(Please write your Exam Roll No.) Exam Roll No. .....

END TERM EXAMINATION

FOURTH SEMESTER [B.TECH.] MAY-JUNE-2018

Paper Code: IT-212 **Subject: Software Engineering**

Time: 3 Hours **Maximum Marks: 75**

Note: Attempt five questions in all including Q.No 1 which is compulsory.

Q1 Answer **any five** the following in brief:- **(5x5=25)**

(a) Explain the term acceptance testing, alpha testing and beta testing.
(b) What are the characteristic for a good SRS? Design SRS template.
(c) Discuss functional non-functional requirements? How do we check if all requirements have been met?
(d) Explain the term coupling and cohesion.
(e) Differentiate between the following:
(i) Deliverable and Milestone (ii) Measures, metrics and measurement.
(f) Differentiate between bug, failure and fault.

Q2 (a) List the difference between LOC and Function Point. compute the function point value for a project with the following information domain characteristics
Number of user inputs=30
Number of user outputs=42
Number of user inquiries=08
Number of internal logical files=07
Number of external interfaces=06
Assume all complexity adjustment factors as moderate and all weighing factors as average. **(6)**

(b) Explain Spiral model with labeled diagram. compare evolutionary and prototype model. **(6.5)**

Q3 (a) Draw 0 level, 1 level DFD and ER diagram for online food ordering system. **(6)**
(b) Discuss the term requirement engineering? List the techniques to elicit the requirements. Explain one of the techniques. **(6.5)**

Q4 (a) Explain the term risk. What are the different risk management activities? Explain. **(6)**
(b) Compare three modes of COCOMO. suppose a project with estimated to be 500KLOC. Calculate the effort and development time for each of the three modes of basic COCOMO. **(6.5)**

Q5 (a) With the help of an example, explain when Object Oriented Design is preferable over function Oriented Design. **(5)**
(b) Discuss different the key process areas of Capability Maturity Model (CMM) at each maturity level **(7.5)**

Q6 (a) Explain Boehm software quality model with the help of block diagram. **(6.5)**
(b) Explain structure chart and activity diagram with examples. **(6)**

Q7 (a) What is Software Maintenance? Explain Taute Maintenance model. **(4.5)**
(b) What is Cyclomatic complexity? How is it calculated? Write a program to calculate largest of 3 numbers in C and calculate its Cyclomatic complexity by drawing its DD path graph **(3)**

Q8 (a) Define: Reverse Engineering, Re-Engineering and Configuration Management **(6)**
(b) Write a program which takes three inputs. Design test cases using equivalence class testing and boundary value testing approach. **(6.5)**