.Web.Form
9. Difference between Response.Write() and Response.Output.Write()?
  - a) Response.Output.Write() allows you to buffer output
  - b) Response.Output.Write() allows you to write formatted output
  - c) Response.Output.Write() allows you to flush output
  - d) Response.Output.Write() allows you to stream output
10. The first event triggers in an aspx page is?
  - a) Page\_Init()
  - b) Page\_Load()
  - c) Page\_Click ()
  - d) Page\_Prerender()
11. Web.config file is USED FOR:
  - a) Configures the time that the server-side codebehind module is called



- b) To store the global information and variable definitions for the application
  - c) To configure the web server
  - d) To configure the web browser.
12. Choose the form in which Postback occurs
- a) HTMLForms
  - b) WebForms
  - c) WinForms
  - d) Form
13. What is the property name of a GridView (or a DataGrid) that regulates the sorting?
- a) EnableSorting
  - b) DisacleSorting
  - c) AllowSorting
  - d) Sorting
14. Which one of the following control does not have any visible interface?
- a) DropdownLis
  - b) Data list
  - c) Datagrid
  - d) Repeater Control
15. Which of the following is the default authentication mode for IIS?
- a) Anonymous
  - b) Windows
  - c) Basic Authentication
  - d) None
16. How can Garbage Collection be forced in .NET?
- a) By using System.GC.Finalize()
  - b) By using System.GC.Collect()
  - c) By using System.GC.KeepAlive()
  - d) By using System.GC.Dispose()
17. Explain the significance of Server.MapPath
- a) Returns the Virtual Path of the web folder
  - b) Maps the specified virtual path to Physical path
  - c) Returns the physical file path that corresponds to virtual specified path
  - d) None
18. Name the ASP.NET object that is used to get information about the web servers
- a) The Application object
  - b) The Request object
  - c) The Response object
  - d) The Server object
19. Which of the following is true about AutoPostBack property of a server control?
- a) It causes the control to fire postback event
  - b) By default, this property is set to False
  - c) Both
  - d) None
20. Which one of the following is incorrect about ViewState?
- a) Viewstate is used to maintain or retain values on postback
  - b) Viewstate ensures security because it stores the data in encrypted format
  - c) If a ViewState of a certain control has to be disabled, then set EnableViewState="false".
  - d) Viewstate information automatically transfers from page to page
21. The dual of a Boolean expression is obtained by interchanging
- a) Boolean sums and Boolean products
  - b) Boolean sums and Boolean products or interchanging 0's and 1's
  - c) Boolean sums and Boolean products and interchanging 0's & 1's
  - d) Interchanging 0's and 1's
22. Given that  $(292)_{10} = (1204)_x$  in some number system x. The base x of that number system is
- a) 2
  - b) 8
  - c) 10
  - d) None of the above
23. The sum of products expansion for the function  $F(x, y, z) = (x + y)z'$  is given as
- a)  $x'y'z + xyz' + x'yz'$
  - b)  $xyz + xyz' + xy'z'$
  - c)  $xy'z' + x'y'z' + xyz'$



- d)  $xyz' + xy'z' + x'yz'$
24. How many edges are there in a forest of t-trees containing a total of n vertices ?
- $n+t$
  - $n-t$
  - $n*t$
  - nt
25. Which of the following statements are true ?
- A circuit that adds two bits, producing a sum bit and a carry bit is called half adder.
  - A circuit that adds two bits, producing a sum bit and a carry bit is called full adder.
  - A circuit that adds two bits and a carry bit producing a sum bit and a carry bit is called full adder.
  - A device that accepts the value of a Boolean variable as input and produces its complement is called an inverter.
- I & II
  - II & III
  - I, II, III
  - I, III & IV
26. Active X controls are Pentium binary programs that can be embedded in .....
- Word pages
  - URL pages
  - Script pages
  - Web pages
27. Match the following:
- |                                     |                  |
|-------------------------------------|------------------|
| <b>List-I</b>                       | <b>List - II</b> |
| a. Wireless Application Environment | i. HTTP          |
| b. Wireless Transaction Protocol    | ii. IP           |
| c. Wireless Datagram Protocol       | iii. Scripts     |
| d. Wireless                         | iv. UDP          |
- Codes:**
- |    |     |     |    |     |
|----|-----|-----|----|-----|
|    | a   | b   | c  | d   |
| a) | ii  | iv  | i  | iii |
| b) | iv  | iii | ii | i   |
| c) | iv  | iii | i  | ii  |
| d) | iii | i   | iv | ii  |
28. Which of the following is widely used inside the telephone system for long-haul data traffic?
- ISDN
  - ATM
  - Frame Relay
  - ISTN
29. The document standards for EDI were first developed by large business house during the 1970s and are now under the control of the following standard organisation:
- ISO
  - ANSI
  - ITU-T
  - IEEE
30. Electronic Data Interchange Software consists of the following four layers:
- Business application, Internal format conversion, Network translator, EDI envelope
  - Business application, Internal format conversion, EDI translator, EDI envelope
  - Application layer, Transport layer, EDI translator, EDI envelope
  - Application layer, Transport layer, IP layer, EDI envelope
31. The virtual address generated by a CPU is 32 bits. The Translation Look-aside Buffer (TLB) can hold total 64 page table entries and a 4-way set associative (i.e. with 4- cache lines in the set). The page size is 4 KB. The minimum size of TLB tag is
- 12 bits
  - 15 bits
  - 16 bits
  - 20 bits
32. How much space will be required to store the bit map of a 1.3 GB disk with 512 bytes block size ?
- 332.8 KB
  - 83.6 KB
  - 266.2 KB
  - 256.6 KB
33. Linux operating system uses
- Affinity Scheduling



