1-……Occurs when data is written into a buffer (like array) past its end.
-SQL injection -Integer overflow - Buffer overflow - Missing initialization
2- Problems of Buffer overflow is
-Runtime Exception - Runtime attack -Integer overflow - both 1&2
3-……...is a technique for injecting SQL commands into user input such these are and directly executed by the data base.
-OS command injection -SQL injection -Null pointer - Missing initialization
4-Which of the following allows the attacker to perform malicious acts such deleting tables, dropping database and stealing data.
-OS command injection -Null pointer -SQL injection - Missing initialization
5-……. arises when user-specified input is directly handed over to the operating system for exection by the application without proper vetting.
-OS command injection -SQL injection -Null pointer - infinite loop
6-which of the following mistakes paves the way for an attacker to use clever constructs to execute malicious commands like delete
-SQL injection - infinite loops -OS command injection -Null pointer
7-……...occurs when you attempt to store a larger value into an integral type than will fit.
-Missing initialization -Buffer overflow -integer overflow - SQL injection
8-which of the following mistakes will end up unpredictable results.
-Missing initialization -Buffer overflow - SQL injection -integer overflow
9-……...it arises when accessing and array using an index that lies outside the bounds of the array.
-Null pointer - infinite loops - Improper Validation of an array index - infinite recursion.
10-When you access a location outside the program is valid data boundaries, you end up with a memory access error
-True -False Testing 1&2

11-
12-……..occurs when loop termination condition is never happening or takes too much time to happen
-infinite loops -infinite recursion -Null pointer -missing initialization
13-Some languages support…….. to minimize infinite recursion problem.
-Null pointer -tail recursion -SQL injection -buffer overflow
14- A pointer may have a null value before it is properly initialized or after the memory is freed.
-SQL injection -infinite recursion -Null pointer -missing initialization
15- The heap is a reference Type
-True - False
16-Which of the following mistakes occurs when local variables are declared within a function and cease to exit at the end of the function
-OS command injection -Null pointer -SQL injection - Missing initialization
17-Values 0, Nan, empty string, undefined, null are treated as false Boolean
-True -False
18-It is recommended for programmers to use equal () method than == operator
-True -False
19-Which of the following can be considered as Debugging process step?
-Spotting an error - finding the lines of code that caused the error - fixing the error -Testing if the error is gone - all of the above
20-Which of the following is Visual studio data inspection features?
-Watch windows -Autos and Locals - data Tips - Immediate window - all of the above
21-……allows you to inspect various states of your applications Testing 1&2

-Watch window - Data Tips -Immediate window -locals
22-……shows the local variables for the specific stack frame.
-Data Tips - watch window - local watch window - Autos
23-……. lets the debugger decide which variables to show in the window.
-Autos - Data Tips -Immediate window -locals
24-Which of the data inspection features the variables must be within scope of current execution
-Data Tips - watch window -Immediate window - Autos
25-……..process of automatic freeing objects no longer referenced by the program.
-missing initialization -Island of isolation -Memory leak - Garbage collection
26-which of the following is not advantages of Garbage collection?
-Free unreferenced objects - combat heap fragmentation - helps in ensuring program integrity - less control over scheduling of CPU time
27-……is a pile of memory space available of programmers to allocated and deallocate.
-Stack allocation - Heap allocation -both
28-……is a group of objects that referenced each other but they are not referenced by any active object in the application.
-missing initialization -Island of isolation -Memory leak - Garbage collection
29-……is a situation when there are objects present in the heap that are no longer used, but the garbage collector is unable to remove them from memory and, thus they are unnecessarily maintained
-missing initialization -Memory leak -Island of isolation - Garbage collection
30-Which of the following is a symptoms of a memory leak?
-severe performance degradation - Out of memory error heap error in the app - Random and strange app crashes - the app is occasionally running out of objects - all of the above
31-……modifying the code to make it run more efficiently. Testing 1&2

-Memory leak - Code tuning -Garbage collection -Profilers
32-……is a form of dynamic program analysis that measures the space, time, and the usage of particular instructions to aid program optimization.
-Code tuning -Garbage collection - Profiling -Unreachable objects
33-Instance methods are always slower than static methods.
-True -False
34-char [] the fastest way to build up a string?
-True -False
35-List<T> is always faster than simple array T []?
-True -False the opossite
36-Foreach loops are faster than for-loops?
-True -False for is faster
37-Using an Inappropriate data structure or algorithm is often the reason for a bottleneck?
-True -False
38-……can improve performance when appending strings.
-dictionary -StringBuiler -Array -Stack

1. We measure the efficacy of a software process indirectly.

a) T

b) F

2. propagation of errors from process activity to activity

a) Quality-related

b) Productivity-related

c) Defect removal efficiency

3. The number of components produced and their degree of reusability

a) Reuse data

b) Statistical SQA data

c) Productivity-related

4. used to minimize the development schedule by making the adjustments necessary to avoid delays and mitigate potential problems and risks
used to assess product quality on an ongoing basis and, when necessary, modify the technical approach to improve quality.

