

MARATHWADA INSTITUTE OF TECHNOLOGY, AURANGABAD

DEPARTMENT OF MASTER OF COMPUTER APPLICATIONS



QUEST FOR EXCELLENCE

ADVANCE JAVA

QUESTION BANK

Second Year MCA

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Subject: Advance Java Programming (J2EE)

Course Code: MCA 201

QUESTION BANK

Unit 1

- 1 Explain object oriented programming? Write down advantages and characteristics of OOPS.
- 2 What are the different Java Buzzwords?
- 3 What is JVM? Explain the execution of java program.
- 4 Explain Java packages with suitable example program
- 5 What is Type casting? Explain different type of typecasting.
- 6 What is Constructor? Explain constructor overloading with example.
- 7 What is difference between constructors and normal methods? Explain with example
- 8 How do we access the static variables and static methods of a class?
- 9 What is an Interface? Write a program to implement Interface
- 10 What will be the output of the program? Also give the reason.
(i)

```
public class CommandArgs
{
    public static void main(String [] args)
    {
        String s1 = args[1];
        String s2 = args[2];
        String s3 = args[3];
```

```

        String s4 = args[4];
        System.out.print(" args[2] = " + s2);
    }
}
(ii) public class CommandArgsTwo
{
    public static void main(String [] argh)
    {
        int x;
        x = argh.length;
        for (int y = 1; y <= x; y++)
        {
            System.out.print(" " + argh[y]);
        }
    }
}

```

- 11 Write a program to determine the sum of the series: $1 - 1/2 + 1/3 - 1/4 + \dots + 1/n$. (Take value of n from the user)
- 12 Write a program to accept number through Command line and display its factorial.
- 13 Create a class 'Account' with two overloaded constructors. The first constructor is used for initializing, the name of account holder, the account number and the initial amount in the account. The second constructor is used for initializing the name of the account holder, the account number, the addresses, the type of account and the current balance. The Account class is having methods Deposit (), Withdraw (), and Get_Balance(). Make the necessary assumption for data members and return types of the methods. Create objects of Account class and use them.
- 14 What are the steps involved in java database connectivity.
- 15 Write a Program to add Two Times using Object as argument.
- 16 Create a Package 'ItemPack' which includes Class 'ITEM' with ItemCode, ItemName, rate, quantity as attributes and a method *displayItems()*. Accept the Item details using Constructor .Also Create an Interface having method *calculateAmount()* with rate and quantity as arguments. Create a class, which overrides these methods.
- 17 Write a JDBC Program to display Student details from student table.

- 18 Create a JDBC application to Insert User Registration details like *RegistrationNo, Username, Password, Email* into UserRegistration table. Also perform update and delete operations on specified rows.

- 19 Write a Java Program to Insert Students details like *Roll_No, Name, Address, Age, Date_of_Birth* into Student table.

- 20 What is JDBC? Explain different types of JDBC drivers.

- 21 Write short notes on :
 - a. Command line arguments
 - b. 'Static' keyword
 - c. Inheritance and types
 - d. Object as argument
 - e. JDBC PreparedStatement
 - f. Resultset object

Unit 2

- 1 What is servlet and explain the advantages of servlet.
- 2 Explain servlet life cycle with example program.
- 3 Write the steps for creating servlet program with example program.
- 4 What is the use of RequestDispatcher? Explain its methods with suitable example.
- 5 What are cookies? How to create and use cookies in java servlets?
- 6 What are the advantages and disadvantages of using cookies? Create an HTML file *AddCookies.html* which contains four text boxes .When user enters the values in these text boxes and press the submit button, the values will be sent to *AddCookies.java* servlet and get saved in cookies.
- 7 Explain session management in detail .Also, explain how HttpSession works?
- 8 How does HTTP Servlet handle client requests?
- 9 Create an HTML form *login.html* that accepts the username and password and submits to *login.java* servlet. Verify credentials and on success, set the username in the HTTP Session and show a "Welcome <username>" message.
- 10 Write a servlet program to insert Employee details like empid,employee_name,address,date_of_birth in Employee table using JDBC.
- 11 Create a Login.html page and verify the user in LoginServlet.java servlet. If the user is valid then open the EmployeeForm.html otherwise display appropriate message in Login.html page
- 12 What is JSP? What are the advantages of JSP over Servlets?

- 13 Explain JSP Architecture in detail.
- 14 How is JSP used in the MVC model?
- 15 Explain different types of scripting elements in JSP.
- 16 What are implicit objects? Explain each object with example.
- 17 What are JSP directives? Explain different types of directives with example.
- 18 Explain JSP Action tags with example.
- 19 What are Java Beans? Explain bean tags with example.
- 20 Design a StudentBean class with Student details like firstname, lastname and age. Display the Student details in JSP page using bean tags.
- 21 Explain life cycle methods of JSP.
- 22 Create a JDBC web application to save 'registration' details into registration table using JSP MVC design pattern.
- 23 Write short note on :
 - a) <jsp:useBean> and its attributes
 - b) MVC design pattern in JSP
 - c) <jsp:include> and <jsp:forward>
 - d) JSP Expressions
 - e) GET and POST requests
 - f) Page directive

Unit 3

- 1 What is Struts? What are the advantages of using Struts?
- 2 Explain in brief Struts Architecture.
- 3 What are the steps of creating web application using struts?
- 4 What are the steps of creating web application using struts with ActionForm?
- 5 What are the components of struts?
- 6 What is the role of Action Class? In which method of Action class the business logic is executed? Explain with example.
- 7 What is an ActionForm? Write an ActionForm for Customer which includes details like customer_id, customer_name, address, contact_no.
- 8 Design a registration.jsp page with input for user registration details like firstname, lastname, choose username, choose password, confirm password. After submitting this details, display the details onto the display.jsp page using struts.
- 9 Write an action class for verifying the correct username and password. If login succeeds then open successLogin.jsp and if login fails then open errorpage.jsp.
- 10 What is Struts Validator Framework?
- 11 Explain different struts html tags.
- 12 Explain in brief the use of struts controller.
- 13 What is Action Mapping? Explain with the help of struts configuration file.

- 14 Create a web application in struts to store book information like accession_no, title, author, price details into book table using JDBC.
- 15 Write short note on :
- a) MVC in struts
 - b) Struts tags
 - c) Struts as open source
 - d) Struts config file
 - e) Struts flow

Unit 4

- 1 What is EJB? Explain the features of EJB?
- 2 Explain different types of EJB's?
- 3 What are session beans? Explain its types.
- 4 Write the steps for implementing session beans.
- 5 What is an Entity Bean? How to create Entity beans?
- 6 Explain the features of entity bean and also its life cycle.
- 7 What is the difference between stateful and stateless session beans?
- 8 What are the advantages of using hibernate over JDBC?
- 9 Write a program to insert and fetch employee details using hibernate application.
- 10 What is hibernate? Explain its advantages.
- 11 Explain hibernate architecture.
- 12 Write the steps for creating any hibernate application.
- 13 Create a web application that inserts the user information like username,password,email into user database using hibernate.
- 14 Create a web application that fetches the Student information from Student database using hibernate.

- 15 Write short note on :
- a) Methods of a stateful session bean
 - b) Life cycle of entity bean
 - c) CMP entity bean
 - d) EJB container
 - e) Hibernate with annotations
 - f) Hibernate Framework