

LESSON PLAN

DEPARTMENT OF ELECTRONICS AND TELECOMMUNICATION ENGINEERING



### LESSON PLAN

### DEPARTMENT OF ELECTRONICS AND TELECOMMUNICATION ENGINEERING

SUBJECT CODE: Th.4

NAME: ANALOG ELECTRONICS & LINEAR IC

BRANCH: ELECTRONICS & TELECOMMUNICATION

SEMESTER: DIPLOMA -I V

PERIODS PER WEEK: 5

| Week/Date            | Lecture         | Topic to be covered                                      | Remarks             |
|----------------------|-----------------|--|---------------------|
| 1st week             | 1 <sup>st</sup> | Working Principle of diode and current Equation          | 18/03/2022-         |
| 14/03/2022           | 2 <sup>nd</sup> | Specifications and use of PN junction diode              | 19/03/2022          |
| TO                   | $3^{\rm rd}$    | Breakdown of diode                                       | Holiday so class    |
| 21/03/2022           | 4 <sup>th</sup> | Construction of diode                                    | will be adjusted in |
|                      | 5 <sup>th</sup> | Working of diode   | next week           |
| 2 <sup>nd</sup> week | 1 <sup>st</sup> | Characteristic of diode                                  |                     |
| 21/03/2022           | 2 <sup>nd</sup> | Classification of rectifier                              |                     |
| TO                   | $3^{rd}$        | Half wave rectifier and Full wave rectifier              |                     |
| 26/03/2022           | 4 <sup>th</sup> | Working of n-p-n transistor                              |                     |
|                      | 5 <sup>th</sup> | Working of p-n-p transistor                              |                     |
| 3 <sup>rd</sup> week | 1 <sup>st</sup> | Define alpha ,beta ,gamma of transistor                  | 01/04/2022          |
| 28/03/2022           | 2 <sup>nd</sup> | Load line analysis ,Q- point                             | Holiday             |
| TO                   | $3^{rd}$        | Types of coupling  | One more class      |
| 02/04/2022           | 4 <sup>th</sup> | Working of RC coupled amplifier                          | required            |
|                      | 5 <sup>th</sup> | Classification of power amplifier ,differentiate between |                     |
|                      |                 | voltage and power amplifier                              |                     |



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|----------------------|-----------------|--|-----------------|
| 4 <sup>th</sup> week | 1 <sup>st</sup> | Working Principle of power amplifier Class A |                 |
| 04/04/2022           | 2 <sup>nd</sup> | Working of Class AB                          |                 |
| TO                   | 3 <sup>rd</sup> | Working of Class B                           |                 |
| 09/04/2022           | 4 <sup>th</sup> | Working of Class C                           |                 |
|                      | 5 <sup>th</sup> | Working of Class D                           |                 |
| 5 <sup>th</sup> week | 1 <sup>st</sup> | Construction of Push Pull amplifier          | 14/04/2022 -    |
| 11/04/2022           | 2 <sup>nd</sup> | Working of Push Pull amplifier               | 15/04/2022      |
| TO                   | 3 <sup>rd</sup> | Differentiate JFET and BJT                   | Holiday so more |
| 16/04/2022           | 4 <sup>th</sup> | Construction of JFET                         | 2 classes are   |
|                      | 5 <sup>th</sup> | JFET as an amplifier                         | needed          |
| 6 <sup>th</sup> week | 1 <sup>st</sup> | Relationship among JFET parameters           |                 |
| 18/04/2022           | 2 <sup>nd</sup> | JFET parameters continue                     |                 |
| TO                   | 3 <sup>rd</sup> | Construction of MOSFET                       |                 |
| 23/04/2022           | 4 <sup>th</sup> | Construction of MOSFET continue              |                 |
|                      | 5 <sup>th</sup> | Working of MOSFET                            |                 |
| 7 <sup>th</sup> week | 1 <sup>st</sup> | Classification of MOSFET                     |                 |
| 25/04/202            | 2 <sup>nd</sup> | Characteristics of MOSFET                    |                 |
| TO                   | 3 <sup>rd</sup> | Operation of CMOS                            |                 |
| 30/04/2022           |                 |  |                 |



