VEERMATA JIJABAI TECHNOLOGICAL INSTITUTE

Matunga, Mumbai-400 019

Autonomous Institute affiliated to University of Mumbai

EXAMINATION	End Semester Examination MAY 2021	DATE OF EXAM	12/05/2021
SEMESTER & PROGRAM	Sem-I, 1ST YEAR M.Tech. (Computer Engineering)	TIME	11:00 AM to 01:00PM
TIME ALLOWED	**2 HR.**	MARKS	**60**
COURSE NAME – (CODE)	**TCP/IP AND NP(CO5003T)**		

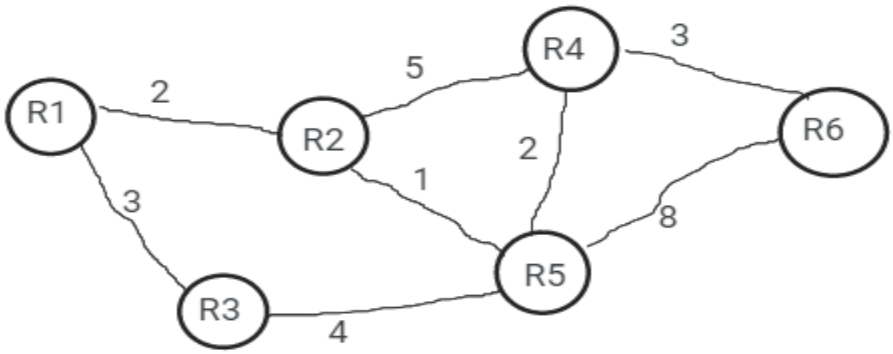
Instructions
1. All questions carry equal marks.
2. Figures to the right indicate full marks.
3. Assume suitable and necessary data.

Q.1 a. List out various conditions in which retransmission occurs. Write in detail about it. (06) CO2

b. The following is a dump of UDP header in hexadecimal format (04) CO1
5EFA00FD001C3297
What is the total length of user datagram? Is the packet from client to server or vice versa?

c. Write about how SYN-flooding attack is done. (02) CO3

Q.2 a. (10) CO2



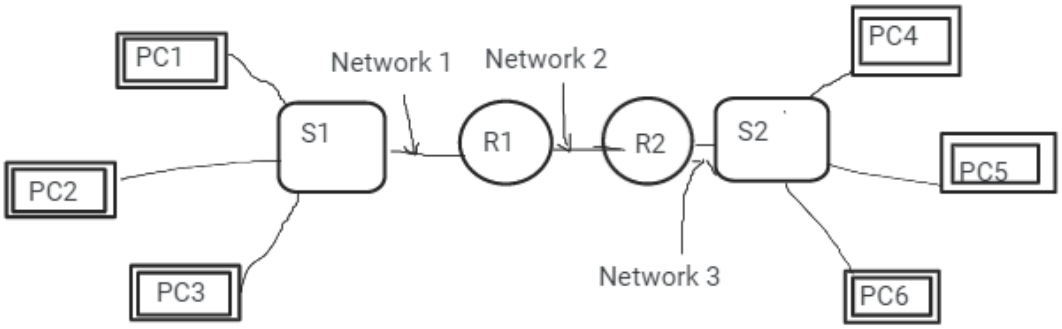
In the above figure, R1, R2, R3, R4, R5 and R6 represents routers. Find out best path from R1 to R6 using Belmann Ford algorithm. Show complete routing table maintained at router R1.

b. List out different functions provided by NMAP tool. (02) CO3

Q.3 a. Write in detail about how DNS resolver find IP address for the host *ce.vjti.ac.in.* Show different techniques. (10) CO4

b. An IPv4 packet has the first few hexadecimal digits as shown below. 0X4500005C000300005906…. How many hops can this packet take before being dropped? (02) CO1

Q.4 a. (10) CO2



Where PC1, PC2, PC3, PC4, PC5, PC6 as end systems, S1 and S2 as switches and R1 and R2 as router. Write down steps for configuring above network in cisco packet tracer using command line interface in such a way that PC from Network 1 can communicate with PC from Network 3. Configure router R1 and R2 with OSPF routing protocol. Write steps.

b. 130.1.1.137 is one of the IP from the network. Considering classful addressing, divide network into 4 different subnets. Find network id and broadcast id for each subnet. (02) CO1

Q.5 a. A datagram with a data size of 5000 bytes(include 20 bytes of ip header) and MTU as 1500 bytes. Consider identification field value is 7860. In how many fragments the datagram will be fragmented. Calculate offset value of each fragment and draw all fragment header with identification value, MF bit value, offset value and DF bit value. (Where MTU- Maximum transmission unit, MF – More fragments flag, DF- Do not fragment flag) (12) CO2