

8. Explain the working of *pnp* Transistor.
9. Write a short note on Zener Diode.

Section–C **2×14=28**

(Long Answer Type Questions)

Note :- Answer any *two* questions. You have to delimit your each answer maximum up to **500** words. Each question carries 14 marks.

10. What do you mean by Generator ? Write the principle of generator. Draw the neat and clean diagram of DC Generator and explain its working.
11. Discuss the growth and decay of current in R-C circuit. Explain the meaning of time constant.
12. What do you mean by Flip-Flops ? Explain about J-K Flip-Flop.
13. Explain SOP and POS process of *k*-map.

BCA-03/4

(4)

TC-398

BCA-03

December – Examination 2023
BCA (Part-I) Examination
BASIC ELECTRONICS
Paper : BCA-03

Time : 3 Hours]

[Maximum Marks : 70

Note :- The question paper is divided into three Sections A, B and C. Write answers as per the given instructions.

Section–A **7×2=14**

(Very Short Answer Type Questions)

Note :- Answer all questions. As per the nature of the question delimit your answer in one word, one sentence or maximum up to **30** words. Each question carries 2 marks.

BCA-03/4

(1)

TC-398 *Turn Over*

1. (i) Define Electric Power.
- (ii) What do you mean by Ohm's Law ?
- (iii) Write down about Junction Rule.
- (iv) Define Quantity Factor.
- (v) What do you mean by Multimeter ?
- (vi) What is depletion region in *pn*-Junction Diode ?
- (vii) Write any *two* differences between Conductor, Semiconductor and Insulator.

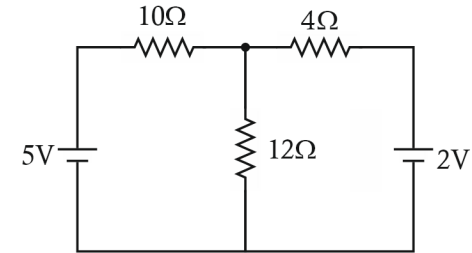
Section-B

4×7=28

(Short Answer Type Questions)

Note :- Answer any *four* questions. Each answer should not exceed **200** words. Each question carries 7 marks.

2. Find the value of current in each resistor and also the potential difference across them by using Kirchhoff's Law :



3. What do you mean by Series Combination ?
Establish a formula for finding the equivalent resistance of three resistors connected in series.
When will this combination be used ?
4. Draw LCR series circuit diagram and obtain the impedance of it. Find the LCR series resonance frequency and show the variation of current with frequency.
5. What is De-Morgan's theorem in Boolean Algebra ?
6. Explain the functioning of full wave rectifier.
7. Write a short note on Full adder.