Reg. No.										

MANIPAL INSTITUTE OF TECHNOLOGY
Manipal University

FOURTH SEMESTER B.Tech. DEGREE
END SEMESTER EXAMINATION - April/May 2017
SUBJECT: INTRODUCTION TO COMMUNICATION SYSTEMS (ECE - 3283)
(OPEN ELECTIVE)

TIME: 3 HOURS **MAX. MARKS: 50**

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

1A.	Explain TDM, FDM & Modulation
1B.	Describe subsystems of satellite
	(6+4)
2A.	Explain attenuation & dispersion in optical fibers.
2B.	With a neat block diagram explain basic pulsed Radar System.
	(6+4)
3A.	Explain frequency reuse, hand-off & interference with respect to mobile communication.
3B.	Explain wavelength division multiplexing with regard to optical communication.
	(6+4)
4A.	Discuss any two satellite applications
4B.	Derive expression for Numerical aperture of a multimode step index optical fiber. A silica optical fiber has a core refractive index of 1.5 & cladding of 1.47. Determine: (a) critical angle at the core cladding interface (b) Numerical aperture of fiber (c) acceptance angle in air for the fiber.
4C.	List any four features of PBX
	(4+4+2)
5A.	Explain Zigbee network. Also mention its applications
5B.	With neat block diagram explain the working of paging systems.
5C.	Describe Radar Beacons.
	(4+4+2)