Board of Departmental Examination, Himachal Pradesh
October 2016

Paper # 3: <u>HPPSC</u>-Computer
Other
Part-A (Theory)

Time Allowed: 2 Hours   **Marks: 75**

Note: Attempt all questions;   No Reference Book Allowed

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

1. In your ASP.NET application, the user requires the following URL to be captured and stored in the database. How do you capture the referring URL in asp.net
   a) Request.UrlReffer
   b) Request.UrlReffer.Url
   c) Request.Url
   d) RequestUrl

2. Which ASP property is used to identify a user
   a) ASP cookie
   b) Server object
   c) Application object
   d) Query String

3. Default1 has the link GO
   How can Default2.aspx get the color parameter?
   a) Request.QueryString("color")
   b) Response.Parameter("color")
   c) Request.Parameter("color")
   d) Get("color")

4. Your application uses two threads named T1 and T2. You need to modify the code to prevent the execution of T1until T2 completes execution. What should you do?
   a) Configure T1 to run at low priority
   b) Configure T2 to run at high priority
   c) Use a WaitCallback delegate to synchronize threads
   d) Call the sleep method of T1

5. Asp server scripts are surrounded by delimiters
   a) <% %>
   b) <&> <&>
   c) <script> </script>
   d) <%> <%>

6. Which method do you invoke on the Data Adapter to load your generated dataset
   a) DataList
   b) Fill()
   c) DataBind
   d) Load

7. Dim a as integer=10
   Dim b as integer=8
   Dim c as integer=6
   Dim Mycheck as Boolean

Contd

Select the condition which results in Mycheck to be true
a) Mycheck=a>b and c>b
b) Mycheck=b>a or c>b
c) Mycheck=a>b or c>b
d) Mycheck=b>a and c>b

8. What is the full form of DLL
a) Dynamic link library
b) Dynamic library link
c) Dynamically link library
d) Dynamically linking of library

9. How can you logout using Form authentication
a) FormsAuthenticate.LogOut()
b) FormsAuthenticate.SignOut()
c) Session.SignOut()
d) Session.LogOut()

10. How can you script your ASP code in Java Script
a) <%language="javascript"%>
b) <%@language="javascript"%>
c) Java Script is default scripting Language
d) None

11. Fill in the blanks:

C#	Details View	Eval	Repeater	Item Template
Control Parameter	**DataTextField**	VBScript	Datakey Name	Bind

i) _____ code (server or client) is found in a code behind class.
ii) _____ is the default scripting language used in ASP.NET.
iii) _____ is the fastest data control.
iv) _____ provides the ability to work with a single record or row from an associated data source.
v) _____ sets an array that contains the name of primary key fields for items to be displayed in the control.
vi) _____ is unidirectional (read only) data binding.
vii) _____ binds the value of a property of a control to a parameter object.
viii) _____ enables you to format the data items that the control displays.
ix) _____ is bidirectional (editable) data binding.
x) _____ property is needed on a Combo Box to set a column name, prior to setting the DataSource , to display data in the combo box

12. True or false:
1) All users of the same application shares one session object.
2) All users of the same application shares one application object.
3) Include files must have the file extension ".inc".
4) ASP.NET supports server-side includes and server side object tags.
5) AJAX can be used for interactive communication with database.
6) Viewstate values are saved in hidden fields within the aspx page.
7) Control state cannot be disabled.
8) Multiview is a data control.
9) ASP.NET applications runs without a web server.
10) ASP.NET is a major upgrade over ASP

13. Match the following

1 User control	a) automatic memory management technique.
2) Data reader	b) destructor used with VB.NET.
3) Regular Expression validator	c) provides information about a given directory.
4) Garbage collection	d) allows you to create, modify and delete directories and files.
5) ExecuteNonquery	e) executed after the webform loads.
6) System.IO	f) have no visible interface.
7) Prerender event	g) used for pattern matching.
8) Finalize	h) executes a transact SQL statement against the connection and returns the number of rows affected.
9) System.Data.Oledb	i) executed after any control event.
10) DirectoryInfo class	j) provides an open standard for accessing and manipulating all types of data.

