



C16-EC-402

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5649

**BOARD DIPLOMA EXAMINATION, (C-16)
OCTOBER/NOVEMBER-2018
DECE-FOURTH SEMESTER EXAMINATION**

ELECTRONIC CIRCUITS

Time : 3 Hours]

[Total Marks: 80

PART-A

3X10=30

Instructions :

1. Answer **All** questions.
2. Each question carries **Three** marks.
3. Answer should be brief and straight to the point and shall not exceed five simple sentences.

1. List six merits of SMT Technology.
2. Define the terms differential gain and common mode gain.
3. Draw the pin configuration of IC 741.
- * 4. Distinguish between active and passive filters.
5. Classify the types of IC voltage regulators.
6. List the different types of clippers.
7. Distinguish between voltage and current time base generators.
8. Define capture range and lock range of PLL.
9. Draw the current to voltage convertor circuit.
10. Define the terms resolution and accuracy of D/A converter.

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PART-B

10X5=50

Instructions :

1. Answer any **Five** questions.
2. Each question carries **ten** marks.
3. Answer should be comprehensive and the criterion for valuation is the content but not the length of the answer

11. Explain the fabrication of diode and transistor on monolithic IC.
12. Explain the use of operational amplifier as differentiator and Integrator.
13. Explain RC Phase shift oscillator circuit and mention the frequency of oscillation and condition for oscillations.
14. Explain the operation of transistor series and shunt type voltage regulators.
15. Draw and explain the circuit of Astable multivibrator using op-amp.
16. Draw and explain the block diagram of 555 IC.
17. Draw and explain the three op-amp instrumentation amplifier.
18. Draw and explain the circuit of D/A converter using R-2R ladder network.
