Roll No:
(To be filled in by the candidate)

PSG COLLEGE OF TECHNOLOGY, COIMBATORE - 641 004

SEMESTER EXAMINATIONS,   JUNE 2022

MCA   Semester: 2

20MX23   ENTERPRISE COMPUTING

Time : 3 Hours   Maximum Marks: 100

INSTRUCTIONS:

1. Answer **ALL** questions. Each question carries 25 Marks.
2. All question (A) carry 3 marks, question b carry 10 marks and C question carry 12 marks.
3. Course Outcome : Table

Qn.1	CO1	Qn.2	CO2.	Qn.3	CO3.	Qn.4	CO4.

1. a) What is an Enterprise application? Give any two examples for enterprise applications.
   b) Explain how Separation of Concerns simplifies the enterprise application developments.
   c) Discuss the various tiers of J2EE with their Components and Containers. Also discuss the requirements and challenges of enterprise application fulfilled by J2EE architecture

2. a) Compare and contrast the uses of Session Beans and Entity beans for Enterprise applications.
   b) Explain the architecture and the flow of object creations and interactions for enterprise data access using JDBC. How JDBC increases the longevity of Java enterprise applications over embedded form like SQLJ
   c) i) Identify and analyze the use of possible EJBs with their types and web services for the following intra- enterprise apps case study

   > **Action bazaar** is a simple web based online auction system like eBay. Sellers post their item listing on this site. Eager buyers get in the good-old competitive spirit and put bids against each other. Winning bidders pay for the items. Sellers ship sold items. Consider the following business constraints

   1. Each participant bid for one or more products and services using credit card.
   2. The users can put up their products for auction once they signup.
   3. Follow the traditional auction procedures like details of bid will not be visible for other bidders and FIFO allotment.
   4. Bid with highest value will be winning one.
   5. Bid value less than minimum value and after close date will be invalid.
   6. Advertising the new products may be by notifications to all.
   7. Ensure that the site cannot be accessed by *webbots*. Therefore you should ask users to solve a CAPTCHA before they can access the site.

   (OR)

   ii) Identify and analyze the use of possible EJBs with their types and web services for the following intra- enterprise apps case study

   Consider an **Online cab service management system**: Cab Service Company employees are categorized into sections. Each section has a section manager,

Section No and a fixed basic salary rate is assigned to a section. They keep data on Emp-no, NIC No, name, address, sex, DOB, contact no. of employees. If the employee is a driver, his driving license no and capable vehicle classes should be added. Each employee is assigned only to one section. For a travel, driver is assigned to a vehicle. They keep following data about vehicles; Reg No, Insurance no, Model, vehicle category, current mileage. In this case customer is the person who is making a reservation. They keep name, NIC_no, address, contact no. regarding the customer. Once a customer reserved a cab, he cannot make any other reservations until the end of the reserved duration. Customer can reserve one or more vehicles from a reservation. They are keeping index no, payment method, amount, No. of vehicles, distance, start date and time, end date and time regarding a reservation. They are supplying various kinds of supplies to maintain vehicles. A supplier can supply more than one supplying category. Company always keeps data on additional suppliers. Every supplier has a Reg No, Name, address, contact no. A employee is responsible for one or more supplying categories. They keep data like cat_no, cat_description, quantity, net cost regarding every supplying category. To ensure that the site cannot be accessed by webbots, you should ask users to solve a CAPTCHA before they can access site.

3. a) Identify a suitable session management technique for developing a visitor specific count for a JSP. Give reasons for your choice

    b) i) Compare and contrast Single Page Web Apps and Multipage Web Apps.   [5]

        ii) Explain the architecture, advantages and disadvantages and applicability of AJAX framework in Web apps / Mobile apps   [5]

    c) i) Explain how a JSP web page is processed, with Life Cycle state diagram. Indicate the various JSP elements processed and errors occurred in each stage.

(OR)

        ii) Discuss the various steps involved in the development and deployment of a Web application to accept and sort the list of names based on user choices (Ascending/Descending, Case Sensitive / Insensitive)

4. a) Compare and contrast Web Applications and Web services in an Enterprise Computing System

    b) Compare and contrast SOAP and REST based web services for the following application.

    You have been asked to develop Bookface, a social networking site for people who love reading, and always have their face in a book. The site will allow avid readers to comment on their favourite books, and to read the comments made by others on their favourite books, and other books by their favourite authors. Users must register before they can submit comments on a book. Users should choose a screen name and they should supply an email address. You have been asked to ensure that the site cannot be accessed by webbots and therefore you should ask users to solve a CAPTCHA before they can access the site. The site should list authors together with their books. Comments are made on books, not on authors. Users can add authors if they are not already there, and they can add books to authors

    c) i) Explain the step by step process of development, deployment and consuming the SOAP based Web Services for Spell checker in multiple programming languages by different applications.

(OR)

        ii) 1) Discuss the Web Services Standard Stack along with their role in developing the Enterprise Application development.   [6]

            2) Compare and contrast Code First and Contract first Approaches for Web Services development   [6]

FD/JU   /END/