

APRIL/MAY 2019

**BEL 41 — SEMICONDUCTOR DEVICES  
AND IC FABRICATION TECHNOLOGY**

Time : Three hours

Maximum : 75 marks

**SECTION A — (10 × 2 = 20 marks)**

Answer ALL questions.

1. Define the current amplification factor.
2. What is phototransistor?
3. What is pinch off voltage?
4. Give any two applications of FET.
5. What is an intrinsic stand-off ratio?
6. What do you understand by break over voltage?
7. Mention any two applications of LDR.
8. What is semiconductor LASER diode?
9. What do you mean by monolithic IC?
10. Write any two advantages of IC.





SECTION B — (5 × 5 = 25 marks)

Answer ALL questions

11. (a) Describe the transistor connections.

Or

- (b) Explain the transistor as an amplifier.

12. (a) Enumerate the construction of FET.

Or

- (b) Explain the working principle of MOSFET.

13. (a) Describe the working of SCR as switch.

Or

- (b) Discuss the characteristics of TRIAC.

14. (a) List out the applications of LED?

Or

- (b) Elucidate the working of solar cell.

15. (a) Write a note on monolithic integrated Circuit technology.

Or

- (b) Describe the fabrication of transistor.

SECTION C — (3 × 10 = 30 marks)

Answer any THREE questions.

16. Explain the transistor characteristics in CE mode.

17. Explain the parameters of FET.

18. Describe the construction and working characteristics of UJT.

19. Give a brief account on LCD construction.

20. Discuss the steps involved in making of resistors and capacitor.

