1 The possibility of errors is maximum in which of the following phase of SDLC ?
(1) Design (2) Coding
(3) Specification (4) Installation and Maintenance

2 Cardinality in an Entity-Relationship diagram
(1) refers to the number of higher level entities that are used in the ER model
(2) is used to show the ratio of one entity in relationship to another entity
(3) is used to show the order of the relationships between two entities
(4) gives the count of the number of entities involved in a single relationship

3 The ISO Quality Assurance Standard that applies to Software Engineering is
(1) ISO 9000 (2) ISO 9001
(3) ISO 9002 (4) ISO 9003

4 Software engineering primarily aims on
(1) reliable software
(2) cost effective software
(3) reliable and cost effective software
(4) none of the above

5 Software feasibility is based on which of the following :
(1) Business and marketing concerns
(2) Scope. constraints, market
(3) Technology, finance, time, resources
(4) Technical process of the developers

6 The division of system into components, processes and sub system is called
(1) System Analysis (2) System Design
(3) Programming (4) Functional Decomposition

7 A turnkey project includes
(1) Hardware (2) Software
(3) Training (4) All the above

8 The worst type of coupling is
(1) Control coupling (2) Data coupling
(3) Content coupling (4) Stamp coupling

9 CASE Tool is
(1) Computer Aided Software Engineering
(2) Component Aided Software Engineering
(3) Constructive Aided Software Engineering
(4) Computer Analysis Software Engineering

10 Pseudocode can replace
(1) Flowcharts
(2) Structure charts
(3) Cause-effect graphs Decision tables
(4) None of these

11 Project Indicator enables a software project manager to
(1) Assess the status of ongoing project
(2) Track potential risks
(3) Uncover potential areas before they go critical
(4) All the above

12 Site for Alpha testing is
(1) Software Company (2) Installation Place
(3) Anywhere (4) None of the above

13 Cohesion and Coupling can be represented using
(1) Cause Effect Graph (2) Dependence Matrix
(3) SRS (4) Structure Charts

14 Black box testing is some time called ?
(1) Data Flow Testing (2) Behavioral testing
(3) Loop testing (4) Graph based testing

15 The most important feature of spiral model is
(1) Requirement analysis (2) Risk management
(3) Quality management (4) Configuration management

16 A COCOMO model is
(1) Common Cost Estimation Model
(2) Constructive Cost Estimation Model
(3) Complete Cost Estimation Model
(4) Comprehensive Cost Estimation Model

17 The term HIPO is
(1) Hierarchical Input Process Output
(2) System Analysis and Design Aid
(3) Documentation Technique
(4) All of the above

18 Key process areas of CMM level 4 are also classified by a process which is
(1) CMM level 2 (2) CMM level 3
(3) CMM level 5 (4) All of the above

19 Which is not a Software Life Cycle Model ?

(1) Spiral model (2) Waterfall model
(3) Prototyping model (4) Capability maturity model

20 By metadata we mean

(1) very large data (2) data about data
(3) data dictionary (4) meaningful data

21 A data dictionary has information about

(1) every data element in a data flow
(2) only key data element, in a data flow
(3) only important data elements in a data flow
(4) only numeric data elements in a data flow

22 The term parallel run refers to

(1) The same job run on two computers to test their speeds
(2) The processing of two different jobs initiated from two terminals
(3) The concurrent operations of existing system and the new system
(4) None of the above

23 Tracing of any input record or process chronologically that has been performed on a system is an

(1) Audit trail (2) Report generation
(3) Batch processing (4) Conversion

24 Good system design prevents data entry errors by

(i) Designing good forms with plenty of space to write in block capitals
(ii) By giving clear instructions to a user on how to fill a form
(iii) Reducing keystrokes of an operator
(iv) Designing good keyboard

(1) (i) (2) (i), (ii), (iv)
(3) (i), (ii) (4) (iii) and (iv)

25 In interactive data input a menu is used to

(1) enter new data
(2) add/delete data
(3) select one out of many alternatives often by a mouse click
(4) detect errors in data input

26 In a system flowchart, the manual data input is expressed by symbol of

(1) Online storage (2) Keyboard symbol for input
(3) Rectangle (4) None of the above

