(Model Paper) **C –23, EC-401**

State Board of Technical Education and Training, A. P

Diploma in Electronics and Communication Engineering (DECE)

IV Semester

Subject Name: Electronic circuits II

Sub Code: EC- 401

Time: 90 minutes **Unit Test-I** **Max.Marks:40**

Part-A **16Marks**

Instructions: (1) Answer **all** questions.

(2) First question carries **four** marks, each question of remaining carries **three** marks

1. Fill the following blanks with one word
   a) The output wave form shape of non-linear wave shaping circuit is same as input wave form (State True/False) (CO1)
   b) Draw RC differentiator circuit (CO1)
   c) What is the input impedance of ideal OPAMP (CO2)
   d) What is the open loop gain of ideal OPAMP (CO2)
2. List different linear and non-linear wave shaping circuits (CO1)
3. Define CMRR and Slew rate for OP-AMP (CO2)
4. Distinguish between linear and digital ICs (CO2)
5. Define sweep voltage (CO3)

Part-B **3×8=24**

Instructions: (1) Answer **all** questions.

(2) Each question carries **eight** marks

(3) Answer should be comprehensive and the criterion for valuation is the content but not the length of the answer.

6. (a) Explain the working of transistor clipper with wave forms (CO1)

   (or)

   (b) Explain RC integrator circuit with wave forms (CO1)

7. (a) Explain the working of differential amplifier constructed using BJTs. (CO2)

   (or)

   (b)Explain the function of Op Amp as Inverting amplifier with a circuit diagram. (CO2)

8. (a)Explain the working of OP-Amp based RC-phase shift oscillator circuit (CO3)

   or

   (b) Explain the working of OP-Amp based Bootstrap sweep circuit (CO3)

***

(Model Paper) C –23, EC-401

State Board of Technical Education and Training, A. P

Diploma in Electronics and Communication Engineering (DECE)

IV Semester

Subject Name: Electronic circuits II

Sub Code: EC - 401

Time: 90 minutes **Unit Test II** **Max.Marks:40**

Part-A **16Marks**

Instructions: (1) Answer **all** questions.
(2) First question carries **four** marks, each question of remaining carries **three** marks

1. Fill the following blanks with one word
   a) It is an active circuit which converts an analog input signal to a digital output signal **(State True/False)** (CO5)
   b) In 555 IC which pin provides a discharge path from the timing capacitor to ground when the output is low (CO4)
   c) What is the function of LM566 IC_____ (CO4)
   d) Binary weighted resistors method is used for Analog to Digital conversion **(State True/False)** (CO5)
2. List any 3 applications of voltage to current converter (CO3)
3. Define lock range of PLL (CO4)
4. Give the pin configuration of 555 IC (CO4)
5. Describe the need for A/D and D/A conversion. (CO5)

Part-B **3×8=24**

Instructions: (1) Answer **all** questions.
(2) Each question carries **eight** marks
(3) Answer should be comprehensive and the criterion for valuation is the content but not the length of the answer.

6. (a) Explain the working of OP-Amp based monostable multivibrator circuit with waveforms (CO3)

   or

   (b) Explain the working of OP-Amp based Schmitt trigger circuit with waveforms (CO3)

7. (a)Draw internal block diagram of PLL – LM565 and explain its working (CO4)

   or

   (b)Explain frequency multiplier and FM demodulator using PLL (CO4)

8. (a)Explain D/A conversion using R-2R ladder network. (CO5)

   or

   (b)Explain A/D conversion using successive approximation method (CO5)

***

MODEL PAPER
BOARD DIPLOMA EXAMINATIONS
C-23, EC-401, ELECTRONIC CIRCUITS–II
IV SEMESTER
SEMESTER END EXAMINATION

TIME:3 HOURS **MAX MARKS:80**

Part-A **10×3=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. Give the classification of clippers (CO1)
2. Distinguish between linear and digital ICs (CO2)
3. List different IC packages. (CO2)
4. State various levels of integration (CO2)
5. Distinguish between voltage and current time-base generators (CO3)
6. List any three applications of current to voltage converter (CO3)
7. Define lock range of PLL (CO4)
8. Give the pin configuration of 555 IC (CO4)
9. List IC numbers of any three DACs (CO5)
10. Describe the need for A/D and D/A conversion. (CO5)

Part-B **5×8=40**

Instructions: (1) Answer **any five** questions.
(2) Each question carries **10** marks
(3) Answer should be comprehensive and the criterion for valuation is the content but not the length of the answer.

11. Explain the working of transistor clipper with wave forms (CO1)
12. Explain RC integrator circuit with wave forms (CO1)
13. Explain the function of Op Amp as Inverting amplifier with a circuit diagram. (CO2)
14. Explain the working of OP-Amp based Miller sweep circuit. (CO3)
15. Explain the working of OP-Amp based Schmitt trigger circuit with waveforms (CO3)
16. Draw internal block diagram of 555 IC and explain the function of each block (CO4)
17. Explain frequency multiplier and FM demodulator using PLL (CO4)
18. Explain A/D conversion using successive approximation method (CO5)

-0o0-