



INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

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ELECTRONICS AND COMMUNICATION ENGINEERING

DEFINITIONS AND TERMINOLOGY

Course Name	:	JAVA PROGRAMMING
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Course Faculty	:	Mr. G Chandra Sekhar, Assistant Professor

OBJECTIVES

I	To help students to consider in depth the terminology and nomenclature used in the syllabus.
II	To focus on the meaning of new words / terminology/nomenclature

DEFINITIONS AND TERMINOLOGY QUESTION BANK

S. No	QUESTION	ANSWER	Blooms Taxonomy Level	CO	CLO	CLO Code
UNIT - I						
1	Define an object?	An instance of a class is called object. The object has state and behavior. Whenever the JVM reads the “new()” keyword then it will create an instance of that class.	Remember	CO1	CLO 01	ACS552.01
2	List features of java?	Object-oriented Inheritance Encapsulation Polymorphism Abstraction Platform independent High Performance Multi-threaded	Remember	CO1	CLO 01	ACS552.01
3	What is the syntax of if statement?	The syntax of if statement is: if (testExpression) { // statement(s) }	Understand	CO1	CLO02	ACS552.02
4	What is Syntax of switch Statement?	switch (n) { se 1: // code to be executed if n = 1; break; se 2: // code to be executed if n = 2; break; default: // code to be executed if n doesn't match any cases }	Remember	CO1	CLO03	ACS552.03
4	Define break statement?	Break Statement is loop control statement which is used to terminate the loop. As soon as the break statement is encountered	Remember	CO1	CLO03	ACS552.03

S No	QUESTION	ANSWER	Blooms Taxonomy Level	CO	CLO	CLO Code
		from within a loop, the loop iterations stops there and control returns from the loop immediately to the first statement after the loop.				
5	What are Integer Constants?	Integer constants are whole numbers without any fractional part. It must have at least one digit and may contain either + or – sign.	Remember	CO1	CLO03	ACS552.03
6	What is the syntax of if statement?	The syntax of if statement is: if (testExpression) { // statement(s) }	Understand	CO1	CLO03	ACS552.03
7	What is Explicit or Narrowing type conversion?	Changes a value to a type with a shorter range. Some data may get lost. target-type specifies the desired type to convert the specified value.	Remember	CO1	CLO 03	ACS552.03
8	Define an Array?	An array is a collection of similar type of elements that have a contiguous memory location.	Remember	CO1	CLO 03	ACS552.03
9	What is a Data type?	A data type, in programming, is a classification that specifies which type of value a variable has and what type of mathematical, relational or logical operations can be applied to it without causing an error.	Remember	CO1	CLO 03	ACS552.03
10	List benefits of inheritance?	A code can be used again and again Inheritance in Java enhances the properties of the class, which means that property of the parent class will automatically be inherited by the base class. It can define more specialized classes by adding new details.	Remember	CO1	CLO 05	ACS552.05
12	Why java is simple?	Java was designed to be easy for the professional programmer to learn and use effectively. Java inherits the C/C++ syntax and many of the object-oriented features of C++	Remember	CO1	CLO 02	ACS552.02
13	What is Truncation of Java?	Floating-point value assigned to an integer type.	Remember	CO1	CLO 02	ACS552.02
14	Why java is Interpreted and High Performance language?	Java enables the creation of cross-platform programs by compiling into an intermediate representation called Java byte code. This code can be executed on any system that implements the Java Virtual Machine	Remember	CO1	CLO 02	ACS552.02

S No	QUESTION	ANSWER	Blooms Level	CO	CLO	CLO Code
15	Define parameter passing?	There is only call by value in java, not call by reference. If we call a method passing a value, it is known as call by value. The changes being done in the called method, is not affected in the calling method.	Remember	CO1	CLO 04	ACS552.04
16	What is java?	Java is a high-level programming language and is platform independent. It is a collection of objects.	Remember	CO1	CLO 01	ACS552.01
17	Define programming language?	A programming language is a formal language, which comprises a set of instructions used to produce various kinds of output. Programming languages are used in computer programming to create programs that implement specific algorithms	Remember	CO1	CLO 01	ACS552.01
18	Why java is Robust?	Java programs are portable across many Operating systems.	Remember	CO1	CLO 02	ACS552.02
19	Why java is Distributed?	Java is designed for the distributed environment of the Internet because it handles TCP/IP protocols. Uses RMI method enables a program to invoke methods across a network	Remember	CO1	CLO 02	ACS552.02
20	Define recursion?	Recursion is the process of defining a method in terms of itself, that is a method that calls itself.	Remember	CO1	CLO 02	ACS552.02
21	Define Encapsulation?	Encapsulation in Java is a mechanism of wrapping the data (variables) and code acting on the data (methods) together as a single unit. In encapsulation, the variables of a class will be hidden from other classes, and can be accessed only through the methods of their current class. Therefore, it is also known as data hiding.	Remember	CO1	CLO 02	ACS552.02
22	List arithmetic operators?	the arithmetic operators are: + Addition - Subtraction (also unary minus) * Multiplication / Division % Modulus ++ Increment += Addition assignment -= Subtraction assignment *= Multiplication assignment	Remember	CO1	CLO 03	ACS552.03

S No	QUESTION	ANSWER	Blooms Level	CO1	CLO	CLO Code
		/= Division assignment %= Modulus assignment -- Decrement				
23	What are Real constants?	The numbers having fractional parts are called real or floating point constants. These may be represented in one of the two forms called fractional form or the exponent form and may also have either + or – sign preceding it.	Remember	CO1	CLO 03	ACS552.03
24	What is JVM?	A Java Virtual Machine is a runtime environment required for execution of a Java application. Every Java application runs inside a runtime instance of some concrete implementation of abstract specifications of JVM. It is JVM which is crux of 'platform independent' nature of the language.	Remember	CO1	CLO 02	ACS552.02
25	Define Local Variable	A variable declared inside the body of the method is called local variable.	Remember	CO1	CLO 02	ACS552.02
26	What is an Operator?	An operator, in computer programming, is a symbol that usually represents an action or process. These symbols were adapted from mathematics and logic. An operator is capable of manipulating a certain value or operand.	Remember	CO1	CLO 03	ACS552.03
27	What is the syntax of if else statement?	The syntax of if..else statement is: <pre> if (testExpression) { // statement(s) inside the body of if } else { // statement(s) inside the body of else} </pre>	Understand	CO1	CLO 03	ACS552.03
28	Define constructor?	Constructor is a special method provided in OOP language for creating and initializing an object. In java, the role of a constructor is only to initialize an object and new key role is creating an object.	Remember	CO1	CLO 03	ACS552.03
29	What is syntax of for loop?	<pre> for (init; condition; increment) { statement(s); } </pre>	Remember	CO1	CLO 03	ACS552.03
30	What is continue statement?	The continue statement in java programming works somewhat like the break statement. Instead of forcing termination, it forces the	Remember	CO1	CLO 03	ACS552.03

