

M.Tech.I.T. 2015 I & III.

REVATI-I (CBCS – 2015 COURSE) : **WINTER - 2016**
SUBJECT : SOFTWARE ARCHITECTURE

Day : **Tuesday**
Date : **13-12-2016**

Time : **11.00 A.M. To 2.00 P.M.**
Max. Marks : 60.

N.B.:

- 1) All questions are **COMPULSORY**.
- 2) Both the sections should be written in **SEPARATE** answer books.
- 3) Figures to the **RIGHT** indicate full marks.

SECTION-I

Q.1 Define role of an architect and discuss about skills of an architect. (10)

OR

Describe architecture business cycle.

Q.2 Describe decomposition approach for software design with examples. (10)

OR

Define abstraction with examples.

Q.3 State and describe 3-software design principles. (10)

OR

Describe 'Singleton' design pattern.

SECTION-II

Q.4 Explain stateless and stateful session Beans in EJB. (10)

OR

Explain entity and session beans in EJB.

Q.5 Describe client side technology in multi-tier architecture. (10)

OR

State the transition from HTML to DHTML.

Q.6 Explain include directive and include action of JSP. (10)

OR

In JSP page how can we handle runtime exception? Explain with example code.

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WINTER - 2016

REVATI - I (CBCS - 2015 COURSE):
SUBJECT: MACHINE LEARNING

Day: *Thursday*
Date: *15-12-2016*

Time: *11:00 A.M. To 2:00 P.M.*
Max. Marks: 60

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- 3) Answers to both the sections should be written in **SAME** answer book.

SECTION - I

- Q.1 What is Machine Learning? List different applications of Machine Learning. (10)
- OR**
- Q.1 List different approaches of Machine Learning. Explain any one in detail. (10)
- Q.2 What are Multidimensional Inputs and Multidimensional Output? (10)
- OR**
- Q.2 Explain regression in detail? Discuss functions of regression. (10)
- Q.3 What are probabilities Density Functions (PDFs)? Discuss them in detail. (10)
- OR**
- Q.3 Explain Gaussian Distribution. Explain it in detail. (10)

SECTION-II

- Q.4 Discuss Hidden Markov Model in detail. (10)
- OR**
- Q.4 List and explain critical applications of Reinforcement Learning. (10)
- Q.5 Discuss forward Algorithm in detail. (10)
- OR**
- Q.5 Draw and explain Data Warehouse Architecture. (10)
- Q.6 Discuss relation between Machine Learning and Data Mining. (10)
- OR**
- Q.6 Compare and contrast Semi - Supervised and Reinforcement Machine Learning. (10)

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REVATI-I (CBCS – 2015 COURSE) : WINTER - 2016
SUBJECT : MOBILE NETWORKS AND COMMUNICATION

Day : *Saturday*
Date : *17-12-2016*

Time : *11.00 A.M. To 2.00 P.M.*
Max. Marks : 60.

N.B.:

- 1) All questions are **COMPULSORY**.
- 2) Both the sections should be written in **SEPARATE** answer books.
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SECTION-I

Q.1 What is cell splitting? Explain frequency management system. **(10)**

OR

What is Handoff system? Explain frequency reuse channel.

Q.2 Compare SDMA and TDMA, CDMA. **(10)**

OR

Write a signal separation advantages and disadvantage.

Q.3 What is co-channel? Explain reduction co-channel. **(10)**

OR

What is non-co channel? Explain propagation path loss.

SECTION-II

Q.4 Explain resource allocation and mobility management. **(10)**

OR

What is switching technique? Explain small switching systems.

Q.5 Draw GSM system architecture. **(10)**

OR

Explain wireless communication system UMTS.

Q.6 Explain Hidden station problem. **(10)**

OR

What is Bluetooth technology? Explain in detail.

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REVATI - I (2015 COURSE) (CBCS): WINTER - 2016
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SECTION - I

Q.1 What is parallel processing? How parallel processing can be achieved in an uniprocessor system? Explain. [10]

OR

Explain Flynn's classification of parallel processing with neat diagrams.

Q.2 What are interconnection networks? What are the factors those contribute in deciding the structure of interconnection networks? Explain. [10]

OR

What are static types of networks? Explain with neat diagrams.

Q.3 Explain the concept of clusture computing in detail. [10]

OR

Explain the architecture of a supercomputer.

SECTION - II

Q.4 Explain the data flow principle. What are data flow graphs? How they are used to represent data flow mechanism? Explain. [10]

OR

What are static and dynamic data flow machines? What is data flow compiler? What is out-of-order execution? Explain.

Q.5 What is parallel model? What are its components? Explain. [10]

OR

Give and explain in brief the classification of parallel programming models.

Q.6 Explain the digital system design flow in VHDL with neat diagram. [10]

OR

What is a basic template of a VHDL program? Explain with suitable example.

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