

Code No: 155SF

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B. Tech III Year I Semester Examinations, February - 2022

ELECTRONIC CIRCUIT ANALYSIS

(Electronics and Communication Engineering)

Time: 3 hours

Max. Marks: 75

Answer any five questions  
All questions carry equal marks

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- 1.a) Discuss in detail about Darlington pair and derive the equation on for its input impedance.  
b) Draw the circuit diagram of Cascode amplifier and explain. [8+7]
- 2.a) Explain in detail about hybrid- $\pi$  model of common emitter transistor model.  
b) What is the effect of feedback on gain and distortions of amplifier? [10+5]
- 3.a) List the different topologies of feedback amplifiers.  
b) Discuss the Current series feedback in detail with neat diagram. [8+7]
- 4.a) Draw the circuit diagram of RC phase shift oscillator and derive the equation for its frequency of oscillator.  
b) Describe in detail about LC type oscillators along with generalized analysis. [8+7]
- 5.a) How to attain frequency stability in oscillators?  
b) With a neat diagram, explain the working of a push-pull Class-B power amplifier. [5+10]
- 6.a) Discuss in detail about single tuned amplifiers.  
b) Write in detail about complimentary Symmetry Class-B amplifier. [7+8]
- 7.a) What is a bistable multivibrator? Explain in detail about its working.  
b) Compare Bistable, Astable and Monostable multivibrators. [8+7]
- 8.a) Discuss the different methods of generating Time base waveform.  
b) Write in detail about Bootstrap time base generator with a neat circuit diagram. [7+8]

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