S No	QUESTION	ANSWER	Blooms Level	CO	CLO	CLO Code
		next iteration of the loop to take place, skipping any code in between.				
31	Define Procedural oriented language	A procedural language is a type of computer programming language that specifies a series of well-structured steps and procedures within its programming context to compose a program. It contains a systematic order of statements, functions and commands to complete a computational task or program	Remember	CO1	CLO1	ACS552.01
32	What is Polymorphism?	Polymorphism means many forms. A single object can refer the super class or sub-class depending on the reference type which is called polymorphism.	Remember	CO1	CLO3	ACS552.03
33	What are oops concepts?	<ul style="list-style-type: none"> • Inheritance • Encapsulation • Polymorphism • Abstraction Class/object	Remember	CO1	CLO8	ACS552.08
34	What is data abstraction?	Abstraction is a process of hiding the implementation details from the user. Only the functionality will be provided to the user. In Java, abstraction is achieved using abstract classes and interfaces.	Remember	CO1	CLO3	ACS552.03
35	Define multithread	A thread is a lightweight sub-process, the smallest unit of processing Multithreading in java is a process of executing multiple threads simultaneously	Remember	CO1	CLO3	ACS552.03
36	Why java is dynamic.	Java programs carry with them substantial amounts of run-time type information that is used to verify and resolve accesses to objects at run time. This makes it possible to dynamically link code in a safe and expedient manner.	Remember	CO1	CLO1	ACS552.01
37	List the type conversions	There are two type conversions Automatic or widening type conversion, Explicit or narrowing type conversion.	Remember	CO1	CLO4	ACS552.04
38	Define Instance Variable	A variable declared inside the class but outside the body of the method, is called instance variable.	Remember	CO1	CLO4	ACS552.04
39	List Bitwise Operators	Bitwise operators are ~ Bitwise unary NOT & Bitwise AND Bitwise OR	Remember	CO1	CLO2	ACS552.02

S No	QUESTION	ANSWER	Blooms Level	CO	CLO	CLO Code
		^ Bitwise exclusive OR >> Shift right >>> Shift right zero fill << Shift left &= Bitwise AND assignment = Bitwise OR assignment ^= Bitwise exclusive OR assignment >>= Shift right assignment >>>= Shift right zero fill assignment <<= Shift left assignment		CO1		
40	What is an Identifier?	Identifiers are used as the general terminology for the names of variables, functions and arrays.	Remember	CO1	CLO 2	ACS552.02
41	Define variable?	A variable is a container which holds the value while the java program is executed. A variable is assigned with a datatype. Variable is a name of memory location. There are three types of variables in java: local, instance and static. There are two types of data types in java: primitive and non-primitive.	Remember	CO1	CLO4	ACS552.04
42	Define object – oriented programming?	Object-oriented programming (OOP) is a programming language model organized around objects rather than "actions" and data rather than logic	Remember	CO1	CLO1	ACS552.01
43	Why java is architecture-neutral ?	the compiler will generate an architecture-neutral object file meaning that compiled Java code (bytecode) can run on many processors given the presence of a Java runtime. For portable it means there are no implementation-dependent aspects of the specification	Remember	CO1	CLO1	ACS552.01
44	What is Automatic or widening type conversion?	Changes a value to a type with a larger range Widening conversion takes place when two data types are automatically converted. This happens when: <ul style="list-style-type: none"> • The two data types are compatible. • When we assign value of a smaller data type to a bigger data type 	Remember	CO1	CLO4	ACS552.04

S No	QUESTION	ANSWER	Blooms Level	CO	CLO	CLO Code
45	Define class?	A class is a user defined blueprint or prototype from which objects are created. It represents the set of properties or methods that are common to all objects of one type. All Java codes are defined in a class. A Class has variables and methods.	Understand	CO1	CLO4	ACS552.04
46	List Relational Operators	Relational Operators == Equal to != Not equal to > Greater than < Less than >= Greater than or equal to <= Less than or equal to	Remember	CO1	CLO4	ACS552.04
47	What is C Constant?	A C constant refers to the data items that do not change their value during the program execution.	Remember	CO1	CLO3	ACS552.03
48	What is meant by Method Overriding?	Method overriding happens if the sub class method satisfies the below conditions with the Super class method: <ul style="list-style-type: none"> • Method name should be same • Argument should be same • Return type also should be same 	Remember	CO1	CLO4	ACS552.04
49	What are the rules for naming identifier.	An identifier may be any descriptive sequence of uppercase and lowercase letters, numbers, or the underscore and dollar-sign characters, must not begin with a number	Remember	CO1	CLO3	ACS552.03
50	Define static Variable	A variable which is declared as static is called static variable.	Remember	CO1	CLO 6	ACS552.13
51	What is inheritance?	It allows access of properties and methods of super class by a sub class. Extend keyword is used to inherit all the properties of the superclasses by subclasses. Inheritance represents the IS-A relationship which is also known as a parent-child relationship.	Remember	CO1	CLO3	ACS552.03
52	What is Conditional Statement?	A statement written in the if-then form is a conditional statement.	Remember	CO1	CLO3	ACS552.03
53	What is syntax of do while loop?	do {	Remember	CO1	CLO3	ACS552.03

S No	QUESTION	ANSWER	Blooms Taxonomy Level	CO	CLO	CLO Code
		statement(s); } while(condition);				
54	What is user defined function?	A function is a block of code that performs a specific task. Java allows to define functions according to the need. These functions are known as user-defined functions.	Remember	CO1	CLO3	ACS552.03
55	List types of variables.	There are three types of variables in java: <ul style="list-style-type: none"> • local variable: • instance variable • static variable 	Remember	CO1	CLO3	ACS552.03
UNIT – II						
1	What is access specifier?	Access specifier determine the type of access to the member of a class	Remember	CO2	CLO5	ACS552.05
2	What are different types of access modifiers in java?	public, private, protected, default	Remember	CO2	CLO5	ACS552.05
3	What is the scope of default modifier	Accessed only to classes in the same package	Remember	CO2	CLO5	ACS552.05
4	What is the scope of protected	Any thing declared as protected can be accessed by classes in the same package and subclasses in the other packages.	Remember	CO2	CLO5	ACS552.05
5	What is the difference between this () and super ()?	This () can be used to invoke a constructor of the same class whereas super() can be used to invoke a super class constructor.	Remember	CO2	CLO6	ACS552.06
6	Define super class	Super class is a class from which another class inherits. Subclass is a class that inherits from one or more classes.	Remember	CO2	CLO5	ACS552.05
7	Define subclass?	Subclass is a class that inherits from one or more classes.	Remember	CO2	CLO5	ACS552.05
8	What is the use of Inheritance what are its advantages?	Inheritance is the process of inheriting all the features from a class	Remember	CO2	CLO5	ACS552.05
9	What is the advantage of Inheritance	The advantages of inheritance are reusability of code and accessibility of variables and methods of the super class by subclasses.	Remember	CO2	CLO5	ACS552.05
10	Define Wrapper Class	Wrapper Class: Wrapper class provides the mechanism to convert primitive into object and object into primitive. In Java, you can use	Remember	CO2	CLO6	ACS552.06

