

SE SEM-IV ECS NEP 2020 May 2026
Date 19/05/2026

Time: 2 hours

Total Marks: 60

N.B. 1. Question No 1 is compulsory.

2. Attempt any three questions from the remaining Five questions.

3. Figures to the right indicate full marks.

4. Assume Suitable data wherever necessary.

Q. N. 1 Attempt any Five of the followings

- a Discuss importance of Telecommunication. [03]
- b Define analog and digital signal. State examples and draw their waveforms. [03]
- c Differentiate between switching and routing. [03]
- d Discuss the primary functions of the ITU. [03]
- e State the applications of AM, FM and PM. [03]
- f Explain working of VoIP. [03]

Q. N. 2 a Discuss the evolution of Telecommunication. [08]

b Explain the block diagram of a basic mobile phone system. [07]

Q. N. 3 a Describe different types of Wired Transmission Media along with their advantages, disadvantages and applications. [08]

b What is error detection? Explain any one error detection technique in detail. [07]

Q. N. 4 a Compare Radio Waves, Microwaves and Infrared transmission media. [05]

b Explain PSTN (Public Switched Telephone Network). [05]

c Describe Frequency Division Multiplexing (FDM). [05]

Q. N. 5 a Explain the terms bandwidth and frequency spectrum in telecommunication. [05]

b Compare 2G, 3G, 4G, and 5G technologies. [05]

c Write short note on Cloud-based Communication. [05]

Q. N. 6 a With the help of necessary diagrams explain star and mesh network topologies. Also state their advantages and disadvantages. [08]

b What is IoT? Discuss characteristics, applications, advantages and disadvantages of IoT. [07]
