MANIPAL INSTITUTE OF TECHNOLOGY, MANIPAL 576104

(Constituent College of Manipal University)

**SIXTH SEMESTER B.TECH. (IT/CCE) DEGREE END SEMESTER EXAMINATION, MAY – 2016**
**SUBJECT: PROGRAM ELECTIVE I – NETWORK TECHNOLOGIES – ICT-332**
**(REVISED CREDIT SYSTEM)**

**TIME: 3 HOURS**　　　　　　　　**11/05/2016**　　　　　　　　**MAX. MARKS: 50**

---

**Instructions to candidates**
　　　　Answer any **FIVE FULL** questions.
　　　　Missing data, if any, may be suitably assumed.

---

1A.　　What are the services and applications of PSTN? How to overcome the drawbacks of PSTN?
1B.　　Why do we need virtual hosting? How to achieve it?
1C.　　What are basic logics used for forward and filter by the switch?　　　　　　　　[5+3+2]

2A.　　Explain the role of Data Center Network layer in the following scenario "User A is accessing his E-Mail account through a mobile device, and User B is watching movie via YouTube using his Laptop device, and User C is scanning his desktop system using licensed anti-virus software, which stores the summary in his online account.
2B.　　How do you implement hybrid cloud model for an academic institute to maintain student and employee details?
2C.　　Show time description of SDP for following scenario "an hour meeting from 10am UTC on 1 August 2010, with a single repeat time a week later at the same time".　　　　[5+3+2]

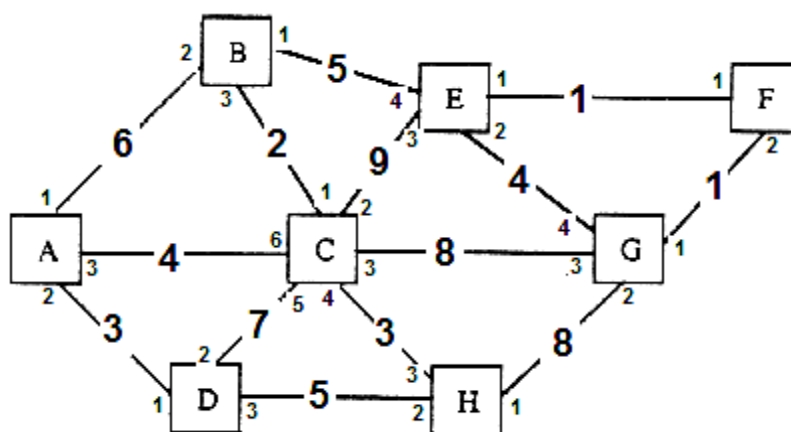3A.　　Generate spanning tree for the network topology given in Figure Q.3A using STP. Show the steps for each face.



Figure Q.3A

3B.　　Virtualizing Data Centers is not in the interest of industries to utilize the resources effectively. Why?
3C.　　What are the components of mobile wireless system? Write the roles of any one component.
　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　[5+3+2]

4A.　　List and explain the different types wireless threats observed in wireless communication.
4B.　　Differentiate the dynamic and static routing techniques based on features?
4C.　　Why do we need cloud computing, when we have virtualization and data center?　　[5+3+2]

5A. Draw and explain NIST reference architecture of cloud computing. Briefly describe the service layer of the reference architecture.

5B. Why does Home Agent double encapsulate the packet?

5C. What is geographical clustering? How does it help in business continuity? [5+3+2]

6A. List and explain key properties of virtualization.

6B. What is the role of VAD in VoIP? How does Echo Cancellation work?

6C. "Horizontal scaling of servers leads increase in management complexities" Justify this and also state the solutions to overcome management complexities. [5+3+2]

\*\*\*\*\*\*\*\*\*\*\*\*\*