U23IT301 OBJECT ORIENTED PROGRAMMING USING JAVA

University Important Questions

UNIT-1

2 MARK QUESTIONS:

1. What are the programming paradigms currently available?
2. What is an object oriented paradigm?
3. What are the differences between structures and classes in C++?
4. Differentiate Object Oriented and Object Based Programming Languages.
5. What is Object Oriented Programming? How is it different from the Procedure Oriented Programming?
6. List any two drawbacks of procedure oriented languages.
7. What is meant by prototype based programming?
8. What is a Class? What is an Object? Give an example for each
9. Define encapsulation.
10. Compare inheritance and delegation with respect to Object Oriented Programming.
11. Which feature of object oriented programming provides (a) data hiding (b) reusability?
12. Define (a) Object (b) class
13. What is the use of scope resolution operator :: in C++?
14. Can you have a class named main in C++? If yes how do you call its constructor?
15. What is an abstract class?
16. What is Object Orients Programming? List any four OOP languages.
17. What is meant by function overloading?
18. What are conditional constructor and destructor?
19. What is nameless object?
20. Give a note on access specifiers.

16 MARK QUESTIONS:

1. Describe the basic concepts of Object Oriented Programming and bring out the advantages of OOP.
2. Explain the declaration and defining a class in C++. How will you define the member functions of a class? Explain.
3. What is the need for parameterized constructors? Explain the function of constructors with their declaration and definition inside a class.
4. Illustrate the reserved word inline with two examples.
5. Explain the constructors and destructors.
6. explain the relation between (i)structured Programming(POP) and (ii)OOPs
7. Differentiate Object Oriented and Object based Languages.(8)
8. Explain copy constructor? Explain with a suitable example.
9. Differentiate Object Oriented and Object based Languages. Give examples for both. List any 8 features of Oops. (Detailed explanation or examples are not required).
10. Explain the following terms with respect to OOPS .Give suitable examples
(i) Dynamic Binding
(ii) Message Passing

(iii) Reusability
(iv) Polymorphism

UNIT-2

2 MARK QUESTIONS:

1. Define interfaces in java .How interfaces are implemented? How they can be accessed? How to apply interfaces? What is meant by extension of interfaces? Explain with an example.
2. What are threads? Synchronization? Explain the life cycle of thread with example
3. Explain life cycle of applet with example
4. Explain in detail exception handling in java
5. Explain in detail about JAVA I/O operations
6. Explain Inheritance in JAVA
7. Develop a real-life application program to illustrate the use of multithreads.
8. Explain with an example how multiple inheritances is achieved in Java.
9. How is synchronization of threads performed?
10. An educational institution wishes to maintain its employee's database which is divided into a number of classes with minimum information as shown in figure. Specify all the classes and define methods to create the database and retrieve individual information as when required.
11. Explain the life cycle of an applet and write a simple applet to display a moving banner.
12. What is the purpose of garbage collection in Java, and when is it used?
13. Give the importance of operator overloading.
14. Differentiate overloaded and overridden functions.
15. What is the main purpose of a template in C++? Give an example.
16. Write a program to exchange values of two variables. Use template variables as function arguments.
17. What is hierarchical inheritance?
18. What are the operators of C++ that cannot be overloaded?
19. Can friendship between classes be symmetric or transitive? Justify your answer with an example.
20. What is the use of virtual function?

16 MARK QUESTIONS:

1. What is operator overloading? How will you define it? Illustrate unary operator overloading with an example.
2. Describe the syntax of multiple inheritance. When do we use such an inheritance? Explain with an example.
3. Define friend class and specify its importance. Explain with suitable example.
4. Explain the operators used for dynamic memory allocation with examples.
5. Define functional overloading with example.
6. Explain in detail the various types of Inheritance with example programs
7. Explain virtual function in C++. Describe any two applications in which virtual functions may use.

For each of these applications, specify the parent classes and derived classes.
8. What are inline functions? What are their advantages? Givean example .What is the rules to be followed while defining inline functions?
9. What is the need for and advantages of Templates? What is the difference between function template and class template?
10. What are the various type conversions? Explain each with a program

UNIT-3

2 MARK QUESTIONS:

1. Draw console stream class hierarchy.
2. Describe how exceptions are handled.
3. What are file pointers?
4. Give any two examples of exceptions.
5. What are the predefined C++ stream objects?
6. What stream class is required to create an output stream?
7. Why is it not possible to refer an exception declared within try block outside try block?
8. Explain the various file stream classes needed for file manipulation.
9. What are file pointers? Describe get-pointers and put-pointers.
10. What is an I/O stream?
11. Why is it necessary to include the file iostream in all our programs?
12. Name the two ways in which a file can be opened.
13. Illustrate the exception handling mechanism
14. What are the file stream classes used for creating input and output files?
15. List out any four containers supported by Standard Template Library?
16. What is Seekg() and Seekp()?Give Example ?
17. What is rethrowing an expression?
18. What are the classes in iostream.h header files?
19. What is an exception? Give any four examples of exception.
20. What are the types of exceptions?

