B.TECH SEM – VII (2007 COURSE) (COMPUTER ENGG.) : SUMMER - 2018

SUBJECT: SOFTWARE ARCHITECTURES

Day : **Tuesday** | **S-2018-2769** | Time : **02.30 PM TO 05.30 PM**
Date : **22/05/2018** | Max. Marks : 80

N. B. :

1) **Q.No.1** and **Q.No.5** are **COMPULSORY.** Out of remaining attempt **ANY TWO** questions from each section.
2) Answers to both sections should be written in **SEPARATE** answer books.
3) Figure to the right indicates **FULL** marks.
4) Draw neat labeled diagrams **WHEREVER** necessary.
5) Assume suitable data, if necessary.

SECTION-I

Q. 1 **a)** Explain in detail WSC Storage Hierarchy and Networking. **(05)**

b) Design Software Architecture for Online Word Processor Software. **(05)**

c) What are the different Performance Debugging tools? **(04)**

Q. 2 **a)** Define Software Framework and differentiate between Data Design And Architecture Design. **(08)**

b) Write short note on Web Engineering Layers. **(05)**

Q. 3 **a)** State broad groups of Infrastructure Software that makes Cluster Level Infrastructure. **(07)**

b) Describe work loads of citation based similarity computation that uses map reduce. **(06)**

Q. 4 **a)** How does Latency Bandwidth And Capacity contribute as WSC building blocks? **(07)**

b) Give in detail Architectural Overview of WSCs. **(06)**

SECTION-II

Q. 5 **a)** Explain in detail Google's in-row cooling system. **(05)**

b) Which are the steps required to improve the energy efficiency of Data Centers. **(05)**

c) Enlist the advantages of oversubscribing facility power. **(04)**

Q. 6 **a)** What is Data Center? With the help of block diagram explain Data Center tier classification. **(07)**

b) Explain Capital Cost and Operation Cost in detail. **(06)**

Q. 7 **a)** What do you mean by energy efficiency of WSC? Give all the measures of it. **(07)**

b) Explain in detail modeling cost of real-world Data Centers. **(06)**

Q. 8 **a)** Explain Fault Severity and causes of Service Level Faults. **(07)**

b) What is an efficient repair process of WSCs? **(06)**

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