

B.SC. (I. T.) SEM. - V (CBCS - 2015 COURSE) : SUMMER - 2018
SUBJECT: PARALLEL AND DISTRIBUTED COMPUTING

Day : **Thursday**
Date : **24/05/2018**

S-2018-0954

Time : **02.30 p.m. to 05.30 p.m.**
Max. Marks: 60

N. B.:

- 1) **Q. No. 1 is COMPULSORY.**
 - 2) Attempt **ANY TWO** from questions **Q.No.2 to Q. No.4.**
 - 3) Figures to the right indicate **FULL** marks.
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SECTION-I

- Q.1** Answer in brief **ANY TEN** of the following **(40)**
- a) Explain Amdahl's law in parallel processing.
 - b) What are the differences between point-to-point and collective communication operations in message passing?
 - c) What is the purpose of MPI_Comm_size and MPI_send routines in MPI?
 - d) What is makespan?
 - e) Explain the purpose of parallel for and parallel sections directives in Open MP.
 - f) Enlist different components of a grid.
 - g) What is virtual organization in grid/cloud?
 - h) Homogeneous Vs Heterogeneous clusters.
 - i) What is a peer in P2P systems? Enlist different type of peers.
 - j) Define cloud computing in your own terms.
 - k) Synchronous and Asynchronous MPI mode.
 - l) Blocking and Non-blocking message passing interface.
- Q.2** Answer **ANY ONE** from the following: **(10)**
- a) What is monitoring and discovery service? What sort of information about grid resources would you explore before submitting your job on the grid?
 - b) Write a short note on structured and unstructured P2P systems. Give one example of each.
- Q.3** Answer **ANY ONE** from the following: **(10)**
- a) Explain different cloud deployment models.
 - b) What are parallel programming paradigms? Describe with block diagram Task-Farming, and ii) Data Pipelining parallel programming paradigms.
- Q.4** Answer **ANY ONE** from the following: **(10)**
- a) Explain MaxMin and MinMin scheduling algorithms with suitable examples?
 - b) Write a short note on structured and unstructured P2P systems. Give one example of each.

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