

UNIVERSITY OF MADRAS
B.Sc. DEGREE COURSE IN PHYSICS
SYLLABUS WITH EFFECT FROM 2020-2021

BPS-CSC12

CORE-XII: CORE PRACTICAL – IV (Basic Electronics)
(Common to B.Sc.Physics with Computer Applications)
(At the end of Sixth Semester - Any Fifteen Experiments)

Credits:4

1. A.C. Circuit – LCR – Series resonance.
2. A.C. Circuit – LCR – Parallel resonance.
3. Bridge rectifier - Zener regulated power supply - 9V characteristics.
4. Verification of Demorgan's theorem.
5. Emitter follower.
6. FET characteristics.
7. Common Source FET amplifier.
8. UJT characteristics
9. UJT as Relaxation oscillator.
10. SCR characteristics.
11. Transistor – Astable multivibrator.
12. Transistor – Bistable multivibrator.
13. Transistor – Phase shift oscillator.
14. Transistor – Wien's bridge oscillator.
15. NAND and NOR as universal gates.
16. Half Adder & Full adder (using basic logic gates and Ex-OR gate or NAND gates only).
17. Half Subtractor & Full subtractor (using basic logic gates and Ex-OR gate or NAND gates only).
18. RC coupled single stage CE Transistor amplifier – frequency response.
19. Decode Counter using 7490
20. 4 Bit Shift Register using 7473/7476
21. 4 Bit ripple Counter using 7473/7476