

S.No. 5342

16 SMBEEL 2:2

(For candidates admitted from 2016–2017 onwards)

B.Sc. DEGREE EXAMINATION, APRIL 2022.

Part III — Electronics — Major Based Elective

ELECTRONIC INSTRUMENTATION

Time : Three hours

Maximum : 75 marks

PART A — (10 × 2 = 20)

Answer ALL questions.

- 1. Define Transducer.**
- 2. What do you mean by linearity?**
- 3. What is RMS?**
- 4. Draw the output waveform of Integrator?**
- 5. Define PID.**
- 6. What are the types of DAC?**
- 7. Name some analog recorders.**

8. Draw the block diagram of Signal generator.

9. What is synthesizer?

10. Why we need frequency response characteristics?

PART B — ($5 \times 5 = 25$)

Answer ALL questions, choosing either (a) or (b).

11. (a) Draw and explain the block diagram of Instrumentation Systems.

Or

(b) Write short note about :

(i) Pressure Transducer

(ii) Temperature Transducer.

12. (a) Explain the operation of Differentiator.

Or

(b) Evaluate the performance of V to F Converter.

13. (a) Illustrate the operation of Petrol Engine.

Or

(b) Discuss atmospheric Data Acquisition.

14. (a) Explain the operation of Signal Generator.

Or

(b) Evaluate the performance of XY recorder.

15. (a) Discuss the operation of Spectrum analyser.

Or

(b) Illustrate the operation of Phase meter.

PART C — ($3 \times 10 = 30$)

Answer any THREE questions.

16. Elaborate the operation of LVDT with neat Diagram.

17. Explain the operation of Instrumentation Amplifier with neat diagram.

18. Discuss the Firing angle control procedures of SCR in detail.

19. Elaborate the function block diagram of VTVM in detail.

20. Draw and explain the function diagram of frequency synthesizers with neat sketch.