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		Integer, Float etc. instead of int, float etc. We can communicate with objects without calling their methods. ex. using arithmetic operators.				
11	What is an Abstract Class?	Abstract class is a class that has no instances. An abstract class is written with the expectation that its concrete subclasses will add to its structure and behavior, typically by implementing its abstract operations.	Remember	CO2	CLO 06	ACS552.06
12	Define Abstract Method?	A method without body (no implementation) is known as abstract method. A method must always be declared in an abstract class, or in other words you can say that if a class has an abstract method, it should be declared abstract as well.	Remember	CO2	CLO 06	ACS552.06
13	List types of Inheritance?	<ol style="list-style-type: none"> 1. Single Inheritance 2. Multiple Inheritance (Through Interface) 3. Multilevel Inheritance 4. Hierarchical Inheritance 5. Hybrid Inheritance (Through Interface) 	Remember	CO2	CLO 07	ACS552.07
14	What is multiple inheritance?	A derived class will be inheriting a parent class and as well as the derived class act as the parent class to other class.	Remember	CO2	CLO 07	ACS552.07
15	What is dynamic binding?	A block of code executed with reference to a procedure(method) call is determined at run time. Dynamic binding is also known as late binding or run-time binding.	Remember	CO2	CLO 07	ACS552.07
16	What is syntax of inheritance?	<pre>public class subclass extends superclass{ //all methods and variables declare here }</pre>	Remember	CO2	CLO 06	ACS552.06
17	What is multilevel inheritance?	Getting the properties from one class object to another class object level wise with different priorities.	Remember	CO2	CLO 07	ACS552.07
18	Define Abstract class syntax?	<pre>abstract class test Abstract Class { protected String myString; public String get String() { return myString;</pre>	Remember	CO2	CLO 06	ACS552.06

S No	QUESTION	ANSWER	Blooms Taxonomy Level	CO	CLO	CLO Code
		<pre>public abstract string any Abstract Function(); }</pre>				
19	What is Static Binding?	The binding which can be resolved at compile time by compiler is known as static or early binding. Binding of all the static, private and final methods is done at compile-time .	Remember	CO2	CLO6	ACS552.06
20	What is final?	A Java(TM) programming language keyword. You define an entity once and cannot change it or derive from it later. More specifically: a final class cannot be subclassed, a final method cannot be overridden and a final variable cannot change from its initialized value.	Remember	CO2	CLO5	ACS552.05
21	What is compile time polymorphism?	Compile time polymorphism: it is nothing but the method overloading in java. In simple terms we can say that a class can have more than one methods with same name but with different number of arguments or different types of arguments or both.	Remember	CO2	CLO7	ACS552.07
22	Write Abstract class syntax declaration?	<pre>abstract class A{ abstract void myMethod(); void anotherMethod(){ } }</pre>	Remember	CO2	CLO6	ACS552.06
23	What is concrete class?	A class which is not abstract is referred as Concrete class.	Remember	CO2	CLO6	ACS552.06
24	Which inheritace is supported by java	Single inheritance	Remember	CO2	CLO7	ACS552.07
25	What do you mean by Object-based language.	The languages that support classes but not polymorphism?	Remember	CO2	CLO7	ACS552.07
26	In case of using abstract class or function overloading, which function is supposed to be called first?	Function with highest priority in compiler	Remember	CO2	CLO7	ACS552.07

S No	QUESTION	ANSWER	Blooms Taxonomy Level	CO	CLO	CLO Code
27	Define private	Private members of a class can't be inherited. These members can only be accessible from members of its own class only. It is used to secure the data.	Remember	CO2	CLO7	ACS552.07
28	Define Inner class	Java inner class is defined inside the body of another class. Java inner class can be declared private, public, protected, or with default access whereas an outer class can have only public or default access.	Remember	CO2	CLO7	ACS552.07
29	What is Runtime polymorphism?	Runtime polymorphism: Runtime polymorphism or dynamic method dispatch is a process in which a call to an overridden method is resolved at runtime rather than at compile-time. In this process, an overridden method is called through the reference variable of a super class. The determination of the method to be called is based on the object being referred to by the reference variable.	Remember	CO2	CLO7	ACS552.07
30	What is constructor chaining?	Constructor chaining occurs through the use of inheritance. A subclass constructor method's first task is to call its superclass' constructor method. This ensures that the creation of the subclass object starts with the initialization of the classes above it in the inheritance chain.	Remember	CO2	CLO7	ACS552.07
31	Define Static variable	Java static variable. We can use static keyword with a class level variable. A static variable is a class variable and doesn't belong to Object/instance of the class. Since static variables are shared across all the instances of Object, they are not thread safe.	Remember	CO2	CLO7	ACS552.07
32	Define Final variable	A final variable can be explicitly initialized only once. A reference variable declared final can never be reassigned to refer to a different object.	Remember	CO2	CLO7	ACS552.07
33	What is the final class?	The main purpose of using a class being declared as final is to prevent the class from being sub classed. If a class is marked as final then no class can inherit any feature from the final class.	Remember	CO2	CLO7	ACS552.07
34	Define abstract class	An abstract class is a class that is declared abstract—it may or may not include abstract methods. Abstract classes cannot be instantiated, but they can be subclassed.	Remember	CO2	CLO7	ACS552.07

