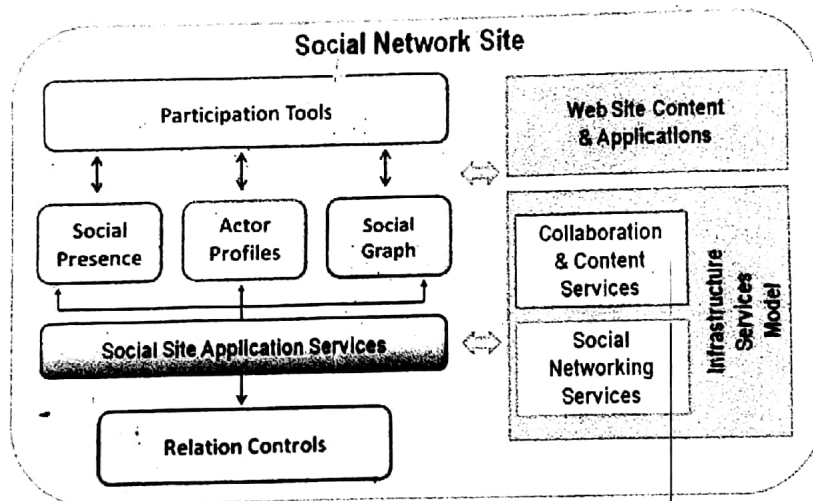M.Sc. (Informatics) – III Semester - 2016
IT-35- Software Engineering

Time: 3 Hrs.
Max. Marks: 75

Note: Answer five questions in all. All questions carry equal marks. Please write
your roll no. on the top of this paper.

Q 1 Define the term 'Software Engineering'. What are the 3 key elements used in   15
software engineering? With the help of a suitable diagram, describe and discuss
linear sequential waterfall model.

Q 2 Explain Extreme Programming, giving the process and techniques used in each   15
phase of the process. Distinguish between verification and validation.

Q 3 "Fundamental design concepts provide the software engineer with a foundation   15
from which sophisticated design methods can be applied". Explain the
fundamental software design concepts.

Q 4 Compare the waterfall, incremental, Rapid Application Development, prototyping   15
and spiral model based on the following factors: methodology, advantages and
disadvantages. (Draw a table to show the comparison).

Q 5   15

The above diagram shows the block diagram of a social network site, describe
each block in terms of the functions and workflows. Propose a technical solution
of the above social network.

Q 6 What is 'Requirement Specifications'. Write down detailed requirement   15
specifications and propose a design to generate the Enrollment Number of all the
UG and PG students of your University. Your design must be supported with a
logical flowchart.