14. When data and acknowledgement are sent in the same frame, this is called as
    a) Piggy packing
    b) Piggy backing
    c) Back packing
    d) Good packing

15. Encryption and Decryption is the responsibility of .... Layer.
    a) Physical
    b) Network
    c) Application
    d) Datalink

16. An analog signal carries 4 bits in each signal unit. If 1000 signal units are sent per second, then baud rate and bit rate of the signal are .... and ....
    a) 4000 bauds \ sec & 1000 bps
    b) 2000 bauds \ sec & 1000 bps
    c) 1000 bauds \ sec & 500 bps
    d) 1000 bauds \ sec & 4000 bps

17. The VLF and LF bauds use .... propagation for communication.
    a) Ground
    b) Sky
    c) Line of sight
    d) Space

18. Using the RSA public key crypto system, if p=13, q=31 and d=7, then the value of e is
    a) 101
    b) 105
    c) 103
    d) 107

19. FAN IN of a component A is defined as
    a) Number of components that can call or pass control to component A.
    b) Number of components that are called by component A.
    c) Number of components related to component A.
    d) Number of components dependent on component A

20. The relationship of data elements in a module is called
    a) Coupling
    b) Modularity

c) Cohesion

d) Granularity

21. Software Configuration Management is the discipline for systematically controlling
    a) the changes due to the evolution of work products as the project proceeds.
    b) the changes due to defects (bugs) being found and then fixed.
    c) the changes due to requirement changes
    d) all of the above

22. Which one of the following is not a step of requirement engineering ?
    a) Requirement elicitation
    b) Requirement analysts
    c) Requirement design
    d) Requirement documentation

23. Testing of software with actual data and in actual environment is called
    a) Alpha testing
    b) Beta testing
    c) Regression testing
    d) None of the above

24. The student marks should not be greater than 100. This is
    a) Integrity constraint
    b) Referential constraint
    c) Over-defined constraint
    d) Feasible constraint

25. GO BOTTOM and SKIP-3 commands are given one after another in a database file of 30 records. It shifts the control to
    a) 28th record
    b) 27th record
    c) 3rd record
    d) 4th record

26. An ER Model includes
        I. An ER diagram portraying entity types.
        II. Attributes for each entity type
        III. Relationships among entity types.
        IV. Semantic integrity constraints that reflects the business rules about data not captured in the ER diagram
    a) I, II, III & IV
    b) I&IV
    c) I, II & IV
    d) I & III

27. Based on the cardinality ratio and participation .... associated with a relationship type, choose either the Foreign Key Design, the Cross Referencing Design or Mutual Referencing Design.
    a) Entity
    b) Constraints
    c) Rules
    d) Keys

28. Data Integrity control uses ....
    a) Upper and lower limits on numeric data.
    b) Passwords to prohibit unauthorised access to files.
    c) Data dictionary to keep the data

d) Data dictionary to find last access of data

29. Which three are legal array declarations in Java program?
     1. int [] myScores [];
     2. char [] myChars;
     3. int [6] myScores;
     4. Dog myDogs [];
     5. Dog myDogs [7];
   a) 1, 2, 4
   b) 2, 4, 5
   c) 2, 3, 4
   d) All are correct

30. In Java, which one of the following will declare an array and initialize it with five numbers?
   a) Array a = new Array(5);
   b) int [] a = {23,22,21,20,19};
   c) int a [] = new int[5];
   d) int [5] array;

31. In Java, you want subclasses in any package to have access to members of a superclass. Which is the most restrictive access that accomplishes this objective?
   a) public
   b) private
   c) protected
   d) transient

32. In java, what is the prototype of the default constructor?
   a) Test( )
   b) Test(void)
   c) public Test( )
   d) public Test(void)