a) Process metrics

b) Project metrics

c) Product metrics

5. measures that indicate the effectiveness of the deliverables.

a) Inputs

b) Outputs

c) Results

6. Process metrics are collected across all projects and over long periods of time

a) T

b) F

7. Some flaw in a sw engineering work product that is uncovered before the sw is delivered to the end-user

a) Error

b) Defect

8. A flaw that is uncovered *after* delivery to the end-user

a) Error

b) Defect

9. Functionality, quality, complexity, etc. are types of _____measures

a) Direct measures

b) Indirect measures

10. Software Measurement Requires normalization of both size- and function-oriented metrics

a) T

b) F

11. Lines of Code (LOC) can be chosen as the normalization value

a) Size-Oriented Metrics

b) function-oriented metrics

c) Object-Oriented Metrics

12. LOC measures are programming language dependent

a) True

b) False

13. The most widely used function-oriented metric is the LEC 5

a) (FP)

b) Defects per KLOC

c) Errors per KLOC

14. Computation of the FP is based on characteristics of the software's information domain and complexity

a) T

b) F

15. The function point is programming language independent

a) T

b) F

16. Function-Oriented Metrics Based on *subjective* rather than *objective* data

a) T

b) F

17. Is defined by Number of Scenario scripts, *key* classes, *support* classes and Average number of support classes per key class

a) Object-Oriented Metrics

b) Function-Oriented Metrics

c) Use-Case Oriented Metrics

18. The no. of use-cases is directly proportional to the size of the application in LOC and to the no. of test cases

a) T

b) F

19. The use-case is dependent of programming language

a) T

b) F

20. The primary thrust at the project level is to measure errors and defects

a) T

b) F

21. Can be used at both the project and process level

a) Defect Removal Efficiency (DRE)

b) Metrics for Software Quality

c) Mean-time-to-change (MTTC)

22. Provides reference model of mature practices and helps identify the potential areas of improvement

Provides goal-level definition for and key attributes for specific processes

a) Capability Maturity Models (CMM)

b) Web Testing Issues

c) Web Page Functionality Test

23. CMM goal: Obtain control of the quality of the products provided by the software suppliers

a) T

b) F

24. CMM has Five maturity levels

1. Level 1: Initial
2. Level 2: Repeatable
3. Level 3: Defined
4. Level 4: Quantitatively Managed

5. Level 5: Optimizing

25. CMM Supports Improving the quality and success of an organizations processes for creating software

LEC 5 lec 1 slide 4

a) T

b) F

26. In CMM level_____ Software processes are in a black box and Planning and controls have no standards

a) Level 1: Initial

b) Level 2: Repeatable

c) Level 3: Defined

27. In CMM level _____ Processes are still black boxes, but with defined milestones and reviews

a) Level 2: Repeatable

b) Level 3: Defined

c) Level 4: Quantitatively Managed

I'm not sure check it again for any answer modification

28. In CMM level 3: Processes are documented and used across the entire organization and The boxes are now internally visible

a) T

b) F

29. In CMM level _____can identify weaknesses and strengths proactively in processes and continually improving range of processes capabilities

a) Level 3: Defined

b) Level 4: Quantitatively Managed

c) Level 5: Optimizing

30. Testing a web application is quite a bit more difficult than testing the same functionality in a Windows Desktop application

a) T

b) F

31. Web browsers don't provide clear visibility to what's happening on the page

a) T

b) F

32. Web Page Functionality Test

1. Check all the links
2. Check forms in all pages
3. Cookies testing
4. Test HTML and CSS
5. Database Testing

Sol 1, 2, 3, 4, 5 all are true

33. Test if any errors are shown while executing queries

a) Data validity testing

b) Data integrity testing

c) Check response time of queries

34. Maintained while creating, updating, or deleting data in database

a) Data integrity testing

b) Check response time of queries

35. A method of simulating the user's way of experience

a) Web Page Usability Test

b) Web Site Security Testing

c) Web Site Management Testing

36. A method of testing multiple browsers based on user requirements and The web page presentation depends on how well the components are used → web page compatibility testing

LEC 5

a) Testing web page compatibility

b) Content checking

c) Test for navigation

37. Test unauthorized access to secure pages should not be permitted and Check sessions are automatically killed after prolonged user inactivity

a) Security Testing

b) Performance Testing

c) Test Environment

38. Verifies web page responses as per expectations based on the environment

includes stress testing and load testing of the application

a) Performance Testing

b) Test Environment

c) Web Page Usability Test

39. It is preferred to Set up a test environment that is separate from your development and production environment

a) T

b) F

40. Testing a web application using different networks is a Performance Testing

a) T

b) F

41. An application's performance and the accessibility are based directly on the network used

a) T

b) F