



C16-AEI-302

6214

BOARD DIPLOMA EXAMINATION, (C-16)  
MARCH/APRIL—2018  
DAEI—THIRD SEMESTER EXAMINATION  
ELECTRONIC CIRCUITS

Time : 3 hours ]

[ Total Marks : 80

PART—A

3×10=30

**Instructions** : (1) Answer **all** questions.  
(2) Each question carries **three** marks.  
(3) Answers should be brief and straight to the point and shall not exceed **five** simple sentences.

1. Classify MOSFET's.
2. Draw the symbols for P-channel and N-channel JFET.
3. State why CE mode is widely used in amplifier circuits.
4. Define the term stabilization.
5. Classify amplifiers based on coupling.
6. Draw the block diagram of current series negative feedback amplifier.
7. Compare negative and positive feedback in any three aspects.
8. List any three applications of an oscillator.
9. List any three advantages of crystal oscillator over other oscillators.
10. Classify multivibrators.

**PART—B**

10×5=50

- Instructions :** (1) Answer *any five* questions.  
(2) Each question carries **ten** marks.  
(3) Answers should be comprehensive and the criterion for valuation is the content but not the length of the answer.

11. Explain the working of SCR with its characteristics.
12. Explain the transistor as an amplifier in CB and CE mode.
13. (a) Compare RC coupling, transformer coupling and DC coupling schemes used in amplifiers in any three aspects. 6  
(b) Draw the circuit diagram of direct-coupled amplifier. 4
14. Draw and explain the block diagram of current shunt feedback amplifier.
15. (a) Explain the principle of negative feedback in amplifiers. 5  
(b) Explain the working of bootstrap sweep circuit. 5
16. Draw and explain the working of crystal oscillator with circuit diagram.
17. Draw and explain the working of RC phase shift oscillator with circuit diagram.
18. Draw and explain the working of transistorized bistable multivibrator with waveforms.

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