College of Engineering **Student No:** _____ Course No: SWE 4417

Final Exam of Second Course Tile: Student Name: _____

Date: 21-05-2015

Term 2014/2015 Exam Time: 2 Hours

Eng. Ibrahim Al-Sharif

No of Questions: 5 Total Grade: 100 Try to Answer: All

Q1: Define: (20 marks)

Distributed Software Systems

- 1- Web services.
- 2- XML.
- 3- WSDL.
- 4- UDDI.
- 5- SOAP.
- 6- Throughput.
- 7- Execution time.
- 8- Latency.
- 9- Execution time.
- 10-Service broker.

Q2- Talk about the following: (15 marks)

- 1- Elasticity:
- 2- Responsibilities in Software as a Service (SaaS):
- 3- Responsibilities in Platform as a Service (PaaS):
- 4- Responsibilities in Infrastructure as a Service (IaaS):
- 5- Code Migration:

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Q3- Answer the following: (15 marks)

- 1- What is Atomicity? Why we need it?
- 2- What is the core idea of the 2-phase commit protocol?
- 3- Message-Oriented Middleware connection types are: Point-to-point and Publish / Subscribe .Explain briefly each type

Q4- Answer the following: (25 marks)

- 1- Explain the important principle of RMI.
- 2- List the three types of invocation semantics in RMI. and explain one.
- 3- What is the main task of Registry, Skeleton and Remote reference layer in RMI?
- 4- What is IDL in CORBA? Why we need it?
- 5- What are the limitations of CORBA?

Q5-Design: (25 marks)

A group chatting system is required for a small company, What is and Why?

- Architecture of the system:
- Invocation Semantic:
- Middleware Type:
- Middleware Name:
- *Programming Language(s):*
- *Interaction model:*
- Failure model:
- Security model: