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Subject Code:- ACSAI0612

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NOIDA INSTITUTE OF ENGINEERING AND TECHNOLOGY, GREATER NOIDA

(An Autonomous Institute Affiliated to AKTU, Lucknow)

B.Tech

SEM: VI - THEORY EXAMINATION (20 - 20.....)

Subject: Advance Java Programming

Time: 3 Hours

Max. Marks: 100

General Instructions:

IMP: Verify that you have received the question paper with the correct course, code, branch etc.

1. This Question paper comprises of three Sections -A, B, & C. It consists of Multiple Choice Questions (MCQ's) & Subjective type questions.

2. Maximum marks for each question are indicated on right -hand side of each question.

3. Illustrate your answers with neat sketches wherever necessary.

4. Assume suitable data if necessary.

5. Preferably, write the answers in sequential order.

6. No sheet should be left blank. Any written material after a blank sheet will not be evaluated/checked.

SECTION-A

20

1. Attempt all parts:-

1-a. Select the correct code to add an attribute in a HTTP Session object in servlets. (CO1,K2) 1

- (a) session.addAttribute(name,value)
- (b) session.setAttribute(name,value)
- (c) session.createAttribute(name,value)
- (d) None of the above.

1-b. Select the true statement about servlets(CO1,K2) 1

- (a) Servlets execute within the address space of web server
- (b) Servlets are platform-independent because they are written in java
- (c) Servlets can use the full functionality of the Java class libraries
- (d) Servlets execute within the address space of web server, platform independent and uses the functionality of java class libraries

1-c. The implicit Object is used to access the servlet context. (CO2,K2) 1

- (a) pageContext
- (b) config
- (c) application
- (d) out

1-d. The implicit Object is used to write output to the client browser(CO2,K2) 1

- (a) request

- (b) response
(c) out
(d) application
- 1-e. Which are the ioc container in spring? (CO3,K1) 1
- (a) BeanFactory
(b) ApplicationContext
(c) Both BeanFactory & ApplicationContext
(d) None of the above
- 1-f. JPA ----- equivalent with hibernate.cfg.xml file (CO3,K1) 1
- (a) configuration.xml
(b) persistence.xml
(c) jpa.configuration.xml
(d) None of the above
- 1-g. This component contains the data of the application. (CO4,K1) 1
- (a) Controller
(b) Model
(c) View
(d) None of the above
- 1-h. _____ is the default value of an input tag. (CO4,K1) 1
- (a) number
(b) date
(c) email
(d) text
- 1-i. Annotation used for entity manager injection in EJB components.(CO5,K2) 1
- (a) PersistenceContext
(b) Persistence
(c) PersistenceCon
(d) None of the mentioned
- 1-j. Analyze the JPA @Entity association attributes.(CO5,K2) 1
- (a) Association validation
(b) Association multiplicity
(c) Association cascade behavior
(d) Association direction
2. Attempt all parts:-
- 2.a. Explain JDBC in short.(CO1,K1) 2
- 2.b. Demonstrate the concepts of session Implicit Object in JSP.(CO2,K1) 2
- 2.c. Explain the term Dependency Injection(CO3,K1) 2

- 2.d. State the difference between RequestMapping and GetMapping(CO4,K2) 2
- 2.e. Explain the concept of database transaction.(CO5,K2) 2

SECTION-B

30

3. Answer any five of the following:-

- 3-a. List advantages and disadvantages of Servlets.(CO1,K2) 6
- 3-b. Discuss the difference between Get and Post method.(CO1,K2) 6
- 3-c. Develop a JSP program for session tracking(CO2,K3) 6
- 3-d. Build a JSP program to retrieve data from HTML into JSP page and display on browser.(CO2,K3) 6
- 3.e. Explain Bean lifecycle in Spring framework.(CO3,K2) 6
- 3.f. Explain SpringBoot and its features(CO4,K1) 6
- 3.g. Explain the Persistent Properties in detail(CO5,K1) 6

SECTION-C

50

4. Answer any one of the following:-

- 4-a. Program to create a servlet that displays the welcome message(CO1,K3) 10
- 4-b. Distinguish between the following Servlet, Generic Servlet and HTTP Servlet. (CO1,K3) 10

5. Answer any one of the following:-

- 5-a. Develop a JSP application that uses the JSP API to programmatically create and manipulate JSP pages. Your application should demonstrate how to create JSP pages using the JspWriter object and how to manipulate the contents of the JSP page using the JspContext object. Write a brief report on the steps you followed to create the application, including details on the JSP API and its various objects.(CO2,K3) 10
- 5-b. Define the purpose and key features of the JSP implicit object - out, and explain how it can be used to write output to the response stream.(CO2,K2) 10

6. Answer any one of the following:-

- 6-a. Discuss the role of JdbcTemplate also demonstrate update and delete operation on Student(sid, sname, saddress) Table using JdbcTemplate. (CO3,K3) 10
- 6-b. Describe the JDBC? Which classes are present in the Spring JDBC API?(CO3,K2) 10

7. Answer any one of the following:-

- 7-a. Draw and explain the SpringBoot architecture. Also mention the role of four layers with flow of architecture. (CO4,K2) 10
- 7-b. Differentiate between Spring, Spring MVC, and Spring Boot.(CO4,K2) 10

8. Answer any one of the following:-

- 8-a. Describe the purpose of the @OneToOne and @OneToMany annotations in JPA. Explain in detail with examples.(CO5,K2) 10
- 8-b. Describe database transaction and how is it used in JPA?(CO5,K2) 10