

**Electronic Science
Paper III**

Time Allowed : 2½ Hours]

[Maximum Marks : 200

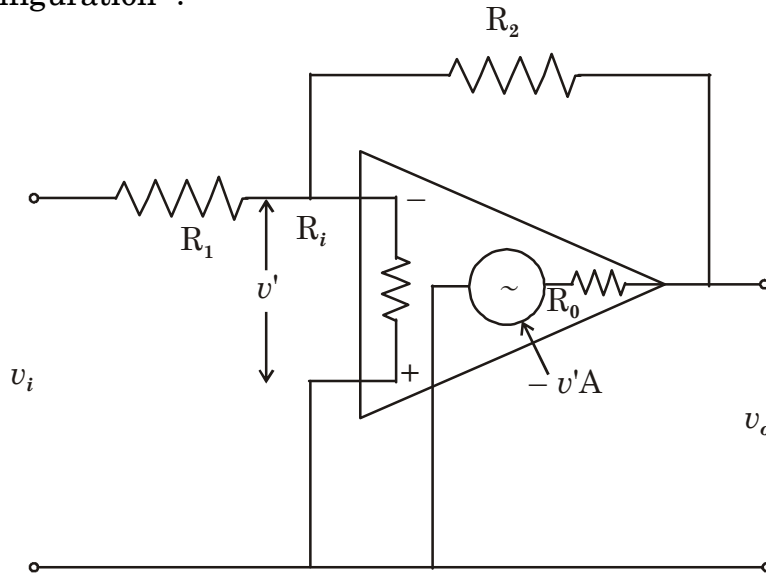
SECTION I

Instructions :—This Section contains two questions (Q. No. 1 and 2), each carrying 20 marks. You have to answer each question in 500 words.

1. (A) (i) Differentiate cz and Bridgeman techniques of crystal growth by describing in detail with suitable diagrams. 10
 (ii) Explain the steps and repeat method of lithography. Depict advantages and disadvantages of this method. 10

Or

- (B) Given an operational amplifier with open loop gain A, input impedance R_i , output impedance R_o . Analyse the inverting amplifier configuration and determine input and output impedances for this configuration : 20



Or

- (C) “Addressing modes significantly influence the architecture and intended applications of a microprocessor/microcontroller.” Elaborate the statement with reference to 8085, 8086 and 8051. 20

18. Compare the 'Ctrl + Alt + Del' mechanism in desktop systems with the 'Watchdog Timer' in embedded systems. 5

19. Explain the concept of deadband in an ON-OFF control. 5

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ROUGH WORK

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