

STELLA MARIS COLLEGE (AUTONOMOUS) CHENNAI – 600 086.
(For candidates admitted during the academic year 2015-16)

SUBJECT CODE : 15PH/ME/CS55

B.Sc. DEGREE EXAMINATION APRIL 2018
BRANCH III - PHYSICS
SIXTH SEMESTER

COURSE : MAJOR – ELECTIVE
PAPER : COMMUNICATION SYSTEMS
TIME : 3 HOURS

MAX. MARKS : 100

SECTION – A

(10 x 3 = 30)

I ANSWER ALL QUESTIONS:

1. Briefly describe the process of modulation.
2. Write the principle of pulse amplitude modulation.
3. How do ground waves propagate?
4. Brief the role of ionosphere causing alternative current.
5. What is Radar? Write the elementary components of Radar.
6. What are microwaves? Mention any two applications of microwave.
7. What are acceptance angle and acceptance cone?
8. What is meant by cladding? Write its significance.
9. Distinguish between cellular and local area network.
10. What is blue tooth technology?

SECTION – B

ANSWER ANY FIVE QUESTIONS:

(5 x 5 = 25)

11. Distinguish between FM and AM.
12. Explain the stratification in ionosphere during day time.
13. Briefly explain the mechanism of propagation of radio waves with a diagram.
14. With a block diagram, explain the working of a simple Doppler Radar.
15. What are the various causes of loss in fibre communication?
16. What is stepped indexed mono mode fibre? Write its characteristics and advantages.
17. Explain the process in making a call in mobile communication.

SECTION – C

ANSWER ANY THREE QUESTIONS:

(3 X 15 = 45)

18. With the aid of wave forms define, explain and analyse amplitude modulation.
19. Explain the propagation of the space wave at the earth's flat and curved surfaces.
20. With a figure explain the principle and working of a Magnetron oscillator.
21. Explain how light propagates through fibre?
22. Explain the first second and third generation network and explain how 3G is advantageous over the other two.