S No	QUESTION	ANSWER	Blooms Taxonomy Level	CO	CLO	CLO Code
35	Define abstract method	An abstract method is a method that is declared without an implementation	Remember	CO2	CLO7	ACS552.07
36	Define interface	An interface is a reference type in Java. It is similar to class. It is a collection of abstract methods. A class implements an interface, thereby inheriting the abstract methods of the interface.	Remember	CO2	CLO7	ACS552.07
37	Can we extend the interface	Yes, An interface can extend another interface in the same way that a class can extend another class. The extends keyword is used to extend an interface, and the child interface inherits the methods of the parent interface.	Remember	CO2	CLO6	ACS552.06
38	What is signature?	Method name and parameters	Remember	CO2	CLO6	ACS552.06
39	What is binding?	What is binding in Java - Association of method call with the method body is known as binding in Java	Remember	CO2	CLO6	ACS552.06
40	What is message passing?	Message passing is a form of communication used in parallel programming and object-oriented programming. Communications are completed by the sending of messages (functions, signals and data packets) to recipients.	Remember	CO2	CLO6	ACS552.06
UNIT – III						
1	What is Exception in Java?	Exception is an error event that can happen during the execution of a program and disrupts it's normal flow. Exception can arise from different kind of situations such as wrong data entered by user, hardware failure, network connection failure etc.	Remember	CO3	CLO8	ACS552.08
2	What is Exception Handling?	Exception Handling is a mechanism to handle runtime errors such as ClassNotFoundException, IOException, SQLException, RemoteException, etc.	Remember	CO3	CLO 08	ACS552.08
3	List Exception Handling keywords in java?	<ul style="list-style-type: none"> • Throw • throws • try-catch • finally 	Remember	CO3	CLO9	ACS552.09
4	What are important methods of Java Exception Class?	<ul style="list-style-type: none"> • String getMessage() • String getLocalizedMessage() • synchronized ThrowablegetCause() • String toString() 	Remember	CO2	CLO 9	ACS552.09

S No	QUESTION	ANSWER	Blooms Taxonomy Level	CO3	CLO	CLO Code
		void printStackTrace()				
5	List types of Exceptions?	There are two types of exceptions in Java: 1)Checked exceptions 2)Unchecked exceptions	Remember	CO3	CLO 09	ACS552.09
6	What is Checked Exceptions?	All exceptions other than Runtime Exceptions are known as Checked exceptions as the compiler checks them during compilation to see whether the programmer has handled them or not. If these exceptions are not handled/declared in the program, you will get compilation error. For example, SQLException, IOException, ClassNotFoundException etc.	Remember	CO3	CLO 09	ACS552.09
7	What is Unchecked Exceptions?	Runtime Exceptions are also known as Unchecked Exceptions. These exceptions are not checked at compile-time so compiler does not check whether the programmer has handled them or not but it's the responsibility of the programmer to handle these exceptions and provide a safe exit. For example, ArithmeticException, NullPointerException, ArrayIndexOutOfBoundsException etc.	Remember	CO3	CLO9	ACS552.09
8	What is the difference between error and exception in java	Errors are mainly caused by the environment in which an application is running. For example, OutOfMemoryError happens when JVM runs out of memory. Where as exceptions are mainly caused by the application itself. For example, NullPointerException occurs when an application tries to access null object.	Remember	CO3	CLO9	ACS552.09
9	What are run time exceptions in java. Give example?	The exceptions which occur at run time are called as run time exceptions. These exceptions are unknown to compiler. All sub classes of java.lang.RuntimeException and java.lang.Error are run time exceptions. These exceptions are unchecked type of exceptions. For example, NumberFormatException, NullPointerException, ClassCastException, ArrayIndexOutOfBoundsException, StackOverflowError etc.	Remember	CO3	CLO8	ACS552.08
10	What is the use of throws keyword in java?	If a method is capable of throwing an exception that it could not handle, then it should specify that exception using throws	Remember	CO3	CLO9	ACS552.09

S No	QUESTION	ANSWER	Blooms Taxonomy Level	CO3	CLO	CLO Code
		keyword. It helps the callers of that method in handling that exception. The syntax for using throws keyword is, return_typemethod_name(parameter_list) throws exception_list{ //some statements }				
12	What is StackOverflowError in java?	StackOverflowError is an error which is thrown by the JVM when stack overflows.	Remember	CO3	CLO8	ACS552.08
13	What is multithreading?	Multithreading in java is a process of executing multiple threads simultaneously.	Remember	CO3	CLO10	ACS552.10
14	What is the thread?	A thread is a lightweight subprocess. It is a separate path of execution because each thread runs in a different stack frame. A process may contain multiple threads. Threads share the process resources, but still, they execute independently.	Remember	CO3	CLO10	ACS552.10
15	What is the purpose of wait() method in Java?	The wait() method is provided by the Object class in Java. This method is used for inter-thread communication in Java. The java.lang.Object.wait() is used to pause the current thread, and wait until another thread does not call the notify() or notifyAll() method. Its syntax is given below. public final void wait()	Remember	CO3	CLO 11	ACS552.11
16	What are the advantages of multithreading?	Multithreading allows 1. the faster execution of tasks. 2. better utilization of cache memory. reduces the number of the required server as one server can execute multiple threads at a time.	Remember	CO3	CLO 11	ACS552.11
17	What are the two ways of creating thread?	1. Extend the Thread class and override the run() method in your class. Create an instance of the subclass and invoke the start() method on it, which will create a new thread of execution. Implements the Runnable interface.The class will have to implement the run() method in the Runnable interface. Create an instance of this class. Pass the reference of this instance to the Thread constructor a new thread of execution will be created.	Remember	CO3	CLO 11	ACS552.11

S No	QUESTION	ANSWER	Blooms Taxonomy Level	CO3	CLO	CLO Code
18	What are the different states of a thread's lifecycle?	<ol style="list-style-type: none"> 1. New 2. Runnable 3. Running 4. Waiting/Blocked/Sleeping 	Remember	CO3	CLO 11	ACS552.11
19	What is a Thread Life Cycle?	The life cycle of a thread is similar to the life cycle of processes running in an operating system. During its life cycle, the thread can move from one state to another. However, it depends on the operation performed on it.	Remember	CO3	CLO 11	ACS552.11
20	What is Thread Pool?	ThreadPool is a pool of threads that reuses a fixed number of threads to execute the specific task.	Remember	CO3	CLO 11	ACS552.11
21	What is the difference between notify() and notifyAll()?	The notify() is used to unblock one waiting thread whereas notifyAll() method is used to unblock all the threads in waiting state.	Remember	CO3	CLO 11	ACS552.11
22	Define try keyword in java?	The "try" keyword is used to specify a block where we should place exception code. The try block must be followed by either catch or finally. It means, we can't use try block alone.	Remember	CO3	CLO 11	ACS552.11
23	Define catch keyword in java?	The "catch" block is used to handle the exception. It must be preceded by try block which means we can't use catch block alone. It can be followed by finally block later.	Remember	CO3	CLO 11	ACS552.11
24	Define finally keyword in java?	The "finally" block is used to execute the important code of the program. It is executed whether an exception is handled or not.	Remember	CO3	CLO10	ACS552.10
25	What are benefits of exception handling?	Java provides a sophisticated exception handling mechanism that enables you to detect exceptional conditions in your programs and fix the exceptions as and when they occur.	Understand	CO3	CLO 10	ACS552.10
26	What is java custom exception?	If you are creating your own Exception that is known as custom exception or user-defined exception. Java custom exceptions are used to customize the exception according to user need.	Understand	CO3	CLO 09	ACS552.09
27	What is java exception propagation?	An exception is first thrown from the top of the stack and if it is not caught, it drops down the call stack to the previous method. If not caught there, the exception again drops down to the previous method, and so on until they are caught or until they reach the very bottom of the call stack. This is called exception propagation.	Understand	CO3	CLO 10	ACS552.10
28	What is multi tasking?	Multitasking is a process of executing multiple tasks simultaneously.	Remember	CO3	CLO11	ACS552.11

