MODEL PAPER – FORMATIVE ASSESSMENT-1, C-23-EE-304

BOARD DIPLOMA EXAMINATION, (C-23)

DEEE – THIRD SEMESTER EXAMINATION

EE-304 : ELECTRONICS ENGINEERING

Time: 90 Minutes Total Marks: 40

PART-A (1 x 4) + (4 x 3) = 16

Instructions:

i. Answer all five questions.

ii. **First question carries four marks and remaining each question carries three marks.**

iii. Answers should be brief and straight to the point and shall not exceed five simplesentences

1. (a) Symbol for LED is_____.

   (b) Expand FET_____.

   (c) Application of Common Collector configuration of Transistor is_____.

   (d) Cut in Voltage of Silicon Diode_____. **(CO1**)

2. Draw the VI characteristics of p n junction Diode. **(CO1)**

3. Define Rectifier and draw the circuit diagram of Half Wave Rectifier. **(CO2)**

4. State the need of filter in power supplies. **(CO2)**

5. Define amplifier. **(CO3)**

PART-B 3 X 8 = 24

Instructions:

a. **Answer all three questions.**

b. **Each question carries eight marks.**

c. **The answers should be comprehensive and the criteria for valuation are the content but not the length of the answer.**

6. (a) Explain the working of PN Junction diode with no bias, forward bias and reverse bias. **(CO1)**

   (OR)

   (b) Explain the working and VI characteristics of field effect transisitor (FET). **(CO1)**

7. (a) Explain the working of full wave bridge rectifier with waveforms. **(CO2)**

   (OR)

   (b) Explain the working of Zener diode as a Voltage regulator in a power supply. **(CO2**)

8. (a) Explain the operation of transistor as an amplifier with circuit diagram. **(CO3)**

   (OR)

   (b) Explain the working, draw the circuit diagram and frequency response of RC coupled amplifier. **(CO3)**

MODEL PAPER – FORMATIVE ASSESSMENT-2C-23-EE-304

BOARD DIPLOMA EXAMINATION, (C-23)

DEEE – THIRD SEMESTER EXAMINATION

EE-304 : ELECTRONICS ENGINEERING

Time: 90 Minutes Total Marks: 40

PART-A (1 x 4) + (4 x 3) = 16

Instructions:

a. Answer all five questions.

b. First question carries four marks and remaining each question carries three marks.

c. Answers should be brief and straight to the point and shall not exceed five simple sentences

1. (a) Feedback factor is defined as.

(b) In oscillator _____type of feed back is used.

(c) IC number for op amp is_____.

(d) In power amplifier the collector load has_____resistance. **(CO4)**

2. Define oscillator and classify it. **(CO4)**

3. List any three applications of oscillators. **(CO4)**

4. List any three advantages of Integrated Circuits over Discrete Circuits. **(CO5)**

5. State the concept of virtual ground. **(CO5)**

PART-B 3 X 8 = 24

Instructions:

i. Answer all three questions.

ii. Each question carries eight marks.

iii. The answers should be comprehensive and the criteria for valuation are the content but not the length of the answer.

6. (a) Explain the effect of feedback on gain, band width and noise. **(CO3)**

(OR)

(b) Explain the Need for power amplifier. **(CO3)**

7. (a) Draw the circuit diagram and explain the working of Hartley Oscillator. **(CO4)**

(OR)

(b) Draw the circuit diagram and explain the working of RC phase shift oscillator. **(CO4)**

8. (a) Explain the working of OpAmp Inverting Amplifier with circuit diagram. **(CO5)**

(OR)

(b) Draw the Pin Diagram of 741 IC and state its important specifications and function of each pin. **(CO5)**

MODEL PAPER – SUMMATIVE EXAMINATIONC-23-EE-304

BOARD DIPLOMA EXAMINATION, (C-23)

DEEE – THIRD SEMESTER EXAMINATION

EE-304 : ELECTRONICS ENGINEERING

Time: 3 hour Total Marks: 80

PART-A 10 X 3 = 30

Instructions:

i. Answer all questions.

ii. Each question carries three marks.

iii. Answers should be brief and straight to the point and shall not exceed five simple sentences

1.	Define PN Junction diode and draw its block diagram and symbol.	**(CO1)**
2.	Draw the VI characteristics of Zener Diode.	**(CO1)**
3.	Define Rectifier and draw the circuit diagram of Half Wave Rectifier.	**(CO2)**
4.	State the need of filter in power supplies.	**(CO2)**
5.	Define amplifier.	**(CO3)**
6.	List any three advantages of RC coupled amplifier.	**(CO3)**
7.	State the need of oscillators.	**(CO4)**
8.	List any three applications of oscillators.	**(CO4)**
9.	List any three advantages of Integrated Circuits over Discrete Circuits.	**(CO5)**
10.	Draw the block diagram of OP-AMP 741 IC.	**(CO5)**

PART-B 5 X 10 = 50

Instructions:

1. Answer any five questions.

2. Each question carries ten marks.

3. The answers should be comprehensive and the criteria for valuation are the content but not the length of the answer.

11.Explain the working of PN Junction diode with no bias, forward bias and reverse bias. (CO1)

12.Draw the input and output characteristics of transistor in common base configuration and explain. (CO1)

13.Explain full wave bridge rectifier with circuit diagram and wave forms (CO2)

14. Explain the effect of feedback amplifiers on gain, bandwidth and noise. (C03)

15.(a) Explain the concept of DC load line. (CO3)

(b) Draw the circuit diagram of Hartley oscillator (C04)

16.Explain about Barkhausen's criterion in Oscillator (CO4)

17.Define integrated circuit. Explain the working of differential amplifier (CO5)

18.Explain Op-Amp as inverting amplifier and give its gain expression. (CO5)