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|-----------------------|-----------------|--|------------------|
|                       | 4 <sup>th</sup> | Operation of VMOS                                  |                  |
|                       | 5 <sup>th</sup> | Operation of LD MOS                                |                  |
| 8 <sup>th</sup> week  | 1 <sup>st</sup> | Define and classified feedback amplifier           | 303/05/2022      |
| 02/05/2022            | 2 <sup>nd</sup> | Types of feedback                                  | (Holiday)        |
| TO                    | 3 <sup>rd</sup> | Types of negative feedback                         | more extra class |
| 07/05/2022            | 4 <sup>th</sup> | Voltage shunt and voltage series                   | required         |
|                       | 5 <sup>th</sup> | Current shunt and current series all parameters    |                  |
| 9 <sup>th</sup> week  | 1 <sup>st</sup> | Oscillator   |                  |
| 09/05/2022            | 2 <sup>nd</sup> | Barkhausen criteria                                |                  |
| TO                    | 3 <sup>rd</sup> | RC phase shift oscillator                          |                  |
| 14/05/2022            | 4 <sup>th</sup> | LC oscillator                                      |                  |
|                       | 5 <sup>th</sup> | Colplit , Hartley oscillator                       |                  |
| 10 <sup>th</sup> week | 1 <sup>st</sup> | Weinbridge oscillator                              | 16/05/2022       |
| 16/05/2022            | 2 <sup>nd</sup> | Equation for frequency oscillation and oscillation | Holiday one      |
| TO                    | 3 <sup>rd</sup> | Define and classified Tuned amplifier              | more extra class |
| 21/05/2022            | 4 <sup>th</sup> | Parallel resonance circuit                         | required         |



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|-----------------------|-----------------|--|------------------|
|                       | 5 <sup>th</sup> | Resonance curve and sharpness of Resonance         |                  |
|                       |                 |  |                  |
| 11 <sup>th</sup> week | 1 <sup>st</sup> | Working of double Tuned amplifier                  |                  |
| 23/05/2022            | 2 <sup>nd</sup> | Clipper circuit introduction                       |                  |
| TO                    | 3 <sup>rd</sup> | Clipper circuit with diode series and shunt        |                  |
| 28/05/2022            | 4 <sup>th</sup> | Positive and negative biased clipper               |                  |
|                       | 5 <sup>th</sup> | Combinational clipper circuit and its application  |                  |
| 12 <sup>th</sup> week | 1 <sup>st</sup> | Positive clamper circuit and its application       | 30/05/2022       |
| 30/05/2022            | 2 <sup>nd</sup> | Astable multivibrator, monostable multivariator    | Holiday one      |
| TO                    | 3 <sup>rd</sup> | Bistable multivibrator                             | more extra class |
| 04/06/2022            | 4 <sup>th</sup> | Working of integrator and differentiatior          | required         |
|                       | 5 <sup>th</sup> | Differential amplifier and configuration           |                  |
| 13 <sup>th</sup> week | 1 <sup>st</sup> | Op-Amp,it's equivalent circuit, symbol             |                  |
| 06/06/2022            | 2 <sup>nd</sup> | Manufacturer designation of IC,pin identification  |                  |
| TO                    | 3 <sup>rd</sup> | Offset voltage,input offset current,CMRR,Slew Rate |                  |
| 10/06/2022            | 4 <sup>th</sup> | Inverting non inverting amplifier                  | 1                |



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|-----------------------|-----------------|---|------------------|
|                       | 5 <sup>th</sup> | Series feedback device, close loop gain                   |                  |
| 14 <sup>th</sup> week | 1 <sup>st</sup> | Summing, inverting, non-inverting amplifier               | Need extra class |
|                       | 2 <sup>nd</sup> | DC and Ac amplifier using op amp                          |                  |
| 10/06/2022            | 3 <sup>rd</sup> | Active filters,lowpass, Butterworth filter, zero crossing |                  |
| TO                    |                 | detectors   |                  |
| Onward                | 4 <sup>th</sup> | IC 555,IC 565   |                  |
|                       | 5 <sup>th</sup> | Operation of 78xx,79xx,LM 317                             |                  |