



AUTUMN RE-MID SEMESTER EXAMINATION-2018
School of Computer Engineering
KALINGA INSTITUTE OF INDUSTRIAL TECHNOLOGY
DEEMED TO BE UNIVERSITY, BHUBANESWAR-24

Software Engineering
[IT-3003]

Time: 1½ Hours

Full Mark: 20

Answer any four questions including question No.1 which is compulsory.

The figures in the margin indicate full marks. Candidates are required to give their answers in their own words as far as practicable and all parts of a question should be answered at one place only.

- Q.1. [5×1]
- (a) What is software engineering ?
 - (b) Why spiral model is known as meta model?
 - (c) What are the characteristics of good SRS document?
 - (d) What are the reasons for software crisis? Explain.
 - (e) What do you understand by person month?
- Q.2. (a) Explain the working of RAD model. What are its applicability ? [2.5]
- (b) Hospital Reception subsystem supports some of the many job duties of hospital receptionist. Receptionist schedules patient's appointments and admission to the hospital, collects information from patient upon patient's arrival and/or by phone. For the patient that will stay in the hospital ("inpatient") she or he should have a bed allotted in a ward. Receptionists might also receive patient's payments, record them in a database and provide receipts, file insurance claims and medical reports. Draw the context diagram and level 1 DFD for the above system. [2.5]
- Q.3. (a) Explain the concept of function point. How it is different from LOC? [2.5]
- (b) Consider a project with the following functional units: [2.5]
- 25 simple user forms and 10 average complexity user inputs.
 - 20 update operations with screen display.
 - 10 simple enquires and 10 complex enquiries
 - User files = 6. Assuming all complexity adjustment factors as average. Calculate the function points for the project.
- Q.4. (a) Explain the details of COCOMO model. [2.5]
- (b) Suppose that the size of a software product of semidetached type, was to be estimated at 500KLOC. Calculate the development effort, development time, staff size and productivity. ($a_1 = 3.0$, $a_2 = 1.12$; $b_1 = 2.5$, $b_2 = 0.35$). [2.5]
- Q.5. (a) Write short notes (any two) [2.5 + 2.5]
- I) Scrum methodology
 - II) Cohesion and coupling
 - III) Prototype model
 - IV) Software configuration management.