S No	QUESTION	ANSWER	Blooms Taxonomy Level	CO	CLO	CLO Code
29	What are the ways of achieving multitasking?	1.Process-based Multitasking (Multiprocessing). 2.Thread-based Multitasking (Multithreading)	Remember	CO3	CLO11	ACS552.11
30	What is multi processing?	Multi-processing refers to the ability of a system to support more than one processor at the same time.	Understand	CO3	CLO11	ACS552.11
31	Define inter thread communication?	Inter-thread communication in Java..... Cooperation (Inter-thread communication) is a mechanism in which a thread is paused running in its critical section and another thread is allowed to enter (or lock) in the same critical section to be executed.	Remember	CO3	CLO11	ACS552.11
32	What is synchronization in java?	Synchronization in java is the capability to control the access of multiple threads to any shared resource.	Remember	CO3	CLO11	ACS552.11
33	What is the use synchronization in java?	The synchronization is mainly used to, To prevent thread interference. To prevent consistency problem.	Remember	CO3	CLO11	ACS552.11
34	What are types of synchronization?	There are two types of synchronization 1. Process Synchronization 2. Thread Synchronization	Remember	CO3	CLO11	ACS552.11
35	What are the types of thread synchronization?	There are two types of thread synchronization mutual exclusive and inter-thread communication. Mutual Exclusive 1. Synchronized method. 2. Synchronized block. 3. static	Remember	CO3	CLO11	ACS552.11
36	What is the use of static synchronization in java?	Synchronization. Cooperation (Inter-thread communication in java) At run time every loaded class has an instance of a Class object. That is the object that is used as the shared lock object by static synchronized methods. (Any synchronized method or block has to lock on some shared object.)	Remember	CO3	CLO11	ACS552.11
37	Do we need to synchronize static methods?	It depends on what your static method is doing. ... The fact that your instance method is synchronized means that no two threads will be executing it with the same target object - but two threads could both be executing m1 with different target objects, so m2 could be called twice at the same time.	Remember	CO3	CLO11	ACS552.11

S No	QUESTION	ANSWER	Blooms Taxonomy Level	CO	CLO	CLO Code
		threads could both be executing m1 with different target objects, so m2 could be called twice at the same time.				
38	What is the difference between static synchronized methods and non static synchronized methods?	Static synchronized methods synchronize on the class object. If one thread is executing a static synchronized method, all other threads trying to execute any static synchronized methods will be blocked. Non-static synchronized methods synchronize on this ie the instance of the class.	Remember	CO3	CLO11	ACS552.11
39	What is syntax of try catch block in java?	try{ //code that may throw an exception }catch(Exception_class_Name ref){ }	Remember	CO3	CLO11	ACS552.11
40	What is syntax of try finally block in java?	try{ //code that may throw an exception }finally{ }	Remember	CO3	CLO11	ACS552.11
41	Define thread scheduler in java?	Thread scheduler in java is the part of the JVM that decides which thread should run. There is no guarantee that which runnable thread will be chosen to run by the thread scheduler. Only one thread at a time can run in a single process. The thread scheduler mainly uses preemptive or time slicing scheduling to schedule the threads.	Remember	CO3	CLO11	ACS552.11
42	what is the difference between preemptive scheduling and time slicing	Under preemptive scheduling, the highest priority task executes until it enters the waiting or dead states or a higher priority task comes into existence. Under time slicing, a task executes for a predefined slice of time and then reenters the pool of ready tasks. The scheduler then determines which task should execute next, based on priority and other factors.	Remember	CO3	CLO11	ACS552.11
43	What is dead lock in java?	Deadlock in java is a part of multithreading. Deadlock can occur in a situation when a thread is waiting for an object lock, that is acquired by another thread and second thread is waiting for an object lock that is acquired by first thread. Since, both threads are waiting for each other to release the lock, the condition is called deadlock.	Remember	CO3	CLO10	ACS552.10
44	What is interrupting a thread?	If any thread is in sleeping or waiting state (i.e. sleep() or wait() is invoked), calling the interrupt() method on the thread, breaks out	Remember	CO3	CLO11	ACS552.011

S No	QUESTION	ANSWER	Blooms Level	CO	CLO	CLO Code
		the sleeping or waiting state throwing InterruptedException. If the thread is not in the sleeping or waiting state, calling the interrupt() method performs normal behaviour and doesn't interrupt the thread but sets the interrupt flag to true.				
45	What is reentrant monitor in java?	Java monitors are reentrant means java thread can reuse the same monitor for different synchronized methods if method is called from the method.	Remember	CO3	CLO6	ACS552.06
46	What is the advantage of reentrant monitor in java?	It eliminates the possibility of single thread deadlocking	Remember	CO3	CLO11	ACS552.011
47	What is daemon thread in java?	Daemon thread in java is a service provider thread that provides services to the user thread. Its life depend on the mercy of user threads i.e. when all the user threads dies, JVM terminates this thread automatically.	Remember	CO3	CLO11	ACS552.011
48	Why JVM terminates the deamon thread if there is no user thread	The sole purpose of the daemon thread is that it provides services to user thread for background supporting task. If there is no user thread, why should JVM keep running this thread. That is why JVM terminates the daemon thread if there is no user thread.	Remember	CO3	CLO11	ACS552.011
49	What are methods of java deamon thread?	1.public void setDeamon(Booleen status) 2.public booleanisDeamon()	Remember	CO3	CLO11	ACS552.011
50	What is java shutdownhook?	The shutdown hook can be used to perform cleanup resource or save the state when JVM shuts down normally or abruptly. Performing clean resource means closing log file, sending some alerts or something else. So if you want to execute some code before JVM shuts down, use shutdown hook.	Remember	CO3	CLO11	ACS552.011
UNIT - IV						
1	What is interface?	Java interface is a blueprint of a class and it is used to achieve fully abstraction and it is a collection of abstract methods.	Remember	CO4	CLO12	ACS552.12
2	Mention interface syntax?	interface FirstInterface { fields; methods; }	Remember	CO4	CLO12	ACS552.12