33. Which cause a compiler error?
   a) int[ ] scores = {3, 5, 7};
   b) int [ ][ ] scores = {2,7,6}, {9,3,45};
   c) String cats[ ] = {"Fluffy", "Spot", "Zeus"};
   d) boolean results[ ] = new boolean [] {true, false, true};
   e) Integer results[ ] = {new Integer(3), new Integer(5), new Integer(8)};

34. In Java
     switch(x)
     {
        default:
           System.out.println("Hello");
     }
     Which two are acceptable types for x?
       1. byte
       2. long
       3. char
       4. float
       5. Short
       6. Long
   a) 1 and 3
   b) 2 and 4
   c) 3 and 5
   d) 4 and 6

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35. In Java
```java
public void test(int x)
{
    int odd = 1;
    if(odd) /* Line 4 */
    {
        System.out.println("odd");
    }
    else
    {
        System.out.println("even");
    }
}
```
Which statement is true?
a) Compilation fails.
b) "odd" will always be output.
c) "even" will always be output.
d) "odd" will be output for odd values of x, and "even" for even values

36. What will be the output of the program?
```java
class PassS
{
    public static void main(String [] args)
    {
        PassS p = new PassS();
        p.start();
    }

    void start()
    {
        String s1 = "slip";
        String s2 = fix(s1);
        System.out.println(s1 + " " + s2);
    }

    String fix(String s1)
    {
        s1 = s1 + "stream";
        System.out.print(s1 + " ");
        return "stream";
    }
}
```
a) slip stream
b) slipstream stream
c) stream slip stream
d) slipstream slip stream

37. In Java, suppose that you would like to create an instance of a new Map that has an iteration order that is the same as the iteration order of an existing instance of a Map. Which concrete implementation of the Map interface should be used for the new instance?
a) TreeMap
b) HashMap
c) LinkedHashMap
d) The answer depends on the implementation of the existing instance

38. You need to store elements in a collection that guarantees that no duplicates are stored and all elements can be accessed in natural order. Which interface provides that capability?
    a) java.util.Map
    b) java.util.Set
    c) java.util.List
    d) java.util.Collection

39. Which of the following are Java reserved words?
    1. run
    2. import
    3. default
    4. implement
    a) 1 and 2
    b) 2 and 3
    c) 3 and 4
    d) 2 and 4

40. Database that contains table linked by common field is called a
    a) Relational database
    b) Centralized database
    c) Flat file database
    d) None of above

41. DBMS is:
    a) Set of programs to update the data
    b) Collection of data
    c) Set of programs to access the data
    d) All of the above

42. What term refers to a collection of related information?
    a) Record
    b) Database
    c) List
    d) Outline

43. A DBMS allows you to create and maintain a database, create reports, and develop application programs, select the best fit answer:
    a) Query language
    b) Database management approach
    c) DBBMS uses
    d) Database administrator

44. The key uniquely identifies each record in a table.
    a) primary key
    b) key word
    c) filed name
    d) All of above

45. Which data type allows alphanumeric characters and special symbols.
    a) Text
    b) Memo
    c) auto number
    d) None of the above

46. Which of the following database object hold data?
    a) Forms

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b) Reports
c) Queries
d) Tables

47. Which of the following store command to retrieve data from database?
    a) Forms
    b) Reports
    c) Queries
    d) Tables

48. Which of the following database object produces the final result to present?
    a) Forms
    b) Reports
    c) Queries
    d) Tables

49. Which of the following is a method to create a new table in MS Access?
    a) Create table in Design View
    b) Create Table using wizard
    c) Create Table by Entering data
    d) All of above

50. In MS Access, to create a new table, in which method you don't need to specify the field type and size?
    a) Create table in Design View
    b) Create Table using wizard
    c) Create Table by Entering data
    d) All of above

51. In MS Access, when creating a new table which method can be used to choose fields from standard databases and tables
    a) Create table in Design View
    b) Create Table using wizard
    c) Create Table by Entering data
    d) None of above

