Registration no:

Total Number of Pages: 02   **B.Tech.**
                                                                                      PCCS4402

7ᵗʰ Semester Regular/Back Examination 2017-18
Principles and Practices in Software Engineering
BRANCH: CSE
Time: 3 Hours
Max Marks: 70
Q.CODE: B226
Answer Question No.1 which is compulsory and any five from the rest.
The figures in the right hand margin indicate marks.

Q1   **Answer the following questions :**   **(2x10)**
a)   What are the fundamental activities of a software process?

b)   Explain why the programs developed using evolutionary development are likely to be difficult to maintain?

c)   Define Software crisis. What are the possible solutions to it.

d)   What are the various types of traceability in software engineering?

e)   What are the reasons behind to perform white box testing?

f)   Why the Spiral model is called as a meta model?

g)   Differentiate between a software measure and a software metric.

h)   Justify the statement: Maintenance is unavoidable in software systems.

i)   Why functional independence is the key factor for a good software design?

j)   What are the various types of software maintenance?

Q2 **a)**   Describe the relevance of CASE tools in software engineering. In which phase SDLC you can take the help of CASE tools?   **(5)**
       b)   Mention the reasons as to why classical waterfall model can be considered impractical and cannot be used in real projects.   **(5)**

Q3 **a)**   Using a suitable example, explain how Halstead's software science is used to measure size, development effort, development cost of software projects.   **(5)**
       b)   Discuss Walkthroughs and Inspections as Software review techniques.   **(5)**

Q4 **a)**   Why the legacy systems require re-engineering? Describe briefly the steps required for re-engineering a software product..   **(5)**

       b)   Discuss the different categories of software development projects according to the COCOMO estimation model   **(5)**

Q5 **a)**   For building a web based library management system for an organization: **(5)**
            i) Develop a Context-level model for the system
            ii) Develop a level-1 DFD for the system.
       b)   Discuss the cyclomatic complexity with suitable example.   **(5)**

Q6 **a)**   What is Software testing? Briefly discuss alpha,beta, acceptance testing.   **(5)**
       b)   What do you understand by the design concept of cohesion measures? Briefly explain each level of cohesion.   **(5)**

Q7 What is activity and deployment diagram? Draw a context level model and deployment **(10)** diagram for Safe Home system.

Q8 **Write short answer on any TWO :** **(5 x 2)**

a) Spiral Model

b) White box Testing

c) Software requirement specification

d) Software Configuration management