27 Decision tree uses
(1) Pictorial depiction of alternate conditions
(2) Nodes and branches
(3) Consequences of various depicted alternatives
(4) All the above

28 In interactive data input terminal commands are normally used to
(1) enter new data
(2) add/delete data
(3) select one out of many alternatives often by a mouse click
(4) detect errors in data input

29 A code is useful to represent a key field because
(1) it is a concise representation of the field
(2) it is usually done by all
(3) it is generally a good idea
(4) it is needed in database design

30 Modularity
(1) is a feature of all programming languages
(2) helps make large programmes more understandable
(3) both (1) and (2)
(4) none of these

31 Which of the following is a tool in design phase ?
(1) Abstraction (2) Refinement
(3) Information hiding (4) All of these

32 Top-down design does not require
(1) step wise refinement (2) loop invariants
(3) flow charting (4) modularity

33 In a decision table if there are 3 variables and 3 rules, it implies
(1) specifications may not be complete
(2) design could be faulty
(3) coding will be incorrect
(4) all of these

34 A structured program
(1) can be reduced to control structures
(2) is generally more complicated than nonstructured program
(3) can only be modified by the person who wrote it
(4) all of these

35 Use of recursion
(1) enhances logical clarity and reduces code size
(2) makes debugging easier
(3) reduces execution time
(4) makes software bug free

36 A desirable property of module is
(1) independency (2) low cohesiveness
(3) high coupling (4) multi-functional

37 The graph theoretic concept will be useful in software testing is
(1) Cyclomatic number (2) Hamiltonian circuit
(3) Euclidean cycle (4) None of these

38 When the ERASE command is used
(1) the file content is erased
(2) the file name is deleted from the directories on the disk
(3) both (1) and (2)
(4) none of these

39 Control structures include
(1) iteration (2) rendezvous statements
(3) exception statements (4) all of these

40 All programming languages
(1) are compatible with each other
(2) can be supported by any operating system
(3) have the same syntax
(4) none of these

41 TCP/IP is a :
(1) Network Hardware (2) Network Software
(3) Protocol (4) None of these

42 Which is the lowest layer of TCP/IP model ?
(1) Host to Host Layer (2) Network Access Layers
(3) Internet Layer (4) Application Layer

43 Which IEEE standard is developed for CSMA/CD ?
(1) IEEE 802.1 (2) IEEE 802.2
(3) IEEE 802.3 (4) IEEE 802.4

44 HTTP stands for
(1) Hyper Test Transfer Protocol
(2) High Tension Transmission Protocol
(3) Hyper-text Transfer Protocol
(4) Hyper Top Text Protocol

45 What loads and executes at client side in Internet ?
(1) Object (2) Class
(3) JSP (4) Applet

46 Keyword used for dynamic method resolution ?
(1) abstract (2) dynamic
(3) virtual (4) typeid

47 Class is
(1) Collection of objects
(2) Return type
(3) A parameter
(4) A template of object to be created

48 Which is the fastest port for data transfer ?
(1) USB (2) Serial
(3) Parallel (4) FireWire

49 Which IP address is reserved for loop back or local host ?
(1) 192.168.0.0 (2) 127.0.0.0
(3) 127.0.0.1 (4) None of these

50 The size of the IPv4 is :
(1) 16 Bits (2) 32 Bits
(3) 64 Bits (4) 128 Bits

51 Object oriented programming tends to achieve
(1) High coupling, Low cohesion
(2) High coupling, High cohesion
(3) Low coupling, High cohesion
(4) Low coupling, Low cohesion

52 Signature of a method specifies
(1) Authentication process
(2) Return type, name and number of arguments
(3) Inheritance
(4) About method body

53 Polymorphism is achieved using
(1) Method overloading (2) Method passing
(3) Aliasing (4) All of the above

54 A condition that is caused by run-time error in program is known as
(1) Syntax Error (2) Semantic Error
(3) Fault (4) Exception

55 Java applets are used to create_____ applications.
(1) Graphical (2) User interactive
(3) Both (1) and (2) (4) None of these

