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JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT  
TEST -1 EXAMINATION – September 2018  
M.Tech I Semester

**COURSE CODE: 14M31CE112**

**MAX. MARKS: 15**

**COURSE NAME: SIMULATION AND MODELING**

**COURSE CREDITS: 03**

**MAX. TIME: 1 Hr**

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*Note: All questions are compulsory. Carrying of mobile phone during examinations will be treated as case of unfair means. Assume suitable data if required.*

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- Q1.a) Define the terms: **[03 Marks]**
- i. Event
  - ii. Environmental System and
  - iii. State of the System
- b) Distinguish between a "Discreet Event" and "Continuous Event" with the help of neat figures. **[02 Marks]**
- Q2.a) Distinguish between "Simulation" and "Modeling". **[02 Marks]**
- b) What are the goals that can be achieved through simulation and modeling. Under what scenarios, Simulation can be used as an appropriate tool. Discuss. **[03 Marks]**
- Q3.a) With the help of a flow diagram, discuss the steps involved in a simulation study. **[03 Marks]**
- b) Why a model has to be verified and validated before implementation. **[02 Marks]**