- b) Fair Preemptive Scheduling
  - c) Hand Shaking
  - d) Highest Penalty Ratio Next
34. The employee salary should not be greater than Rs 2000. This is
- a) Integrity constraint
  - b) Referential constraint
  - c) Over-defined constraint
  - d) Feasible constraint
35. The SQL expression  
*select distinct T.branch\_name from branch T, branch S where T.assets > S.assets and S.branch\_city = "SHIMLA"*  
 finds the names of
- a) All branches that have greater assets than any branch located in SHIMLA
  - b) All branches that have greater assets than all branches located in SHIMLA
  - c) The branch that has the greatest asset in SHIMLA
  - d) any branch that has greater assets than any branch located in SHIMLA
36. Manager's salary details are hidden from the employee. This is
- a) Conceptual level data hiding
  - b) Physical level data hiding
  - c) External level data hiding
  - d) None of the above
37. Redundancy is dangerous as it is a potential threat to data
- a) Integrity
  - b) Consistency
  - c) Sufficiency
  - d) Both a and b
38. In E-R diagram ellipses represent
- a) Entity set
  - b) Attributes
  - c) Relationship among entity sets
  - d) Link between attributes and entity sets
39. In airline reservation system, the entities are date, flight number, place of departure, destination, type of plane and seats available. The primary key is
- a) Flight number
  - b) Flight number + place of departure
  - c) Flight number + date
  - d) Flight number + destination
40. The column of a table is referred to as the
- a) Tuple
  - b) Attribute
  - c) Entity
  - d) Degree
41. If every non-key attribute is functionally dependent on the primary key, then the relation will be in
- a) First normal form
  - b) Second normal form
  - c) Third normal form
  - d) Fourth normal form
42. A data model is a collection of conceptual tools for describing
- a) Data and data relationships
  - b) Data semantics and consistency constraints
  - c) Data, data relationship, data semantics and consistency constraints
  - d) None of the above
43. Relations produced from an E-R model will always be in
- a) First normal form
  - b) Second normal form
  - c) Third normal form
  - d) Fourth normal form
44. E-R modeling technique is a
- a) Top-down approach
  - b) Bottom-up approach
  - c) Left-right approach
  - d) None of the above
45. Assume transaction A holds a shared lock R. If transaction B also requests for a shared lock on R, it will



- a) Result in a deadlock situation
  - b) Immediately be granted
  - c) Immediately be rejected
  - d) Be granted as soon as it is released by A
46. Which of the following group functions ignore NULL values
- a) MAX
  - b) COUNT
  - c) SUM
  - d) All of the above
47. Table Employee has 10 records. It has a non-NULL SALARY column which is also UNIQUE. The SQL statement  
SELECT COUNT(\*) FROM EMPLOYEE WHERE SALARY > ANY (SELECT SALARY FROM EMPLOYEE)  
prints
- a) 10
  - b) 9
  - c) 5
  - d) 0
48. Which of the following SQL commands can be used to modify existing data in a database table?
- a) MODIFY
  - b) UPDATE
  - c) CHANGE
  - d) NEW
49. Let the statement  
SELECT \* FROM nameList;  
return 10 rows. The statement  
SELECT \* FROM nameList WHERE ROWNUM > 5;  
will return
- a) 4 rows
  - b) 5 rows
  - c) 6 rows
  - d) None of these
50. The SQL statement  
SELECT TRUNC(45.926, -2) FROM DUAL;  
a) is illegal  
b) Prints 45  
c) Prints 45.92  
d) Prints 0
51. The SELECT statement  
SELECT 'Hi' FROM DUAL  
WHERE NULL is NULL;  
outputs
- a) Hi
  - b) FALSE
  - c) TRUE
  - d) Nothing
52. The SELECT statement  
SELECT 'Hi' FROM DUAL WHERE NULL IN (NULL);  
outputs
- a) TRUE
  - b) FALSE
  - c) 'Hi'
  - d) Nothing
53. The FROM clause – EMPLOYEE LEFT OUTER JOIN DEPARTMENT
- a) Includes all employees not assigned to any department
  - b) Includes all departments having no employee
  - c) Includes only those employee who are assigned a department
  - d) None of these
54. Table Employee has 10 records. It has a non-NULL SALARY column which is also UNIQUE. The SQL statement  
SELECT COUNT(SALARY) FROM EMPLOYEE WHERE SALARY NOT IN (NULL);  
prints
- a) 10
  - b) 9
  - c) 5
  - d) 0



