

PE – 515
M.Sc. COMPUTER SCIENCE (FOURTH SEMESTER)
Examination JUN. 2022
Paper-I

Name/Title of paper – ADVANCE TRENDS AND TECHNOLOGY IN COMPUTER SCIENCE

Time: Three Hours

[Maximum Marks :80

[Minimum Pass Marks: 29

Note: Answer from both the section as directed. The Figures in the right-hand margin indicate marks.

SECTION – A

1. Choose the correct answer: 2X5
- (a) What are the main components of Big Data?
i. MapReduce ii. HDFS iii. YARN iv. All of these
- (b) The computer cluster architecture emerged as a result of
i. Workstation ii. Super Computer iii. ISA iv. Distributed system
- (c) Facebook tackles Big Data with----- based on Hadoop.
i. project data ii. Prism iii. Project bid iv. Project prism
- (d) The cluster formation in which the work is divided equally among the system is-----
i. light head ii. Load-configuration iii. Load-division iv. Both ii and iv
- (e) A wireless telecommunications network for device to device connections within a very short range
i. sensor network ii. WLAN iii. PAN iv WWAN
2. Answer the following short-answer type questions : 2X5
- i. When can you say that your data is Big?
ii. Explain cloud in cloud computing.
iii. What is grid computing in simple terms?
iv. Write the node hardware specification in cluster computing.
v. What do you understand by Pervasive Information Technology?

SECTION – B

3. Answer the following long answer type questions: 12X5
- Unit-I**
- (a) Define the Big Data with properties. Explain different types 'V' of Big Data analytics.

(b) Explain Massively Parallel Processing (MPP) Platform.

OR

(a) How to implementation of Big Data with example.

(b) Explain real time adaptive analytics and decision engines.

Unit-II

4. (a) What is trusted cloud Computing ? Discuss the characteristics of cloud computing.

(b) Write the benefits & limitations of cloud computing.

OR

(a) Explain any two types of service provided by cloud computing with example.

(b) What is the difference between Web Application & Web Browsers?

Unit-III

5. (a) What is Grid Computing? Explain any two middleware of Grid.

(b) Discuss the resource management of Grid computing.

OR

(a) Explain the Grid Computing Road Maps with example.

(b) What is Grid Monitoring System? Explain with proper diagram.

Unit-IV

6. (a) Explain different workload management activities of Cluster Computing

(b) Explain Cluster classification in detail.

OR

(a) Explain the planning & architecture of Cluster Computing.

(b) What is Virtualization? Explain Virtualization technology with example.

Unit-V

7. (a) Write the pervasive computing Principles & characteristics.

(b) Explain the architecture of pervasive Web Application.

OR

(a) Write notes on: i. Device Categories

ii. Software Component