Govt. Polytechnic Chhapar

Electrical Engineering Department

Lesson plan

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| **Name of Faculty** | | | **Mrs. Mukesh** | | |
| **Discipline** | | | **Electrical Engineering** | | |
| **Semester** | | | **3rd** | | |
| **Subject** | | | **Electronics-II** | | |
| **Lesson Plan Duration** | | | **15/09/2022 to 16/01/2023** | | |
| **Work load (Theory + Practical) Per Week** | | | **[03 + 02 ] Group1&2** | | |
| **Week** | **Day** | **Theory Topic/ Assignment/ Test** | | **No.** | **Practical** |
| **1st** | **1** | **Unit:1 Transistor Audio Power Amplifier** | | **1** | **Tostudytheeffectofcoupling capacitor on lower cut off frequency and upper cut off frequency by plotting frequency responsecurveofatwostageRC coupledamplifier** |
| **2** | **Difference between voltage and power**  **amplifier** | |
| **3** | **Terms in Power Amplifier, collector efficiency,**  **distortion and dissipation capability** | |
| **2nd** | **1** | **ClassificationofpoweramplifierclassA,Band**  **C** | | **2** |
| **2** | **Class A single-ended power amplifier, its working and collector efficiency Impedance matching in a power amplifier using**  **transformer** | |
| **Tomeasure(a)optimumload(b) outputpower(c)signalhandling capacityofapush-pullamplifier** |
| **3** | **Heat sinks in power amplifiers, Push-pull amplifier: circuit details working and**  **advantages** | |
| **3rd** | **1** | **Principlesoftheworkingofcomplementary**  **symmetry push-pull amplifier** | | **3** | **Tomeasure(a)voltagegain(b) inputandoutputimpedancefor anemitterfollowercircuit** |
| **2** | **Revision/Assignment of 1st unit** | |
| **3** | **Class test of 1st unit** | |
| **4th** | **1** | **Unit-2Introductiontotunedvoltageamplifier** | | **4** | **Practical Quiz No.2/ Revision and file checking** |
| **2** | **Series and parallel resonance, Single and**  **double tuned voltage amplifiers** | |
| **3** | **Frequency response of tuned voltage**  **amplifiers,Applications of tuned voltage amplifiers** | |
| **5th** | **1** | **Revision/Assignment of 2nd unit** | | **5** | **Tomeasurefrequencygeneration in(a)Hartley(b)R-CPhaseShift oscillator** |
| **2** | **Class test of 2nd unit** | |
| **3** | **Unit3: Feedback in Amplifiers positive and**  **negative feedback and their need** | |
| **6th** | **1** | **Voltage gain of an amplifier with negative**  **feedback A = A/1+A** | | **6** | **Practical Quiz No.3/ Revision and file checking** |
| **2** | **Effectofnegativefeedbackonvoltagegain,**  **stability, distortion, band width** | |
| **3** | **Outputandinputimpedanceofanamplifier** | |
| **7th** | **1** | **Typical feedback circuits** | | **7** | **Toobservethedifferentiatedand integratedsquarewaveonaCRO fordifferentvaluesofR-Ctime**  **constant** |
| **2** | **Effect of removing the emitter by-pass**  **capacitor on a CE transistor amplifier** | |
| **3** | **Emitter follower and its applications** | |
| **8th** | **1** | **Revision/Assignment of 3rd unit** | |  | **Clippingofbothportionofsine-** |
| **2** | **Unit4:Sinusoidaloscillatorsamplifierpositive** | |

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|  |  | **feedback** | **8** | **waveusing:diodeanddcsource/ Zenerdiodes** |
| **3** | **Difference between an oscillator and an alternator** |
| **9th** | **1** | **Essentials of an oscillator, Circuit details and**  **working of LC oscillators** | **9** | **Clamping a sine-wave to: Negative dc voltage Positive dc voltage** |
| **2** | **Tuned Collector, Hartley** |
| **3** | **andColpitt’soscillators,R-Coscillatorcircuits** |
| **10th** | **1** | **phaseshiftandWeinbridgeoscillatorcircuits** | **10** | **Practical Quiz No.3/ Revision and file checking** |
| **2** | **Introduction to piezoelectric crystal and crystal**  **oscillator circuit** |
| **3** | **Revision/Assignment of 4th unit** |
| **11th** | **1** | **Wave-Shaping and Switching Circuits** | **11** | **Togeneratesquare-waveusingan astable multivibrator and to observethewaveformonaCRO** |
| **2** | **Concept of Wave-shaping circuits** |
| **3** | **R-C differentiating and integrating circuits** |
| **12th** | **1** | **Diodeclippingcircuits,Diodeclampingcircuits** | **12** | **Toobservetriggeringandworking ofabistablemultivibratorcircuit andobserveitsoutputwaveform on aCRO** |
| **2** | **Applications of wave-shaping circuits,**  **Transistor as a switch** |
| **3** | **Collector coupled astable, monostable, Bistable**  **multivibrator circuits** |
| **13th** | **1** | **Workingandapplicationsoftransistorinverter**  **circuit using power transistors** | **13** | **Practical Quiz No.3/ Revision and file checking** |
| **2** | **Revision/Assignment of 5th unit** |
| **3** | **Unit6:WorkingPrinciplesofdifferenttypesof**  **power supplies viz. CVTs** |
| **14** | **1** | **IC voltage regulators(78xx,79xx)** | **14** | **Op-Amp(IC741)asinvertingand non-inverting amplifier, adder Comparator,integratoranddiffer**  **-entiator verify using p-spice** |
| **2** | **Revision/Assignment of 6th unit** |
| **3** | **Unit7: Operational Amplifier, differential**  **amplifier** |
| **15th** | **1** | **Emitter coupled differential amplifier Offset**  **even voltages and currents** | **15** | **Tostudythepinconfigurationand workingofIC555anditsuseas monostableandastablemulti- vibrator** |
| **2** | **Integrator and differentiator, Summer,**  **Subtractor** |
| **3** | **Familiarizationwithspecifications andpin**  **configuration of IC 741** |
| **16th** | **1** | **Blockdiagramandoperationof555ICtimer** | **16** | **Internal Practical/viva-voice evaluation** |
| **2** | **HSBTE old paper solution** |
| **3** | **HSBTE old paper solution** |