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Total No. of Printed Pages: 1

Total No. of Questions: [09]

**B. Tech (ME) (Semester -8<sup>th</sup>)**  
**INTERNET WEB DEVELOPMENT**  
**Subject Code: BCSE0F97**  
**Paper ID: [OE3112311]**

**Time: 03 Hours**

**Maximum Marks: 60**

**Instruction for candidates:**

1. Section A is compulsory. It consists of 10 parts of two marks each.
2. Section B consist of 5 questions of 5 marks each. The student has to attempt any 4 questions out of it.
3. Section C consist of 3 questions of 10 marks each. The student has to attempt any 2 questions.

**Section – A**

**(2 marks each)**

Q1. Attempt the following:

- a) What is object-oriented programming?
- b) Define polymorphism with an example.
- c) What is the purpose of UML class diagrams?
- d) Explain the function of a firewall in networking.
- e) What are MIME types?
- f) Define User Experience (UX) Design.
- g) What is the role of CSS in web design?
- h) Define the Document Object Model (DOM).
- i) What is POJO in Java?
- j) Explain the role of Java EE in enterprise applications.

**Section – B**

**(5 marks each)**

- Q2. Discuss the advanced concepts in Object Oriented Programming (OOP).
- Q3. Explain the client-server architecture and the components of a web application.
- Q4. What are HTML5 and CSS3? How do they enhance the look and feel of a web page?
- Q5. Discuss the basics of multithreaded programming in Java.
- Q6. Explain the role of JSP and servlets in server-side programming.

**Section – C**

**(10 marks each)**

- Q7. Describe in detail the principles behind the design and construction of web applications.
- Q8. Explain how Java Database Connectivity (JDBC) works and its importance in web applications.
- Q9. Discuss the concept of user experience design in the software development lifecycle (SDLC) and its role in web applications.