



Sanjay Ghodawat University, Kolhapur

2018-19

Established as State Private University under Govt. of Maharashtra. Act No XL, 2017 EXM/P/09/01

Year and Program: 2018-19

School of Technology

Department of Electronics Engineering

Course Code: FYT106

Course Title: Elements of
Electronics Engineering

Semester – I

Day and Date

Mondy 5 03 DEC 18

End Semester Examination
(ESE)

Time: Max Marks: 100

10:00 to 1:00 pm

Instructions:

- 1) All questions are compulsory.
- 2) Figures to the right indicate full marks.

| Q.1 | Attempt the following | Marks | Bloom's Level | CO |
|-----|--|-------|------------------|-----|
| a) | With the help of neat diagram & waveforms explain the working of Centre tapped Full wave rectifier? | 07 | L ₂ | CO1 |
| | OR | | | |
| a) | With the help of neat diagram & waveforms explain the working of Half wave rectifier | 07 | L ₂ | CO1 |
| b) | With the help of neat circuit diagram explain Drain characteristics of n channel JFET | 08 | L ₂ | CO2 |
| | OR | | | |
| b) | With the help of neat circuit diagram and input-output characteristics, explain the working of BJT (NPN) common Emitter configuration? | 08 | L ₂ | CO2 |
| Q.2 | Attempt the following | | | |
| a) | With the help of Boolean equation, truth table and symbol explain basic gates | 08 | L ₂ | CO3 |
| | OR | | | |
| a) | a) $(378.44)_{10} \rightarrow (?)_8$ b) $(11011.101)_2 \rightarrow (?)_{10}$ c) $(4057.65)_8 \rightarrow (?)_{10}$ $(425.304)_8 \rightarrow (?)_{16}$ | 08 | L ₃ | CO3 |

| | | | | | |
|-----|----|---|----|----------------|-----|
| | b) | With the help of neat circuit diagram and derivation, explain the working of op-amp as a subtractor. | 07 | L ₂ | CO4 |
| | | OR | | | |
| | b) | With the help of neat circuit diagram and derivation , explain the working of Inverting configuration of op-amp | 07 | L ₂ | CO4 |
| Q.3 | | Attempt any two | | | |
| | a) | Compare forward bias & Reverse bias of p-n junction diode | 08 | L ₂ | CO1 |
| | b) | With the help of neat circuit diagram explain the working of Transistor | 08 | L ₂ | CO2 |
| | c) | Realize basic gates using NOR gate only | 08 | L ₃ | CO3 |
| | d) | With the help of neat circuit diagram, derivation and waveform, explain the working of op-amp as a Differentiator | 08 | L ₂ | CO4 |
| Q.4 | | Attempt any two | | | |
| | a) | Write a short note on AM & PM | 09 | L ₂ | CO5 |
| | b) | With the help of block diagram explain the working of Basic communication system | 09 | L ₂ | CO5 |
| | c) | Explain the need of modulation | 09 | L ₂ | CO5 |
| Q.5 | | Attempt any two | | | |
| | a) | With the help of neat diagram, explain the working of LVDT, state its advantages | 09 | L ₂ | CO6 |
| | b) | With the help of neat diagram, explain the working of RTD, state its advantages | 09 | L ₂ | CO6 |
| | c) | With the help of neat diagram, explain the working of CRO, state its applications | 09 | L ₂ | CO6 |
| Q.6 | | Attempt any three | | | |
| | a) | Write a short note on FM | 06 | L ₂ | CO5 |
| | b) | Classify the Communication System | 06 | L ₂ | CO5 |
| | c) | Write a short note on LM35 | 06 | L ₂ | CO6 |
| | d) | Write a short note on Power supply | 06 | L ₂ | CO6 |
