

**Model Question Paper**  
**Communication systems - Part IV**

12th Standard

**Physics**

Reg.No. : 

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I. Use blue pen only.

II. Answer all questions.

Time : 01:00:00 Hrs

Total Marks : 90

5 x 1 = 5

**Part-A**

- 1) The maximum frequency range of USB of a AM signal is 10.005 MHz and the frequency of the carrier wave is 10 MHz then the channel width is  
(a) a) 50 kHz (b) b) 5 kHz (c) c) 10 kHz (d) d) 0.005 kHz
- 2) The resting frequency of a FM signal wave is 310 MHz and the highest frequency is 310.02 MHz. When modulated by a signal then the (i) frequency deviation and (ii) carrier swing are  
(a) a) 0.02MHz; 4kHz (b) b) 4MHz; 20 kHz (c) c) 20 kHz; 40 kHz (d) d) 20 kHz; 40 MHz
- 3) The radio waves propagated through the troposphere of the earth are known as  
(a) a) Sky wave (b) b) Space wave (c) c) Ground wave (d) d) Surface wave
- 4) Which layer of atmosphere absorbs large amount of radiant energies?  
(a) a) Chromosphere (b) b) Ionosphere (c) c) Troposphere (d) d) Exosphere
- 5) In television system, the frequency of scanning is \_\_\_\_\_ frames per second  
(a) a) 25 (b) b) 625 (c) c) 50 (d) d) 15625

**Part-B**

8 x 3 = 24

- 6) what are the advantages of fiber optic communication system?
- 7) Draw the block diagram of superheterodyne FM receiver.
- 8) Define sensitivity and selectivity.
- 9) State the principle of videcon.
- 10) What is called RADAR?
- 11) What is called Buffer?
- 12) What is phase modulation?
- 13) What is meant by scanning?

**Part-C**

3 x 5 = 15

- 14) What are the merits and demerits of satellite communication systems?
- 15) What are the advantages and disadvantages of digital communication?
- 16) Explain space wave propagation of radio waves.

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