No. of Pages: 2

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APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

FIRST SEMESTER M.TECH DEGREE EXAMINATION, DECEMBER 2018

Branch: **Computer Science and Engineering**

Stream(s): **Computer Science and Engineering**

Course Code & Name:
01CS6107 Advance Software Engineering

Answer *any two full* questions from *each* part
Limit answers to the required points.

Max. : 60 Marks Duration: 3 hours

PART A

			Marks
1.	a.	Give an example of problem analysis where the problem components are relatively simple, but the difficulty in solving the problem lies in the interconnections among sub-problem components.	3
	b.	What are the element of a System. Explain with example	6
2.	a.	Who are members of the development team and what are their roles?	5
	b.	How has software engineering changed?	4
3.	a.	What do you mean by a "process" in software engineering? Illustrate with an example.	4
	b.	Explain Wasserman's Discipline of Software Engineering.	5

PART B

4.		It is decided to automate train ticket reservation at a railway booking office having 10 reservation counters and a self operated enquiry counter. Prepare the problem statement, and state the functional and non functional requirements for the software to be developed for the proposed automation system.	9
5.	a.	Draw the Sequence diagram for the log-in function to be used in an ATM software.	5
	b.	State four important programming guidelines for developing good quality software.	4
6.		A simple library management software shall provide for issue, return and reservation of books. Design suitable software following Object Oriented approach and using UML diagrams.	9

PART C

7.	a.	Discuss the differences in testing a business-critical system, a safety-critical system, and a system whose failure would not seriously affect lives, health, or business.	6
	b.	Explain why the success of a system depends heavily on the quality of the documentation generated during system development.	6
8.	a.	When you develop a build plan, you must take into account the resources available to both developers and customers, including time, staff, and money. Give examples of resource constraints that can affect the number of builds defined for system development. Explain how these constraints affect the build plan.	6

b. Name and describe briefly the following: 6
   i. Black Box Testing,
   ii. White Box Testing,
   iii. Integration Testing.

9. a. If an independent test team does integration testing and a critical fault remains in the code after testing is complete, who is legally and ethically responsible for the damage caused by the fault? 6

   b. Explain why maintenance programming may be more challenging than new development. Why must a good maintenance programmer have good " people skills"? What are other desirable characteristics of a maintenance programmer? 6