56 Which of the following is not a primitive data type?
(1) Boolean (2) byte
(3) string (4) double

57 Tool used to compile java code is
(1) java (2) javac
(3) jar (4) javadoc

58 Superclass of all classes in java
(1) Instance class (2) Super
(3) Object (4) Power

59 What common technique attempts to save time and energy by reducing redundant work in object-oriented programming ?
(1) Reduce lines of programming
(2) Reuse of code
(3) Reduce size of systems being developed
(4) Merging different systems together

60 What term is used to describe the internal representation of an object that is hidden from view outside the object's definition?
(1) Encapsulation (2) Expandable
(3) Polymorphism (4) Inheritance

61 What part of object-oriented technology defines superclass and subclass relationships?
(1) Inheritance (2) Scalability
(3) Encapsulation (4) Polymorphism

62 JVM is able to access class having main method without creating any object because
(1) main method is the first method to be declared
(2) that is its inherent property
(3) it makes explicit call to main method
(4) main method is declared as public and static

63 Unicode character set in java contains
(1) 20 bits (2) 32 bits
(3) 64 bits (4) 16 bits

64 Which of the statements is true in a protected derivation of a derived class from a base class ?

(1) Private members of the base class become protected members of the derived class

(2) Protected members of the base class become public members of the derived class

(3) Public members of the base class become protected members of the derived class

(4) Protected derivation does not affect private and protected members of the derived class

65 The keyword friend does not appear in

(1) The class allowing access to another class

(2) The class desiring access to another class

(3) The private section of a class

(4) The public section of a class

66 In which case is it mandatory to provide a destructor in a class ?

(1) Almost in every class

(2) Class for which two or more than two objects will be created

(3) Class for which copy constructor is defined

(4) Class whose objects will be created dynamically

67 Match the appropriate columns :

	Columns I		**Columns II**
a	Check style	I	declarations and documentation parser
b	JVM	II	debugger for java
c	Javadoc	III	coding standard
d	Jdb	IV	abstract computer for java programs

	a	b	c	d
(1)	I	II	III	IV
(2)	III	II	I	IV
(3)	IV	III	II	I
(4)	III	IV	I	II

68 In a switch block, each case statement is terminated by

(1) goto (2) continue

(3) exit() (4) break

69 Maximum number of template arguments in a function template is

(1) One (2) Two

(3) Three (4) Many

70 Which of the following is example of encapsulation ?

(1) Steering wheel of the car (2) Car

(3) Color of the car (4) Music system of the car

71 What is the difference between virtual functions and pure virtual functions ?
(1) A virtual function must have a definition in the class in which it is declared. A pure virtual function does not provide a definition.
(2) A virtual function does not provide a definition. A pure virtual function must have a definition in the class in which it is declared.
(3) Both are same
(4) None of these

72 An unconditional control structure is
(1) do-while (2) if
(3) goto (4) switch-case

73 What is NOT true about interfaces ?
(1) Interfaces can be instantiated
(2) There are no method bodies in interfaces
(3) An interface is a reference type
(4) Interfaces can be extended by other interfaces

74 Which statements about the C# language are true ?
(1) C# supports both procedural and object-oriented programming.
(2) C# is only a procedural language.
(3) C# is only an object-oriented.
(4) None of the above

75 _____ is a blueprint or prototype that defines the variables and the methods common to all objects of a certain kind.
Select the best word to complete this sentence.
(1) Class (2) Inheritance
(3) Polymorphism (4) Aggregation

76 Given

```
class A {
int a;
int subtract(int a) {
\\a?
```

Which ke word is used to address the conflict occurring between instance variable ' ' and parameter(1) ?
(1) supe: (2) that
(3) inline (4) this

77 In Java, 'new' keyword is used to
(1) Allocate memory corresponding to object
(2) Create a new class variable
(3) Create a new instance variable
(4) Calling default constructor

78 What is garbage collection in the context of Java?
(1) The operating system periodically deletes all of the java files available on the system.
(2) Any package imported in a program and not used is automatically deleted.
(3) When all references to an object are gone, the memory used by the object is automatically reclaimed.
(4) The JVM checks the output of any Java program and deletes anything that doesn't make sense.

