BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
(END SEMESTER EXAMINATION)

CLASS: IMSc **SEMESTER : VII**
BRANCH: MATHS & COMP. **SESSION : MO/19**

SUBJECT: CS6109 SOFTWARE ENGINEERING

TIME: 3:00 HOURS **FULL MARKS: 60**

INSTRUCTIONS:
1. The question paper contains 7 questions each of 12 marks and total 84 marks.
2. Candidates may attempt any 5 questions maximum of 60 marks.
3. The missing data, if any, may be assumed suitably.
***4*. Before attempting the question paper, be sure that you have got the correct question paper.**
5. Tables/Data hand book/Graph paper etc. to be supplied to the candidates in the examination hall.

Q.1(a) Explain Big-Bang model and compare it with Water Fall process model. [6]
Q.1(b) Outline the software development life cycle. Briefly describe each of the stages, its relation to other stages and its overall importance. [6]

Q.2(a) What is Risk? Explain various categories of it. Also mention strategies of Risk. [6]
Q.2(b) Describe four Ps for Project Management and explain any three in detail. [6]

Q.3(a) What is requirement elicitation process and also explain requirement elicitation techniques. [6]
Q.3(b) What is Software Requirement Specification (SRS)? Why is it important? List the characteristic of a good quality SRS? What contents can we include in it? [6]

Q.4(a) Explain Unified Modelling language in Detail. [6]
Q.4(b) Draw context diagram and data flow diagram (DFD) for Library Management System. [6]

Q.5(a) What is Software Reliability? Compare Black Box testing and White Box testing in software product. [6]
Q.5(b) Consider a project with the following functional units : [6]
Number of user inputs = 50
Number of user outputs = 40
Number of user enquiries = 35
Number of user files = 06
Number of external interfaces = 04
Assuming all complexity adjustment factors and weighing factors as average. Then calculate Function Point for the project. AVERAGE characteristic weight = 3

Functional Units	Weighing Factors		
	Low	Average	High
EI	3	4	6
EO	4	5	7
EQ	3	4	6
ILF	7	10	15
EIF	5	7	10

Table1 : Function Point complexity weights

Q.6(a) Explain software quality assurance and standards. [6]
Q.6(b) Explain software reliability. Define the metrics to measure software reliability. [6]

Q.7(a) Define types of maintenance and maintenance activities. [6]
Q.7(b) Write a short note on Re-Engineering. [6]

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