MANIPAL INSTITUTE OF TECHNOLOGY
MANIPAL
(A constituent unit of MAHE, Manipal)

Ist SEMESTER M.Tech. (CSE/CSIS)
END SEMESTER EXAMINATIONS, FEB 2022
SUBJECT: ADVANCED COMPUTER NETWORKS [CSE 5151]
(11/02/2022)

TIME 75M   **PART B**   **MAX. MARKS: 20**

Instructions to Candidates:

❖ Answer **ALL** the questions.
❖ Missing data may be suitable assumed.

Q. No	Question	Marks
1A	Consider the simple model for HTTP streaming. Suppose the server sends bits at a constant rate of 2 Mbps and playback begins when 8 million bits have been received. What is the initial buffering delay t_P?	2M
1B	Illustrate on the requirements of SDN? Describe the OpenDaylight style architecture of SDN with diagram.	3M
1C	Consider the evolution of applications from single monoliths to the highly distributed microservice model. With each successive evolution, the requirements from the network have also evolved. Keeping the above mentioned context into consideration, first discuss the access-aggregation-core network and then in what ways did access-aggregation-core network fail these applications	5M
2A	Discuss the role of SIP registrar and SIP proxy in the real time conversational multimedia Networking applications.	2M
2B	Explain the optical network elements like, optical line terminal(OLTs), optical add/drop multiplexers(OADMs) and optical cross connects(OXCs) in WDM-wavelength routing networks.	3M

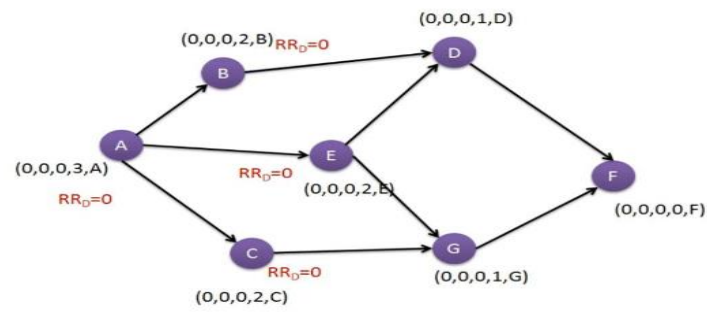|		
2C	Describe the working of Temporally Ordered Routing Algorithm(TORA) with an example. Explain the operations involved in maintaining route for the network shown in figure 2C, after deleting the links in between (E & G) and (D & F).	5M

(0,0,0,1,D)

(0,0,0,2,B) $RR_D=0$

(0,0,0,3,A)

$RR_D=0$

$RR_D=0$

(0,0,0,2,E)

(0,0,0,0,F)

(0,0,0,1,G)

$RR_D=0$

(0,0,0,2,C)

Figure 2C