S No	QUESTION	ANSWER	Blooms Taxonomy Level	CO	CLO	CLO Code
3	What must a class do to implement an interface?	The class must provide all of the methods in the interface and identify the interface in its implements clause.	Remember	CO4	CLO 12	ACS552.12
4	What is “abstract interface”?	Firstly, an interface is abstract. That means you cannot have any implementation in an interface. All the methods declared in an interface are abstract methods or signatures of the methods.	Remember	CO4	CLO 12	ACS552.12
5	Define package?	A Java package is a naming context for classes and interfaces. A package is used to create a separate name space for groups of classes and interfaces. Packages are also used to organize related classes and interfaces into a single API unit and to control accessibility to these classes and interfaces.	Remember	CO4	CLO 13	ACS552.13
6	What is import used for?	Enables the programmer to abbreviate the names of classes defined in a package.	Remember	CO4	CLO 14	ACS552.14
7	What is static import?	By static import, we can access the static members of a class directly without prefixing it with the class name.	Remember	CO4	CLO 13	ACS552.13
8	What are the packages in java?	Packages in Java are a way to encapsulate interfaces, Java classes and also subclasses. They are used for the following tasks – Java Packages are used to prevent the naming conflicts which can occur between the classes. Packages in Java make the searching and locating of classes or enumerations or annotations much easier. Java Packages provide access control to the classes. Packages in Java are used for data encapsulation.	Remember	CO4	CLO 13	ACS552.13
9	List advantages of packages in java?	<ul style="list-style-type: none"> • Reusability • Better Organization • Name Conflicts 	Remember	CO4	CLO 13	ACS552.13
10	List types of packages in java?	User defined package. Built-in package	Remember	CO4	CLO 13	ACS552.13
11	What is a Protected Method?	A protected method is a method that can be accessed by any method in its package and inherited by any subclass of its class.	Remember	CO4	CLO 13	ACS552.13

S No	QUESTION	ANSWER	Blooms Taxonomy Level	CO	CLO	CLO Code
12	What are built-in packages?	<ul style="list-style-type: none"> • java.lang • java.io • java.util • java.applet • java.awt • java.net 	Remember	CO4	CLO 13	ACS552.13
13	Mention syntax of a package?	<pre>package mypack; public class employee { statement; }</pre>	Remember	CO4	CLO 13	ACS552.13
14	What is the base class of all classes?	java.lang.Object class is superclass of all classes. Class Object is the root of the class hierarchy. Every class has Object as a superclass. All objects, including arrays, implement the methods of this class.	Remember	CO4	CLO 14	ACS552.14
15	Write syntax for compilation and run of a package?	<pre>javac -d directory javafilename java directory javafilename</pre>	Remember	CO4	CLO 14	ACS552.14
16	List various types of accessing package from another package?	<ul style="list-style-type: none"> • import package.*; • import package.classname; • fully qualified name. 	Remember	CO4	CLO 14	ACS552.14
17	What is difference between interface and package in java?	The basic difference between packages and interfaces is that a package contains a group of classes and interfaces whereas, an interface contains methods and fields. An interface can be extended by another interface and implemented by the class	Remember	CO4	CLO 14	ACS552.14
18	How do we add a class or interface to a package?	To add a class or interface to a package: Add package myPackageName ; as the first Java statement of the source file. In your development directory, store the source file in a directory structure corresponding to your package name.	Understand	CO4	CLO 14	ACS552.14
19	What is user defined package?	The package we create is called user-defined package.	Remember	CO4	CLO 14	ACS552.14

S No	QUESTION	ANSWER	Blooms Taxonomy Level	CO	CLO	CLO Code
20	What is built in package?	The already defined package like java.io.*, java.lang.* etc are known as built-in packages.	Remember	CO4	CLO 13	ACS552.13
21	What is the purpose of implements keyword?	implements keyword is used to implement an interface in Java.	Remember	CO4	CLO 13	ACS552.13
22	What is the access scope of a protected method?	A protected method can be accessed by the classes within the same package or by the subclasses of the class in any package.	Remember	CO4	CLO 13	ACS552.13
23	Can you identify the error in the below code? interface A { private int i; }	Illegal modifier for field i. Only public, static and final are allowed.	Remember	CO4	CLO 12	ACS552.12
24	Why the below code is showing compile time error? interface X { void methodX(); } class Y implements X { void methodX() { System.out.println("Method X"); } }	Interface methods must be implemented as public. Because, interface methods are public by default and you should not reduce the visibility of any methods while overriding.	Remember	CO4	CLO 12	ACS552.12
25	Does below code compile successfully? If not, why? interface A {	No, because interface fields are static and final by default and you can't change their value once they are initialized. In the above code, methodB() is changing value of interface field A.i. It shows compile time error.	Remember	CO4	CLO 12	ACS552.12

S No	QUESTION	ANSWER	Blooms Taxonomy Level	CO	CLO	CLO Code
	<pre>int i = 111; } class B implements A { void methodB() { i = 222; } }</pre>			CO4		
26	Which Access specifier can be used for a class so that its members can be accessed by a different class in the same package?	Public and protected	Remember	CO4	CLO 13	ACS552.13
27	Syntax for importing an entire package 'pkg'?	Import package.*;	Remember	CO4	CLO 13	ACS552.13
28	What is the output of the following code package pkg; <pre>class output { public static void main(String args[]) { StringBuffer s1 = new StringBuffer("Hello"); s1.setCharAt(1, x); System.out.println(s1); } }</pre>	Hxlllo	Understand	CO4	CLO 13	ACS552.13
29	What is the output (Note : Output.class file is not in directory pkg.) package pkg;	runtime error Since output.class file is not in the directory pkg in which class output is defined, program will not be able to run.	Understand	CO4	CLO 13	ACS552.13

S No	QUESTION	ANSWER	Blooms Taxonomy Level	CO	CLO	CLO Code
	<pre> class output { public static void main(String args[]) { StringBuffer s1 = new StringBuffer("Hello World"); s1.insert(6 , "Good "); System.out.println(s1); } } </pre>			CO4		
30	<p>What is the output of this program?</p> <pre> import java.util.*; class Array { public static void main(String args[]) { int array[] = new int [5]; for (int i = 5; i > 0; i--) array[5 - i] = i; Arrays.sort(array); for (int i = 0; i < 5; ++i) System.out.print(array[i]); } } </pre>	12345	Understand	CO4	CLO 13	ACS552.13
31	<p>Is the following code written correctly?</p> <pre> Class A { // class A } Interface B extends A { </pre>	No. An interface can extend another interface not the class.	Understand	CO4	CLO 12	ACS552.12

