

- (a) Draw a elementary JFET amplifier, which has $g_m = 1600$ siemen , $r_d = 50k\Omega$ and $R_L = 5k\Omega$ Calculate Voltage Gain **6**
- (b) Draw and Explain LC Oscillator in detail. **6**
- OR**
- (b) Expplain h-parameter model detail. **6**
- 3** (a) Enlist/Classify amplifiers. **6**
- OR**
- (a) What is Piezo-electric effect? What are the advantages of Crystal Oscillator then other available oscillator. **6**
- (b) Draw and Explain the Uni-junction Oscillator in detail. **6**
- OR**
- (b) Difference between positive feedback and Negative feedback amplifier. Mention also their advantages . **6**
- 4** Write short Notes on any Two:- **6×2=12**
- (a) CMOS Circuit.
- (b) Voltage divider bias.
- (c) Tuned Oscillators
- (d) R–C Oscillators.
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