16 MARK QUESTIONS:

1. What is meant by exceptions? How an exception is handled in C++? Bring out the advantages of using various exception handling mechanisms.
2. Explain the hierarchy of Stream classes in C++
3. Give the hierarchy of console stream classes
4. Explain in detail about STRINGS in C++, with necessary examples
5. Explain in detail the various File handling Operations
6. What are the keywords used in C++ for exception handling? Describe their usage with suitable
example.
7. What are file modes? Describe various file mode options available in C++.

8. Explain the use of keywords try, catch and throw in handling exceptions in a program. Indicate how the control flows in case of occurrence and non-occurrence of exceptions. Write a program to implement a stack with appropriate exception handling.
9. Explain the 4 functions Seekg, Seekp, tellg, tellp used for setting pointers during file operation and show how they are derived from f stream class.
10. Write a program to append to the contents of a file.

UNIT-4

2 MARK QUESTIONS:

1. What is a token? List the various types of tokens supported by Java.
2. How do we add a class to a package?
3. In Java, can a class be defined inside a method? If so what rule governs access to the variables of the enclosing method? If not, give reasons.
4. How does Java achieve platform independence?
5. Distinguish between method overriding and method overloading in Java.
6. Justify the statement " Java is platform independent"
7. Define Java Virtual Machine.
8. What is a package?
9. What is the type of class for which objects cannot be created?
10. What type of inheritance is supported in Java?
11. What is java Virtual machine?
12. What is default for methods in Java?
13. What is the need for java virtual machine?
14. What is wait(), notify(), notifyall()?
15. What method can be used for changing case of characters?
16. How can overriding be prevented?
17. What are the two ways of using Super Keyword?
18. What are the ways of calling a method in Java?
19. What is abstract class in Java?
20. Give the paint method of an applet which draws a blue circle.

16 MARK QUESTIONS:

1. How is object class created in java environment ?Discuss on objects in java
2. Explain in detail about JAVA VIRTUAL MACHINE
3. Briefly explain about JAVA Byte-code
4. What is the purpose of using packages? How to create user-defined package? Give an example.
5. Explain in detail about java documentation.
6. Explain about arrays(matrix multiplication) and strings in java
7. What is meant by Overloading objects? How are related classes used in java?
8. Differentiate abstract classes and interfaces
9. Describe the structure of a typical Java program.

10. How can a subclass call a method or a constructor defined in a super class? Illustrate with an example program.

UNIT-5

2 MARK QUESTIONS:

1. What are the similarities between interfaces and classes in Java?
2. How do we set priorities for threads?
3. What happens if an exception handler is not defined when exception isthrown?
4. Explain the life cycle of thread.
5. Compare interface and abstract class.
6. What is the major difference between interfaces and a class?
7. What are the two methods by which we may stop threads?
8. What is an exception? Give any four examples of exception.
9. List any four advantages of inheritance. What type of inheritance is not supported by Java
10. What is multithreading?
11. What is an exception?
12. What is an interface? Write an interface to define the few constants, in Java.
13. What is final and finally?
14. Does Java support multiple inheritance? Justify your answer.
15. What is the difference between an abstract class and an interface in Java?
16. What is meant by binding?
17. Can array become private member of the class? How?
18. What is meant by anonymous Union?
19. What is Static data member?
20. What is Polymorphism?

16 MARK QUESTIONS:

1. Define interfaces in java .How interfaces are implemented? How they can be accessed? Howto apply interfaces? What is meant by extension of interfaces? Explain with an example.
2. What are threads? Synchronization? Explain the life cycle of thread with example
3. Explain life cycle of applet with example
4. Explain in detail exception handling in java
5. Explain in detail about JAVA I/O operations
6. Explain Inheritance in JAVA
7. Develop a real‐life application program to illustrate the use of multithreads.
8. Explain with an example how multiple inheritances is achieved in Java.
9. How is synchronization of threads performed?
10. An educational institution wishes to maintain its employee's database which is divided into a number of classes with minimum information as shown in figure. Specify all the classes and define methods to create the database and retrieve individual information as when required.