S No	QUESTION	ANSWER	Blooms Taxonomy Level	CO	CLO	CLO Code
	//interface B extending a class A }					
32	Can you find out the errors in the following code? Interface A { { System.out.println("Interface A"); } static { System.out.println("Interface A"); } }	Interfaces can't have initializers.	Understand	CO4	CLO 12	ACS552.12
33	What is the difference between a Public and a Non-public Class?	A public class may be accessed outside of its package. A non-public class may not be accessed outside of its package.	Remember	CO4	CLO 12	ACS552.12
34	What is marker or tagged interface?	Marker interface is an interface that has no data member and method like Serializable, Cloneable, etc.	Remember	CO4	CLO 12	ACS552.12
35	Compare class and an interface?	A class can be instantiated by creating its objects. An interface is never instantiated as the methods declared inside an interface are abstract and does not perform any action, so there is no use of instantiating any interface.	Remember	CO4	CLO 12	ACS552.12
36	What an interface can contain?	public static Final Variables and abstract methods	Remember	CO4	CLO 12	ACS552.12
37	Mention syntax for implementing two interfaces?	Class parent classname implements child1 classname,child2 classname	Remember	CO4	CLO 12	ACS552.12

S No	QUESTION	ANSWER	Blooms Taxonomy Level	CO	CLO	CLO Code
38	What is the difference between public class and a default class ?	Class without any access specifier has the default scope i.e it can be accessed by any class within same package. Class declared public can be accessed from anywhere.	Remember	CO4	CLO 12	ACS552.12
39	What is the use of Java.lang. Class Class?	The java.lang. Class class is used to represent the classes and interfaces that are loaded by a java program.	Remember	CO4	CLO 13	ACS552.13
40	What Is Externalizable?	Externalizable is an Interface that extends Serializable Interface. And sends data into Streams in Compressed Format. It has two methods, writeExternal(ObjectOutput out) and readExternal(ObjectInput in)	Remember	CO4	CLO 13	ACS552.13
41	What is the difference between a public and a non-public class?	A public class may be accessed outside of its package. A non-public class may not be accessed outside of its package.	Remember	CO4	CLO 13	ACS552.13
42	What is difference between path and classpath?	Path and Classpath are operating system level environment variables. Path is used to define where the system can find the executables(.exe) files and classpath is used to specify the location .class files.	Remember	CO4	CLO 13	ACS552.13
43	What is meant by "abstract interface"?	First, an interface is abstract. That means you cannot have any implementation in an interface. All the methods declared in an interface are abstract methods or signatures of the methods.	Remember	CO4	CLO 14	ACS552.14
44	What are the access modifiers available in java?	Access modifier specifies where a method or attribute can be used. <ul style="list-style-type: none"> • Public is accessible from anywhere. • Protected is accessible from the same class and its subclasses. • Package/Default are accessible from the same package. • Private is only accessible from within the class. 	Remember	CO4	CLO 14	ACS552.14
UNIT - V						
1	Define stream?	A stream can be defined as a sequence of data.	Remember	CO5	CLO 15	ACS552.15
2	Define byte stream?	Java byte streams are used to perform input and output of 8-bit bytes. Though there are many classes related to byte streams but the most frequently used classes are, FileInputStream and FileOutputStream	Remember	CO5	CLO 15	ACS552.15

S No	QUESTION	ANSWER	Blooms Taxonomy Level	CO	CLO	CLO Code
3	Define character stream?	Java Character streams are used to perform input and output for 16-bit unicode. Though there are many classes related to character streams but the most frequently used classes are, FileReader and FileWriter	Remember	CO5	CLO 16	ACS552.16
4	Define standard input Streams?	This is used to feed the data to user's program and usually a keyboard is used as standard input stream and represented as System.in	Remember	CO5	CLO 15	ACS552.15
5	Define standard output streams?	This is used to output the data produced by the user's program and usually a computer screen is used to standard output stream and represented as System.out.	Remember	CO5	CLO 16	ACS552.16
6	Define standard error?	This is used to output the error data produced by the user's program and usually a computer screen is used to standard error stream and represented as System.err.	Remember	CO5	CLO 15	ACS552.15
7	Define input stream?	The InputStream is used to read data from a source	Remember	CO5	CLO 15	ACS552.15
8	Define output stream?	the outputStream is used for writing data to a destination	Remember	CO5	CLO 15	ACS552.15
9	What is FileInputStream?	This stream is used for reading data from the files	Remember	CO5	CLO 15	ACS552.15
10	What is read (int r)?	This method reads the specified byte of data from the InputStream	Remember	CO5	CLO 15	ACS552.15
11	What is FileOutputStream?	FileOutputStream is used to create a file and write data into it	Remember	CO5	CLO 16	ACS552.16
12	What is write (int r)?	This methods writes the specified byte to the output stream	Remember	CO5	CLO 16	ACS552.16
13	What is JDBC?	JDBC stands for Java Database Connectivity, which is a standard Java API for database-independent connectivity between the Java programming language and a wide range of databases	Remember	CO5	CLO 17	ACS552.17
14	Define Driver manager ?	This class manages a list of database drivers. Matches connection requests from the java application with the proper database driver using communication sub-protocol. The first driver that recognizes a certain sub-protocol under JDBC will be used to establish a database Connection	Remember	CO5	CLO 17	ACS552.17
15	Define driver interface?	This interface handles the communications with the database server	Remember	CO5	CLO 17	ACS552.17
16	What is Type 2: JDBC-Native API?	A JDBC bridge is used to access ODBC drivers installed on each client machine. Using ODBC requires configuring on your	Remember	CO5	CLO 17	ACS552.17