79 Everything needs to be incorporated in classes in Java. So primitive variables (int, float) can be directly defined because
(1) it is explicit
(2) of Wrapper Classes
(3) of Inner classes
(4) All of these

80 int occupies_____bytes in java.
(1) 2
(2) 4
(3) 8
(4) 10

81 Which of these field declarations are legal within the body of an interface?
(1) private final static int answer = 42
(2) public static int answer = 42
(3) final static answer = 42
(4) int answer

82 A package is a collection of
(1) Classes
(2) Interfaces
(3) Classes and interfaces
(4) Editing tools and interfaces

83 << is a
(1) Special operator
(2) Arithmetic operator
(3) Bitwise operator
(4) Conditional operator

84 Which of the following variable declarations would NOT compile in a java program ?
(1) int var;
(2) int VAR;
(3) int 1_var;.
(4) int var_1

85 All exception types are subclasses of the built-in class
(1) Exception
(2) RuntimeException
(3) Throwable
(4) None of the above

86 Autoboxing is the term used for
(1) Automatic conversion of primitive value to wrapper object
(2) Automatic conversion of wrapper object to primitive value
(3) Wrapping a variable in class
(4) Packing a class in package

87 Which of these classes provide methods for writing binary representations of Java primitive values

(1) DataOutputStream (2) FileOutputStream
(3) ObjectOutputStream (4) PrintStream

88 How many methods are defined in the Serializable interface ?

(1) One (2) Two
(3) None (4) Four

89 What is byte code in the context of Java?

(1) The type of code generated by a Java compiler.
(2) The type of code generated by a Java Virtual Machine.
(3) It is another name for a Java source file.
(4) It is the code written within the instance methods of a class.

90 Which of the following JSP variables are not available within a JSP expression ?
Select the one correct answer.

(1) out (2) session
(3) request (4) httpsession

91 Which of the following is incorrect ?

(1) Private variable will only be accessible in class
(2) Protected can be accessible in non sub-class of another package
(3) Protected member is accessible in sub-class of another package
(4) Default can be used in another class of same package

92 Which expression will extract the substring "cde" given the following declaration String str = "abcdef"

(1) str.substring(2,2) (2) str.substring(2,3)
(3) str.substring(2,4) (4) str.substring(2,5)

93 Which of the following is not true about Applet class ?

(1) Package java.awt contains some superclass of applet
(2) It can be viewed in browser
(3) Using applet we cannot process graphics
(4) Event handling can be used in applet

94 Which of the following statements about Generics is correct ?

(1) Generics are typed subclasses of the classes from the Collections framework.
(2) Generics are used to parameterize the collections in order to allow for static type checking.
(3) Generics can be used to perform type checking of the objects in a collection at runtime.
(4) Generics can be used to iterate over a complete collection in an easy way, using the 'enhanced for' loop.

95 Which of the following define the rules for Net Languages?
(1) GAC (2) CLS
(3) CLI (4) CLR

96 To get an object of the Print Writer class, we use the get Writer( ) method of the _____ class.
(1) HttpServletRequest (2) HttpServletResponse
(3) SessionContext (4) HupSession

97 Which of the following is faster and consume lesser memory?
(1) SQLDataReader (2) Data Set
(3) Both (1) and (2) (4) None

98 Which of the following authentications is best suited for a corporate network ?
(1) Windows (2) Form
(3) User (4) All

99 An example of a Network layer is
(1) Internet Protocol (IP) – ARPANET
(2) X.25 Packet Level Protocol (PLP) – ISO
(3) Source routing and domain naming – USENET
(4) All of these

100 ICMP (Internet Control Massage Protocol) is :
(1) A Protocol that handles error and control messages
(2) A Protocol used to monitor computers
(3) Both (1) and (2)
(4) None of these

101 Which is a reserved word in the Java programming language?
(1) method (2) native
(3) subedar (4) reference

102 Which is valid declaration of a float ?
(1) float f = 1F; (2) float f = 1.0;
(3) float f ="1"; (4) float f = 1.0d;

103 What is numerical range of char ?
(1) 0 to 32767 (2) 0 to 65535
(3) –256 to 255 (4) –32768 to 32767

104 Functions and procedures are :
(1) not useful in designing computer systems
(2) old fashioned and they are not useful
(3) useful in designing computer systems
(4) have side effects which require special care if they are used as subsystems

