(564) M.Sc. COMPUTER SCIENCE (FOURTH SEMESTER)
Examination June 2020
Compulsory/Optional
Group -
Paper - I

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

Time: - Three Hours [Maximum Marks: 080

[Minimum Pass Marks: 029

नोट : दोनों खण्डों से निर्देशानुसार उत्तर दीजिए। प्रश्नों के अंक उनके दाहिनी ओर अंकित है

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=10

   A- Choose the right answer –

   (i) HDFS stands for.

   (a) Highly Distributed File System

   (b) Hadoop Directed File System

   (c) Highly Distributed File Shell

   (d) Hadoop Distributed File System.

   (ii) The set of loosely connected computers are called as ……… .

   (a) LAN   (b) WAN   (c) Cluster   (d) Workstation.

   (iii) What is true about grid computing?

   (a) Cloud computing is an example of grid computing.

   (b) Cluster computing is an example of grid computing.

   (c) Grid computing is a type of infrastructure as a service.

   (d) Grid computing can run in a cloud computing environment.

   (iv) Which delivery model is an example of a cloud computing environment that provides user with a web-based email service?

   (a) Software as a service.

   (b) Infrastructure as a service.

   (c) Platform as a service.

   (d) Computing as a service.

   (v) Pervasive computing is a computer environment in which virtually every object has processing power with wireless or wired connection to a global network.

   (a) True.

   (b) False.

2. Write the short type answer for the following questions: 2x5=10

   (i) How is Hadoop related to Big Data?

   (ii) What do you mean by cloud in cloud computing?

   (iii) What is grid computing in simple terms?

   (iv) What are the goals of Clustering?

   (v) What is pervasive computing principles.

Section - B

Answer anyone long-answer type questions from each unit.

Unit - 1

3. (a) Describe different V's of big data analytics.   6x2=12
   (b) Explain online advertising of big data analytics.

OR

   (a) Explain the complete concept of unstructured data analytics.
   (b) Explain real-time adaptive analytics and decision engines.

Unit - 2

4. (a) Explain different services of cloud computing.   6x2=12
   (b) Write short note on cloud storage.

OR

   (c) Explain business application of cloud computing with example.
   (d) How cloud computing provides scalability and fault tolerance.

Unit - 3

5. (a) Explain architecture and service modelling of grid computing.   6x2=12
   (b) Explain any two middle ware of grid.

OR

   (a) Discuss the resource management of grid computing.
   (b) Explain Grid Monitoring Architecture with proper diagram.

Unit - 4

6. (a) Describe the architecture of cluster computing system.   6x2=12
   (b) Explain node hardware and node software of cluster technology.

OR

   (a) Explain the role of cluster and hardware system structure of cluster computing.
   (b) Explain different workload management activities of cluster computing.

Unit - 5

7. (a) Describe the evolution of pervasive computing.   6x2=12
   (b) Discuss the pervasive device categories and their characteristics.

OR

   (a) Explain the architecture of pervasive web application.
   (b) Explain different applications of pervasive computing.