B.SC. (I. T.) SEM. - V (CBCS - 2015 COURSE) : WINTER - 2017

SUBJECT: PARALLEL AND DISTRIBUTED COMPUTING

Day: **Wednesday** Time: **10.00 A.M. TO 01.00 P.M.**

Date: **20/12/2017** **W-2017-0854** Max. Marks: 60

N.B.:

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

Q.1 Answer in brief **ANY TEN** of the following: **(40)**

a) Explain SPMD
b) What are the differences between grid and cloud computing?
c) What is the purpose of MPI_init and MPI_finalize routines in MPI?
d) Explain the functionality of Resource-broker in grids?
e) Explain the data handling clauses.
f) Explain MCT algorithm.
g) Write hello world program in C/FORTRAN using OpenMP?
h) Cluster computing Vs Grid computing.
i) What is a *peer* in P2P systems? How it is different from client-server environment?
j) Explain the Sections Directive in shared OpenMP.
k) Motivation behind using MPIs.
i) Explain functions of Gridsim.

Q.2 Answer **ANY ONE** of the following: **(10)**

a) Write a short note on Job submission in grid.

b) Explain different paradigms for parallel programming.

Q.3 Answer **ANY ONE** of the following: **(10)**

a) Explain Grid computing and functionality of grid middleware with diagram.

b) Explain Performance metrics for parallel systems.

Q.4 Answer **ANY ONE** from the following: **(10)**

a) Explain LJFT and SJFT scheduling algorithms with suitable example?

b) Write a short note on Type of clouds. Explain the features of Cloudsim.

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