

G 2779

(Pages : 2)

Reg. No.....

Name.....

M.Sc. DEGREE EXAMINATION, JUNE 2015

Fourth Semester

Faculty of Science

Branch II—Physics—A—Pure Physics

Paper XV—Special Paper III-A—ELECTRONICS—COMMUNICATION ELECTRONICS

(Common with Special Paper III of E-Opto-Electronics and F Computer Science)

(Prior to 2012 Admissions)

Time : Three Hours

Maximum : 75 Marks

Section A

*Answer any six questions.
Each question carries 2 marks.*

1. What is AM ?
2. What is meant by a balanced modulator ?
3. Give the fundamentals of color television.
4. What is a phase discriminator ?
5. Explain the effect of ground on antennas.
6. What are space waves ? Explain.
7. Explain PPM.
8. Briefly discuss on gun diode.
9. What is modem interfacing ?

(6 × 2 = 12 marks)

Section B

*Answer any three questions.
Each question carries 5 marks.*

10. Differentiate between internal and external noise with examples.
11. Describe how television camera output signal is produced.
12. Discuss on antenna gain and resistance.
13. Discuss the operation of a magnetron.
14. Give an account on the use of submarine cables.

(3 × 5 = 15 marks)

Turn over

Section C

Answer all questions.

Each question carries 12 marks.

15. (a) Discuss the generation of amplitude modulation. State the merits and disadvantages.

Or

- (b) Describe the generation of SSB. Explain vestigial sideband transmission.

16. (a) Discuss the transmission and reception of a color TV using block diagram.

Or

- (b) Describe FM reception. Compare FM and AM receivers. How stereo FM reception takes place?

17. (a) Describe the ground wave generation and propagation in communication systems.

Or

- (b) Discuss the operation of a multicavity klystron. State the merits and limitations. Suggest modifications.

18. (a) Describe satellite communication system.

Or

- (b) Discuss PCM and compare with other modulation techniques.

(4 × 12 = 48 marks)