

**BHARATI VIDYAPEETH'S COLLEGE OF ENGG. FOR WOMEN  
DEPARTMENT: E & TC**

**UNIT TEST : I (2009-10)**

**CLASS: SE (SEM:II)      SUB: COMMUNICATION THEORY      MARKS:30**

- Q1] Derive the expression for AM wave [5]**
- Q2] Write short note on Switching Modulator [5]**
- Q3] Write short note on Nonlinear Modulator for DSB generation [5]**
- Q4] What are the advantages of DSB & SSB over DSBFC [5]**
- Q5] Explain Armstrong method of FM generation [5]**
- Q6] Explain Pre-emphasis & De-emphasis in FM [5]**

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- Q1] Explain Baseband & carrier communication [5]**
- Q2] Write short note on Switching Modulators [5]**
- Q3] Explain VSB [5]**
- Q4] Explain concept of instantaneous frequency [5]**
- Q5] Compare AM & FM [5]**
- Q6] The RMS antenna current of an AM transmitter increases by 15% over unmodulated value, when sinusoidal modulation by 1 KHz signal is applied. Determine Modulation Index [5]**

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**UNIT TEST : II (2009-10)**

**CLASS: SE (SEM:II)      SUB: COMMUNICATION THEORY      MARKS:25**

- Q1] Explain FM detector using PLL [8]**
- Q2] Draw & explain Foster Sealy discriminator [6]**
- Q3] Write note on Super-heterodyne receiver [6]**
- Q4] In radio receiver RF amplifier & mixer are connected in cascade. Amplifier has noise figure of 10 db gain of 50 db noise figure of mixer stage is 20 db Calculate overall noise figure. [5]**

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**UNIT TEST : I I (2010-11)**

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- Q1] Explain AGC in detail [5]**
- Q2] Explain following terms**  
**a. sensitivity   b. selectivity**  
**c. fidelity   d. Image frequency   e. Double spotting [10]**
- Q3] Explain noise figure , noise temperature, noise bandwidth [5]**
- Q4] Derive Friss formula for noise factor of amplifier in cascade [5]**
- Q5] Explain the performance of DSBSC in presence of noise [5]**