55. Choose the correct statements
- Column alias cannot be used in the ORDER BY clause
  - Column alias can be used in the ORDER BY clause
  - Column alias cannot be used in the WHERE clause
  - Both b and c
56. The SQL statement  
SELECT LPAD('abcd',10,'wert') FROM DUAL;  
prints
- wertweabcd
  - abcdwertwer
  - wertwertab
  - abwertwert
57. The SQL statement  
SELECT 'Hi' FROM DUAL WHERE NULL = NULL;  
outputs
- TRUE
  - FALSE
  - 'Hi'
  - Nothing
58. The SQL statement  
SELECT ROUND(45.926, -1) FROM DUAL;  
prints
- is illegal
  - Prints garbage
  - Prints 045.926
  - Prints 50
59. If a SQL statement  
SELECT NEXT\_DAY('01-SEP-95', 'FRIDAY') FROM DUAL;  
prints 08-SEP-95  
What will the SQL statement  
SELECT NEXT\_DAY('01-SEP-95', 'SATURDAY') FROM DUAL;  
prints
- 09-SEP-95
  - 02-SEP-95
  - 05-SEP-95
  - 06-SEP-95
60. NOT BETWEEN 10 AND 20
- Displays NULL values
  - Does not display NULL values
  - May display NULL values
  - None of these
61. Which of the following must be enclosed in double quotes?
- Dates
  - Column Alias
  - Strings
  - All of these
62. In SQL, 10/NULL will evaluate to
- FALSE
  - 1
  - NULL
  - 10
63. Almost all the DATE functions return a value of data type DATE, except
- MONTHS\_BETWEEN
  - ROUND
  - NEXT\_DAY
  - TRUNC
64. The SELECT statement  
SELECT LOWER('AbCd'), UPPER('AbCd'), INITCAP('AbCd eFgh') FROM DUAL;  
will print
- Abcd ABCD Abcd Efgh
  - Abcd ABCD ABCD EFGH
  - Abcd ABCD abcd efgh
  - Abcd ABCD aBCD eFGH



65. Which of the following combinations of wildcard characters has the same meaning as the wildcard character %?
- a) %%
  - b) \_%
  - c) %\_
  - d) \_ \_

66. 'Having' clause in SQL statement
- a) Checks individual records based on condition
  - b) Checks grouped records (aggregate function) based on condition
  - c) Checks both depending on location
  - d) None of the above

67. A database to qualify as complete relational database management system must satisfy

- a) 10 CODD rules
- b) 12 CODD rules
- c) 9 CODD rules
- d) 15 CODD rules

68. Which of the following is tool in design phase?

- a) Abstraction
- b) Refinement
- c) Information Hiding
- d) All of above

69. Software testing techniques are more effective if applied immediately after

- a) Requirement analysis
- b) Design
- c) Coding
- d) Integration

70. Black box testing is concerned with

- a) Input and output of program
- b) Internal statement of the program
- c) Both (a) and (b)
- d) None of the above

71. DFD, Data Flow Diagram is

- a) Testing tool
- b) Requirement specification tool
- c) Coding tool
- d) All of the above

72. Consider the following relation schema pertaining to a students database

Student: (rollno, name, address)

Enroll: (rollno, courseno, coursename)

Where the primary keys are shown underlined. The number of tuples in the Student and the Enroll tables are 120 and 8 respectively. What are the maximum and the minimum number of tuples that can be present in (Student \* Enroll), where \* denotes normal join?

- a) 8, 8
- b) 120, 8
- c) 960, 8
- d) 960, 120

73. Which of the form is considered adequate for relational database design?

- a) 2 NF
- b) 3 NF
- c) 4 NF
- d) BCNF

74. The concept of locking can be used to solve the problem of

- a) Lost update
- b) Uncommitted dependency
- c) Inconsistent data
- d) All of the above

75. Given relations R(w,x) and S(y,z), the result of  
SELECT DISTINCT w, x  
FROM R, S

is guaranteed to be same as R, if

- a) R has no duplicates and S is non-empty
- b) R and S have no duplicates
- c) S has no duplicates and R is non-empty
- d) R and S have the same number of tuples