

**UCSC****University of Colombo, Sri Lanka***University of Colombo School of Computing***DEGREE OF BACHELOR OF INFORMATION TECHNOLOGY
(EXTERNAL)**Academic Year 2025 — 2nd Year Examination — Semester 4**IT4206 — Enterprise Application Development***Part 2 - Structured Question Paper*

(2 Hours for both Part 1 and Part 2)

To be completed by the candidate**Index Number**

--	--	--	--	--	--	--

Important Instructions

- This paper has **two (2) parts, Part 1 and Part 2**.
- The total duration of **both Part 1 and Part 2 is 2 hours**.
- The final mark for the paper will be determined by averaging the scores of Part 1 and Part 2, each of which is graded out of **100**.
- The medium of instructions and questions is English. Students should answer in the medium of English language only.
- This paper (Part 2) has **2 questions on 5 pages**. Answer **both** questions.
- Write your answers **only on the space provided** on this question paper.
- Do not tear off any part of this question paper. Under no circumstances may this paper (or any part of this paper), used or unused, be removed from the Examination Hall by a candidate.
- Note that questions appear on both sides of the paper. If a page or part of a page is not printed, please inform the supervisor/invigilator immediately.
- Any electronic device capable of storing and retrieving text, including electronic dictionaries, smartwatches, and mobile phones, is not allowed.
- Calculators are **not allowed**.
- *All Rights Reserved*. This question paper can NOT be used without proper permission from the University of Colombo School of Computing.

**To be completed by
the examiners**

1	
2	
Total	

Index Number

--	--	--	--	--	--	--

1. (a). Explain the primary advantages of utilising **Java EE** over **Java SE** when designing and developing **enterprise-level applications**.

[10 marks]

--

- (b). Briefly explain the architectural issues introduced by a **God Class** and the standard technique used to resolve it.

[6 marks]

--

- (c). State **two (2)** primary advantages of adopting a **Component-Based Development (CBD)** approach when architecting enterprise software.

[6 marks]

--

Index Number

--	--	--	--	--	--	--

- (d). Explain the scenario where the **Remote Method Invocation (RMI)** is required in enterprise application development.

[6 marks]

- (e). Using a proper diagram, illustrate the **Remote Method Invocation (RMI)** process by clearly labelling all the critical components involved.

[16 marks]

- (f). Identify the **two (2)** parameters required to configure a servlet mapping within a **deployment descriptor**.

[6 marks]

Index Number

--	--	--	--	--	--	--

2. (a). What is an **application server**?

[8 marks]

--

(b). Define the purpose of a **Java Archive (JAR)** file within the context of deployment. Illustrate the standard internal directory structure of an enterprise JAR file using a structural diagram.

[20 marks]

--

Index Number

--	--	--	--	--	--	--

- (c). State the mechanism used to transform a **Plain Old Java Object (POJO)** into an Enterprise JavaBeans (EJB) component.

[10 marks]

--

- (d). List and briefly describe the primary components that comprise the **Java Persistence API** architecture.

[12 marks]

--
