Roll No. _____

SVS 320 B-2K13

B.Sc. Vth Semester Degree Examination

Electronics

(Communication Electronics - I)

Paper - 5.1

Time : 3 Hours Maximum Marks :80

Instructions to Candidates:

i) Answer all questions from Section - **A**

ii) Answer any **five** questions from Section - **B**

iii) Answer any **four** questions from Section - **C**

Section - A

1. Choose the correct answer **(1×5=5)**

i) Poynting Vector gives

a) Instantaneous power density

b) Average power density

c) Total power

d) Total power density.

ii) Antenna for direction finding is

a) Yagi-Uda b) Rhombic

c) dish d) loop-antenna

iii) In FM broadcast, the maximum modulation frequency is

a) 50KHz b) 250 KHz

c) 10KHz d) 15KHz

iv) Demodulation is a part of

a) Transmitter b) Receiver

c) Amplifier d) All of the above

v) Fidelity of a superheterodyne receiver is governed by

a) Only audio section

b) RF and Audio section

c) RF and IF section

d) IF, RF and Audio section.

2. Fill in the blanks (1×5=5)

i) The characteristic Impedance of free space is _____

ii) The most common TV antenna is _____

iii) FM broadcast is done in _____ range

iv) An AM detector consists of _____ and _____

v) Super hetrodyne means mixing of _____ and _____.

3. State the following statements are true of false. (1×5=5)

i) The wavelength of an EM wave depends on its velocity.

ii) The size of the antenna becomes small when the frequency is increased.

iii) The highest modulation frequency used in AM is 25KHz.

iv) Linear diode detector uses rectification property of a diode.

v) AM receiver uses FM detector.

Section - B

4. Write Maxwells equations in integral form. (5×5=25)

5. Write a note on yagi antenna.

6. Define modulation? Give different types of modulation.

7. Explain Base modulator for AM generation

8. Explain the working of FM slope detector.

9. Explain TRF receiver.

10. Compare AM and FM receivers

Section - C

11. State and explain poynting Theorem. (4×10 = 40)

12. Explain TV receiving antenna requirements.

13. Define frequency modulation and derive an expression for frequency modulated wave.

14. With a neat block diagram explain AM transmitter.

15. Explain with neat Circuit diagram of Balanced slope detector for FM wave.

16. With block diagram explain FM superhetrodyne receiver.
