

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST-2 EXAMINATION-2025

B. Tech-IV Semester (IT)

COURSE CODE (CREDITS): 19B11CI411 (3)

MAX. MARKS: 25

COURSE NAME: SOFTWARE ENGINEERING PRACTICES

COURSE INSTRUCTORS: MR. PRATEEK

MAX. TIME: 1 Hour 30 Min

**Note:** (a) All questions are compulsory.

(b) The use of calculator is allowed.

(c) The candidate is allowed to make suitable numeric assumptions wherever required for solving problems

Q.No	Question	CO	Marks
Q1	Consider a software project with the following functional units: 10 low external inputs, 12 high external outputs, 20 low internal logical files, 15 high external interface files, 12 average external inquiries. Assume that half of the complexity adjustment factors are average and remaining half are significant. Compute the functional points for the software project.	CO-3	5
Q2	Explain how functional requirements differ from non-functional requirements in the requirement engineering process. Also, discuss various steps of requirement engineering in detail.	CO-5	1+4
Q3	Consider a Restaurant Customer Service System that includes four major roles such as Customer, Waiter, Chef and Cashier. Each of the roles performs some specific set of tasks in the restaurant. (a) Draw a use case diagram for the above mentioned scenario that includes at least ten functionalities in total and minimum three functionalities should be associated with each role. (b) Also, display the sequential interactions between various roles using a sequence diagram for the above mentioned scenario.	CO-4	3+3
Q4	Differentiate between the terms cohesion and coupling in context of software design. Discuss three best types of cohesion and three worst form of coupling taking suitable examples for each category.	CO-4	1+4

Q5

Consider the entity-relationship diagram given below that represents a company that has no more than one factory in a city. Convert this ERD into relational model. Also, include minimum five entries in each relation.

CO-6

4

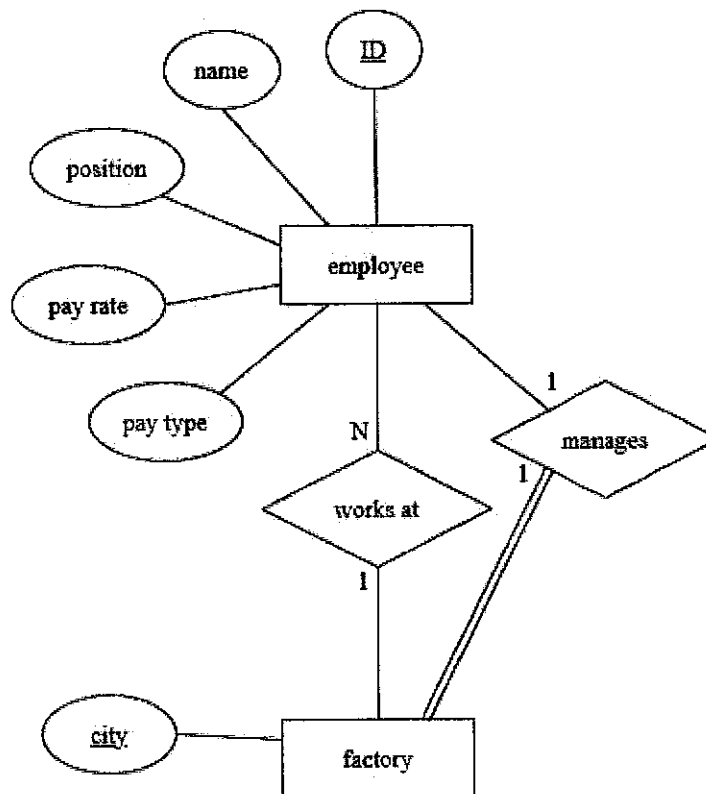


Fig 1. Entity-Relationship Diagram