

**B. TECH. SEM -VII (E & TC ENGG.) (2014 COURSE) (CBCS) :  
SUMMER - 2018**

**SUBJECT: RADIO FREQUENCY ENGINEERING**

Day: **Thursday**  
Date: **24/05/2018**

**S-2018-2544**

Time: **02.30 PM TO 05.30 PM**  
Max Marks. 60

---

**N.B. :**

- 1) All questions are **COMPULSORY**.
  - 2) Figures to the right indicate **FULL** marks.
  - 3) Assume suitable data, if necessary.
- 

- Q.1** a) Explain HF Resistors. (05)  
b) What are chip components, surface mounted inductors? (05)

**OR**

- a) What is chip Resistors? (05)  
b) Write short note on Chip and HF components. (05)

- Q.2** What is vector network analyzer? With neat diagram explain working in detail. (10)

**OR**

With neat diagram explain spectrum analyzer and its working for RF measurement? (10)

- Q.3** a) Explain shunt peaked amplifier. (05)  
b) Explain Bandwidth enhancement techniques. (05)

**OR**

Explain Tuned Amplifier in detail. (10)

- Q.4** a) Explain LAN topologies. (05)  
b) Explain Noise figure. (05)

**OR**

- a) Explain signal to Noise Ratio. (05)  
b) Write short note on Thermal Noise (05)

- Q.5** Design RF oscillations using common emitter BJT. (10)

**OR**

Explain colpitts oscillator. (10)

- Q.6** a) Explain signal ended FET mixer. (05)  
b) Explain significance of mixer. (05)

**OR**

Differentiate between Balanced and Image Reject mixer. (10)

\* \* \* \* \*

---