105 By polymorphism of a subsystem we mean
(1) it should be reusable
(2) it should have polymorphic data types
(3) it should accept generic commands and interpret appropriately
(4) it should morph polygons

106 In UML diagram of a class
(1) state of object can not be represented
(2) state is irrelant
(3) state is represented as an attribute
(4) state is represented as a result of an operation

107 A query operation on a object
(1) has side effects (2) has no side effects
(3) changes the state of an object (4) is not allowed

108 An exception thrown from outside try block will
(1) call function return (2) be ignored
(3) hang the machine (4) call function terminate

109 An exception is caused by
(1) A hardware problem
(2) A problem in the operating system
(3) A run time error
(4) A syntax error

110 In object oriented design
(1) operations and methods are identical
(2) methods specify algorithm whereas operations only state what is to be done
(3) methods do not change values of attributes
(4) methods and constructor are same

111 By encapsulation in object oriented modeling we mean
(1) encapsulating data and programs
(2) hiding attributes of an object from users
(3) hiding operations on object from users
(4) hiding implementation details of methods from users of objects

112 Inheritance in object oriented modeling can be used to
(1) generalize classes (2) specialize classes
(3) generalize and specialize classes (4) create new classes

113 By polymorphism in object oriented modeling we mean
(1) the ability to manipulate objects of different distinct classes
(2) the ability to manipulate objects of different distinct classes knowing only their common properties
(3) use of polymorphic operations
(4) use of similar operations to do similar things

114 Which is not an attribute of cookie property ?
(1) path (2) host
(3) secure (4) domain

115 Overloading the function operator
(1) requires a class with an overloaded operator
(2) requires a class with an overloaded( ) operator
(3) allow you to create objects that act syntactically like functions
(4) usually make use of a constructor that takes arguments

116 Run time polymorphism is achieved by .
(1) friend function (2) virtual function
(3) operator overloading (4) function overloading

117 The members of a class, by default are
(1) public (2) protected
(3) private (4) mandatory to specify

118 A copy constructor takes
(1) no argument (2) one argument
(3) two arguments (4) arbitrary no. of arguments

119 A pointer is
(1) A keyword used to create variables
(2) A variable that stores address of an instruction
(3) A variable that stores address of other variable
(4) All of the above

120 In visual programming, the icons are the _____ image of an object.
(1) physical (2) logical
(3) both (1) and (2) (4) none of these

PROGRAMMER EXAM : 2013 : ANSWER KEY : PAPER -II

QUESTION	ANSWER	QUESTION	ANSWER	QUESTION	ANSWER
1.	DELETE	41.	3	81.	4
2.	4	42.	2	82.	3
3.	1	43.	3	83.	3
4.	3	44.	3	84.	3
5.	3	45.	4	85.	3
6.	4	46.	DELETE	86.	1
7.	4	47.	4	87.	1
8.	3	48.	4	88.	3
9.	1	49.	3	89.	1
10.	1	50.	2	90.	4
11.	4	51.	3	91.	2
12.	1	52.	2	92.	4
13.	2	53.	1	93.	1
14.	2	54.	4	94.	2
15.	2	55.	3	95.	2
16.	2	56.	3	96.	2
17.	4	57.	2	97.	1
18.	3	58.	3	98.	2
19.	4	59.	2	99.	4
20.	2	60.	1	100.	1
21.	1	61.	1	101.	2
22.	3	62.	4	102.	1
23.	1	63.	4	103.	2
24.	3	64.	3	104.	4
25.	3	65.	DELETE	105.	3
26.	2	66.	4	106.	3
27.	4	67.	4	107.	2
28.	2	68.	4	108.	4
29.	1	69.	4	109.	3
30.	2	70.	2	110.	2
31.	4	71.	1	111.	4
32.	3	72.	3	112.	3
33.	1	73.	1	113.	2
34.	1	74.	1	114.	2
35.	1	75.	1	115.	1
36.	1	76.	4	116.	2
37.	1	77.	1	117.	3
38.	2	78.	3	118.	2
39.	4	79.	2	119.	3
40.	4	80.	2	120.	3