		system a Data Source Name (DSN) that represents the target database.				
17	What is Type 3: JDBC-Net pure Java?	JDBC API calls are converted into native C/C++ API calls which are unique to the database A three-tier approach is used to accessing databases. The JDBC clients use standard network sockets to communicate with an middleware application server. The socket information is then translated by the middleware application server into the call format required by the DBMS, and forwarded to the database server.	Remember	CO5	CLO 17	ACS552.17
18	What is Type 4: 100% pure Java?	A pure Java-based driver that communicates directly with vendor's database through socket connection. This is the highest performance driver available for the database and is usually provided by the vendor itself	Remember	CO5	CLO 17	ACS552.17
19	Mention different types of JDBC Drivers?	<ul style="list-style-type: none"> • JDBC-ODBC Bridge plus ODBC Driver (Type 1) • Native API partly Java technology-enabled driver (Type 2) • Pure Java Driver for Database Middleware (Type 3) • Direct-to-Database Pure Java Driver (Type 4) 	Remember	CO5	CLO 18	ACS552.18
20	What is the use of JDBC DriverManager class?	JDBC DriverManager is the factory class through which we get the Database Connection object. When we load the JDBC Driver class, it registers itself to the DriverManager	Remember	CO5	CLO 18	ACS552.18
21	What is JDBC Statement?	JDBC API Statement is used to execute SQL queries in the database. We can create the Statement object by calling Connection.createStatement() method.	Remember	CO5	CLO 17	ACS552.17
22	What is the difference between execute, executeQuery, executeUpdate?	Statement execute(String query) is used to execute any SQL query and it returns TRUE if the result is an ResultSet such as running Select queries. The output is FALSE when there is no ResultSet object such as running Insert or Update queries. We can use getResultSet() to get the ResultSet and getUpdateCount() method to retrieve the update count.Statement executeQuery(String query) is used to execute Select queries and returns the ResultSet. ResultSet returned is never null even if there are no records matching the query.	Remember	CO5	CLO 17	ACS552.17

S No	QUESTION	ANSWER	Blooms Taxonomy Level	CO	CLO	CLO Code
		executing select queries we should use executeQuery method so that if someone tries to execute insert/update statement it will throw java.sql.SQLException with message “executeQuery method can not be used for update”.				
23	How can we set null value in JDBC PreparedStatement?	By using setNull() method of PreparedStatement interface, we can set the null value to an index.	Remember	CO5	CLO 18	ACS552.18
24	What is JDBC PreparedStatement?	JDBC PreparedStatement object represents a precompiled SQL statement. We can use its setter method to set the variables for the query. Since PreparedStatement is precompiled, it can then be used to efficiently execute this statement multiple times. PreparedStatement is better choice than Statement because it automatically escapes the special characters and avoid SQL injection attacks.	Remember	CO5	CLO 18	ACS552.18
25	What are the benefits of PreparedStatement over Statement?	PreparedStatement helps us in preventing SQL injection attacks because it automatically escapes the special characters. PreparedStatement allows us to execute dynamic queries with parameter inputs. PreparedStatement is faster than Statement. It becomes more visible when we reuse the PreparedStatement or use its batch processing methods for executing multiple queries.	Remember	CO5	CLO 18	ACS552.18
26	What is JDBC ResultSet?	JDBC ResultSet is like a table of data representing a database result set, which is usually generated by executing a statement that queries the database. ResultSet object maintains a cursor pointing to its current row of data.	Remember	CO5	CLO 17	ACS552.17
27	What are common JDBC Exceptions?	java.sql.SQLException – This is the base exception class for JDBC exceptions. java.sql.BatchUpdateException – This exception is thrown when Batch operation fails, but it depends on the JDBC driver whether they throw this exception or the base SQLException.	Remember	CO5	CLO 17	ACS552.17

S No	QUESTION	ANSWER	Blooms Taxonomy Level	CO	CLO	CLO Code
		<p>java.sql.SQLException – For warning messages in SQL operations.</p> <p>java.sql.DataTruncation – when a data values is unexpectedly truncated for reasons other than its having exceeded MaxFieldSize.</p>				
28	What is the use of PrintWriter class?	PrintWriter provides advanced methods to write formatted text to the file. It supports printf function. PrintWriter constructors supports varied kinds of arguments	Remember	CO5	CLO 15	ACS552.15
29	Mention file handling operations?	<ul style="list-style-type: none"> • Create file • Delete file • Read file • Write file • Change file permissions 	Remember	CO5	CLO 15	ACS552.15
30	What are Stateless and Stateful operations in Java stream?	<ul style="list-style-type: none"> • Stateless operations, such as filter and map, retain no state from previously seen element when processing a new element, each element can be processed independently of operations on other elements. • Stateful operations, such as distinct and sorted, may incorporate state from previously seen elements when processing new elements. Stateful operations may need to process the entire input before producing a result. For example, one cannot produce any results from sorting a stream until one has seen all elements of the stream. 	Remember	CO5	CLO 16	ACS552.16
31	What is the difference between the Reader/Writer class hierarchy and the InputStream/OutputStream class hierarchy?	The Reader/Writer class hierarchy is character-oriented, and the InputStream/OutputStream class hierarchy is byte-oriented	Remember	CO5	CLO 16	ACS552.16
32	Define byte stream?	Byte Streams: Provide a convenient means for handling input and output of bytes.	Remember	CO5	CLO 15	ACS552.15

S No	QUESTION	ANSWER	Blooms Taxonomy Level	CO	CLO	CLO Code
33	Define character stream?	Character Streams: Provide a convenient means for handling input & output of characters.	Remember	CO5	CLO 15	ACS552.15
34	What is the difference between Collection and Stream?	The main difference between a Collection and Stream is that Collection contains their elements but Stream doesn't. Stream work on a view where elements are actually stored by Collection or array, but unlike other views, any change made on Stream doesn't reflect on original collection.	Remember	CO5	CLO 16	ACS552.16
35	What is the purpose of the File class?	The File class is used to create objects that provide access to the files and directories of a local file system.	Remember	CO5	CLO 16	ACS552.16
36	What is System.out.println()?	"println()" is a method of PrintStream class. "out" is a static object of PrintStream class defined in "System" class. System is a class from java.lang package used to interact with the underlying operating system by the programmer.	Remember	CO5	CLO 15	ACS552.15
37	What Is Print Stream And Print Writer?	Functionally both are same but belong to two different categories – byte streams and character streams. println() method exists in both classes.	Remember	CO5	CLO 15	ACS552.15
38	What is the return type of Class.forName() method?	The Class.forName() method returns the object of java.lang.Class object.	Remember	CO5	CLO 17	ACS552.17
39	What are the different types of ResultSet?	<ul style="list-style-type: none"> • Resultset.TYPE_Forward_ONLY • Resultset.TYPE_SCROLL_INSENSITIVE • Resultset.TYPE_SCROLL_SENSITIVE 	Remember	CO5	CLO 17	ACS552.17
40	What are the functions of the JDBC Connection interface?	The Connection interface maintains a session with the database. It can be used for transaction management. It provides factory methods that return the instance of Statement, Prepared Statement, Callable Statement, and Database MetaData.	Remember	CO5	CLO18	ACS552.18

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