

C 31837

Name

Reg. No.

**FOURTH SEMESTER B.TECH. (ENGINEERING) DEGREE EXAMINATION
JUNE 2007**

IT 04 406—COMMUNICATION SYSTEMS

(2004 admissions)

Time : Three Hours

Maximum : 100 Marks

Answer all questions.

Part A

- I. (a) What is PWM ? Explain.
(b) Compare ASK and PSK.
(c) Explain what is meant by of geosynchronous orbit ?
(d) Explain the function of command and telemetry sub-system.
(e) Distinguish between graded index and step index multimode fiber.
(f) Explain various modes of propagation of the optical fiber.
(g) Compare TDM and TDMA.
(h) Define z-transform and its ROC.

(8 × 5 = 40 marks)

Part B

- II. (a) Draw the block diagram of delta modulation system and explain.

Or

- (b) Draw the block diagram of QAM system and explain.

- III. (a) Draw a block diagram of communication sub-system and explain each sub system.

Or

- (b) (i) Explain spin stabilization technique. (8 marks)

- (ii) Explain what is meant by station keeping ? (7 marks)

- IV. (a) (i) Explain the principle of light transmission in a fiber. (7 marks)

- (ii) Explain the different types of losses in optical fiber. (8 marks)

Or

- (b) Explain various fiber optical source devices. (15 marks)

- V. (a) Explain frequency division multiple access technique with necessary diagrams.

Or

- (b) State and prove any two properties of Fourier series representation.

(15 marks)

[4 × 15 = 60 marks]