

G 1547

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Reg. No.....

Name.....



B.TECH. DEGREE EXAMINATION, MAY 2015

Fourth Semester

Branch : Applied Electronics and Instrumentation Engineering

AI 010 405 – SIGNAL COMMUNICATION (AI)

(New Scheme – 2010 Admission onwards)

[Regular/Improvement/Supplementary]

Time : Three Hours

Maximum : 100 Marks

Part A

Answer all questions.

Each question carries 3 marks.

1. Define the terms modulation and demodulation.
2. Explain external noise and internal noise.
3. What do you mean by aliasing error?
4. What are the disadvantages of using optical fibers in telecommunication?
5. What is an active satellite?

(5 × 3 = 15 marks)

Part B

Answer all questions.

Each question carries 5 marks.

6. Describe the needs of wireless telemetry.
7. Explain the concept of noise spectrum.
8. Define slope over load and granular noise.
9. Differentiate single tone and multi tone fibers.
10. What are the disadvantages of Geostationary Satellites?

(5 × 5 = 25 marks)

Turn over

**Part C**

Answer all questions.

Each full question carries 12 marks.

11. Explain in detail the issues related to long distance transmission.

Or

12. Draw the block diagram of a digital communication system and explain the function of each block.

13. Describe the considerations of filter selection for suppression of noise.

Or

14. Define thermal noise and describe its relation to temperature and bandwidth.

15. With the help of neat diagrams, explain the transmitter and receiver of pulse code modulation.

Or

16. (a) Describe the concept of FDM as employed in telemetry.

(b) What are IRG standards? Explain their applications.

17. With the help of block diagram, explain optical fiber communication system.

Or

18. Write the principle of operation of pn detector.

19. Describe with neat block diagram of a satellite down link model.

Or

20. Write a neat block diagram, explain a satellite communication system.

(5 × 12 = 60 marks)