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

Day : **Monday** | **S-2018-2768** | Time : **02.30 PM TO 05.30 PM**
Date : **21/05/2018** | Max. Marks : 80

N.B.:

1) **Q. No. 1** and **Q. No. 5** are **COMPULSORY**. Out of the remaining attempt **ANY TWO** questions from Section – **I** and Section – **II**.
2) Figures to the right indicate **FULL** marks.
3) Answers to both the sections should be written in **SEPARATE** answer books.
4) Use of non programmable **calculator** is **ALLOWED**.
5) Draw neat and labeled diagrams **WHEREVER** necessary.
6) Assume suitable data, if necessary.

SECTION - I

Q.1 a) What are various factors that leads to define "unreliable network"? **(05)**

b) Explain how semantics of RPC are similar to that of local procedure call. **(05)**

c) Justify need of election in distributed mutual exclusion. **(04)**

Q.2 a) Explain in detail concept of stateless and stateful server. **(07)**

b) Describe the significance and construction of middleware. **(06)**

Q.3 a) With neat sketch discuss about fundamental model for distributed system. **(07)**

b) Describe the significance of marshalling in communication between distributed system. **(06)**

Q.4 a) How synchronization is achieved using physical clocks elaborate? **(06)**

b) Write a short note on: nested transactions. **(07)**

SECTION - II

Q.5 a) Explain concept of event ordering in distributed system. **(05)**

b) List and describe various security techniques for DS. **(05)**

c) What happens if munin process modifies a share variable outside a critical region? **(04)**

Q.6 a) Describe about various design issues for processor allocation algorithm. **(07)**

b) Discuss the following with example. **(06)**
i) physical clock
ii) Logical clock
iii) clock skew

Q.7 a) Distinguish between symmetric and asymmetric cryptographic algorithms. **(07)**

b) Write a note on: "Protection and security in distributed system". **(06)**

Q.8 a) Describe replication in Andrew file system. **(07)**

b) List out the steps to implement IRMI using Java. **(06)**

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