

Name:

Enrolment No:



**UNIVERSITY OF PETROLEUM AND ENERGY STUDIES**  
**End Semester Examination, May 2020**

**Course:** R&S Connecting Network

**Program:** B.C.A

**Course Code:** CSBC 3007

**Semester:** 6<sup>th</sup>

**Time** 03 hrs.

**Max. Marks:** 100

**Instructions:** The paper contains 3 sections where section A contains 6 questions of 5 marks each, section B contains 4 question of 10 Marks each and section C contains question of 20 marks. Write precise and follow the word limit. The word limit for section B is 300 and for section C is 800 words.

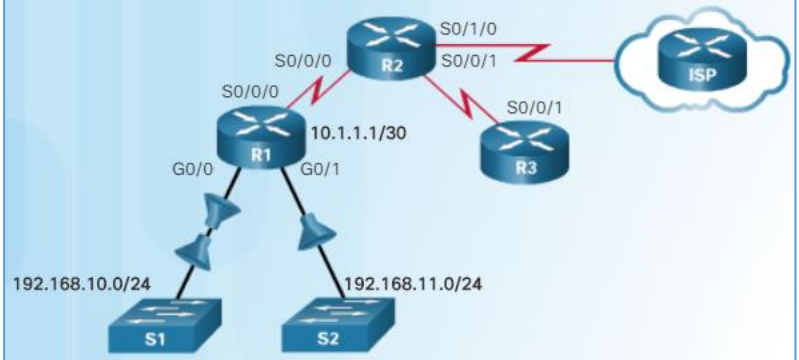
**SECTION A**

S. No.		Marks	CO
Q 1	Which of the following is NOT a WAN technology? a). DCE b). DTE c). DWDM d). DDC	5	CO1
Q 2	Which is NOT a secure way for remote access. a). SSH b). HTTP c). HTTPS d). All	5	CO1
Q 3	Which of the following is correctly mapped? a) Bandwidth: describes the capacity of a link b) Delay: Delay is time taken by the packet from source to destination c) Jitter: Inconsistencies in delay d) All	5	CO4
Q 4	Calculate the wildcard mask corresponding to the subnet mask /28 a).0.0.0.255 b).0.0.0.28 c).0.0.0.15 d). 0.0.0.31	5	CO2
Q 5	Which of the following is the INCORRECT about NAT? a). Network address translation b). Maps Private IP to Public IP c). PAT is more efficient than static NAT d). PAT uses port address	5	CO3
Q6	Which of the following is operating modes of SNORT? a). Sniffer mode, b). Packet Logger mode c). Network Intrusion Detection System (NIDS)	5	CO4

d). All of the above

**SECTION B**

Q 7 What is the difference between inbound and outbound ACL? Follow the given topology and write the configuration for the ACL.



- a). Block all incoming traffic from the network 192.168.11.0 to 192.168.10.0
- b). Configure ACL such that all host in the network 192.168.10.0/24 will not be able to access the internet and telnet to 192.168.11.0/24.

**10 CO4**

Q 8 Briefly discuss the PPP architecture with LCP and NCP. Write the configuration commands of PPP.

**10 CO2**

Q 9 Provide a brief discussion of following broadband solution: DSL, fiber to home, and Wi fi along with comparison.

**10 CO1**

Q 10 Describe the method for trouble-shooting layer wise for transport layer and application layer.

**10 [5+5] CO4**

Q 11 Explain software defined network. What is control plane and data plane and decoupling them is advantageous for programmable network.

**10 [5+5] CO3**

**SECTION-C**

Q12 a). As a network administrator you have secure your intranet from the intruder. The LAN suffers different types of vulnerabilities. Discuss such vulnerabilities in the LAN. What type of attack that are possible on the LAN using these vulnerabilities? Discuss the solution present to mitigate these attacks.  
 b). To prevent the attack IDS and IPS are used. Take SNORT as a case study discuss the required features of IDS. Give a comparison of signature based and behavior based IDS.

**20 [10+10] CO4**

Or a). Discuss the role of VPN is teleworking. What is the role of GRE protocol in site to site VPN tunneling?  
 b). Discuss the role of virtualization in network evolution. How open stack and open flow provides network virtualization. Discuss different types of hypervisor.

**20 [10+10] CO2, CO3**