Roll No…….. **Total No. of Printed Pages: [01]**
Total No. of Questions: [09]

BCA (Semester – 6th)
EMERGING TRENDS IN INFORMATION TECHNOLOGY
Subject Code: BCAP1-628
Paper ID: [160128]

Time: 03 Hours **Maximum Marks: 60**

Instruction for candidates:

1. Section A is compulsory. It consists of 10 parts of two marks each.
2. Section B consist of 5 questions of 5 marks each. The student has to attempt any 4 questions out of it.
3. Section C consist of 3 questions of 10 marks each. The student has to attempt any 2 questions.

Section – A **(2 marks each)**

Q1. Attempt the following Questions:

a) Write down the four characteristics of cloud computing.
b) Discuss the relationship between Web 2.0 and Cloud Computing
c) Differentiate between soft computing and hard computing.
d) Define the term edge routers in IoT with the help of an example.
e) Differentiate between parallel computing and distributed computing.
f) How neurons play a vital role in Computers.
g) In daily use can you use a PaaS if yes name the four PaaS cloud?
h) Differentiate beween IaaS and SaaS Clouds.
i) Write down the name of 8 Emerging Technologies names.
j) Name the classification of grid computing organization based on their functional role.

Section – B **(5 marks each)**

Q2. With the help of a case study of Computer Lab (CL1) in your department demonstrate the word "cluster computing" if three Operating Systems like, Windows, Solaris and Linux are installed in your Computer Lab.
Q3. Discuss the need of Grid Computing.
Q4. Define the term "Energy aware cloud computing" with an example.
Q5. What is the role of "Neural Networks" in Emerging Trends in IT?
Q6. Discuss the various topologies of IoT.

Section – C **(10 marks each)**

Q7. Discuss Grid requirements of end users, application developers, tool developers, and grid developers, and system managers.
Q8. Suppose you are designing Virtual Data Centre. What key elements you need? Draw the Block Diagram for it.
Q9. With the help of neat and clean diagram elaborate the architecture of IoT.