52. Which of the following is a problem of file management system?
    a) Lack of data independence
    b) data redundancy
    c) program dependence
    d) all of above

53. What is the language used by most of the DBMSs for helping their users to access data?
    a) High level language
    b) SQL
    c) Query Language
    d) 4GL

54. Which of the following hardware component is the most important to the operation of database management system?
    a) high resolution video display
    b) printer
    c) high speed, large capacity disk
    d) plotter

55. If a piece of data is stored in two places in the database, then
    a) storage space is wasted
    b) changing the data in one spot will cause data inconsistency
    c) it can be more easily accessed
    d) both a and b

56. An audit trail
    a) is used to make backup copies
    b) is the recorded history of operations performed on a file
    c) can be used to restore lost information
    d) none of the above

57. Which of the following fields in a student file can be used as a primary key?
    a) class
    b) Unique Identification Number
    c) GPA
    d) Major

58. Which of the following contains a complete record of all activity that affected the contents of a database during a certain period of time?
    a) report writer
    b) query language
    c) data manipulation language
    d) transaction log

59. Information hiding is to hide from user, details
    a) That are relevant to him
    b) That are not relevant to him
    c) That may be maliciously handled by him
    d) That are confidential

60. Which of following is correct sequence of SDLC
    a) Analysis, coding, design, testing and implementation
    b) Analysis, design, coding, implementation and testing
    c) Analysis, design, coding, testing and implementation
    d) Design, Analysis, coding, testing and implementation

61. Software testing techniques are more effective if applied immediately after
    a) Requirement analysis
    b) Design
    c) Coding
    d) Integration

62. 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

63. DFD, Data Flow Diagram is
    a) Testing tool
    b) Requirement specification tool
    c) Coding tool
    d) All of the above

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64. 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

65. Which of the form is considered adequate for relational database design?
   a) 2 NF
   b) 3 NF
   c) 4 NF
   d) BCNF

66. 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

67. 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

68. Which of the following statements is not true about XML Schemas:
   a) They are used to define the content and structure of data.
   b) They define a set of symbols and the relationships of those symbols.
   c) They are themselves XML documents.
   d) They have their own syntax.

69. With XML:
   a) views are not limited to one multi-valued path only.
   b) documents can automatically be generated from database data only.
   c) database data can automatically be extracted from XML documents only.
   d) With XML, all of the above are true

70. What is not true about XML?
   a) Web page display is the most important application of XML.
   b) With XML, there is a clear separation between document structure, content and materialization.
   c) XML is more powerful than HTML.
   d) XML documents have two sections

71. Which of the following statements is true concerning routines and triggers?
   a) Both consist of procedural code.
   b) Both have to be called to operate.
   c) Both run automatically.
   d) Both are stored in the database

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72. The following SQL is which type of join:
    SELECT CUSTOMER_T. CUSTOMER_ID, ORDER_T. CUSTOMER_ID, NAME, ORDER_ID
    FROM CUSTOMER_T,ORDER_T WHERE CUSTOMER_T. CUSTOMER_ID = ORDER_T.
    CUSTOMER_ID
    a) Equi-join
    b) Natural join
    c) Outer join
    d) Cartesian join

73. A UNION query is which of the following?
    a) Combines the output from no more than two queries and must include the same number of columns.
    b) Combines the output from no more than two queries and does not include the same number of columns.
    c) Combines the output from multiple queries and must include the same number of columns.
    d) Combines the output from multiple queries and does not include the same number of columns

74. Inheritance is which of the following?
    a) When a supertype entity inherits values of the subtype attribute
    b) When a subtype entity inherits values of the supertype attribute
    c) When a supertype entity inherits values of another supertype attribute
    d) When a subtype entity inherits values of another subtype attribute

75. Duplicate data often results in loss of data integrity because:
    a) the data formats may be inconsistent.
    b) data values may not agree.
    c) Both a & b.
    d) Neither a & b