DHARMSINH DESAI UNIVERSITY, NADIAD
FACULTY OF TECHNOLOGY

B.TECH. SEMESTER VII [Information Technology]

SUBJECT: (IT 715) Distributed Computing

Examination	**: Third Sessional**	**Seat No.**	**:**
Date	**: 14/10/2016**	**Day**	**: Friday**
Time	**: 02:15 to 3:30**	**Max. Marks**	**: 36**

INSTRUCTIONS:

1. Figures to the right indicate maximum marks for that question.
2. The symbols used carry their usual meanings.
3. Assume suitable data, if required & mention them clearly.
4. Draw neat sketches wherever necessary.

Q.1 **Do as directed.** **[12]**

(a) Give the definition of 1) Grid Service 2) Virtual Organization **[04]**

(b) Give the definition of Peer to Peer System. **[02]**

(c) Explain importance of ESB in context of Application Integration. **[02]**

(d) Write Down Features of ESB. **[02]**

(e) Differentiate between executable and abstract business processes. **[02]**

Q.2 Attempt Any Two following questions. **[12]**

(a) Explain SOA Governance in detail. **[06]**

(b) Write down steps for implementing Scientific Web service which provides operation like Sine and Cos using contract first approach. **[06]**
1) Write Down ".java" code, write down steps to test it.
2) Write Client Application which uses web service.

(c) Write down steps for implementing Arithmetic Web service which provides operation like Addition and Subtraction. **[06]**
1) Write Down ".java" code, write down steps to test it.
2) Write Client Application which uses web service.

Q.3 Attempt following questions **[12]**

(a) Explain composition, orchestration, and Choreography of web services Provided by BEPL. **[04]**

(b) Write Steps for Implementing BPEL process to get solution of Sqrt (a^2+b^2). **[08]**
1) Create two separate web services one for computing Square and Addition operation and second for Finding value of **Square Root of computed value** along with code. [03]
2) Give BPEL process, involved activities and their sequences and mapping of variables. [03]
3) Write down steps to use BPEL process as a web service. [02]

OR

Q.3 Attempt following questions **[12]**

(a) Draw Hour Glass model based Grid Architecture. Also discuss responsibility of each layer. **[04]**

(b) Write Steps for Implementing BPEL process to get solution of ($\sin^2$ (a+b)). **[08]**
1) Create two separate web services one for Addition operation and second for Finding value of **$\mathbf{Sin^2}$** along with code. [03]
2) Give BPEL process, involved activities and their sequences and mapping of variables. [03]
3) Write down steps to use BPEL process as a web service. [02]