



FIFTH SEMESTER BTECH. (E & C) DEGREE END SEMESTER EXAMINATION

DECEMBER 2021-JANUARY 2022

SUBJECT: INTRODUCTION TO COMMUNICATION SYSTEMS (ECE -4304)

TIME: 75 minutes

MAX. MARKS: 20

Instructions to candidates

- Answer **ALL** questions.
- Missing data may be suitably assumed.

Q. No.	Questions	Marks
1A.	With neat diagrams explain the operation of global positioning system. Discuss the similarity and differences between GPS and NAVIC	5
1B.	A target is approaching radar site with a relative velocity of 365.76km/hr. The radar transmits continuous wave energy at a wavelength of 5cm. Find the Doppler shift due to target motion. Also, find the Doppler shift if the target alters its course by 45° .	3
1C.	Explain dual tone multi frequency system used in Telephones.	2
2A.	With a neat block diagram explain the different subsystems of satellite	5
2B.	Explain the avalanche photodiode with necessary diagrams	3
2C.	Explain the bending losses in optical fiber communication system	2