

**B.Sc. Semester - 5 (CBCS) Examination**  
**Oct/Nov. - 2022(Old Course)**  
**SOLID STATE ELECTRONICS (CORE)**

**Time: 2:30 Hours****Marks: 70****Instructions:**

1. All questions are compulsory.
2. Figures to the right indicate marks.

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- Q. 1(a) Answer the following question (any one). (7)
- (1) Write a note on R-C coupled amplifier.
  - (2) Explain in brief: push-pull amplifier.
- Q. 1(b) Answer the following question (any one). (4)
- (1) Explain direct coupled amplifier.
  - (2) Explain thermal runaway of power amplifier.
- Q. 1(c) Answer the following question (any three). (3)
- (1) Unit of voltage gain is .....
  - (2) ..... coupled amplifier is widely used for voltage amplification.
  - (3) ..... coupled amplifier has poor frequency response.
  - (4) If the collector current flows for less than half cycle of the input signal, it is called class ..... power amplifier.
  - (5) The collector efficiency of series-fed class A amplifier is .....% .
- Q. 2(a) Answer the *following* question (any one). (7)
- (1) Explain Astable multivibrator .
  - (2) Write a note on positive and negative clippers.
- Q. 2(b) Answer the following question (any one). (4)
- (1) Write a short note on switching action of transistor.
  - (2) Explain biased positive clamper.
- Q. 2(c) Answer the following question (any three). (3)
- (1) ..... switch has very fast operating speed.
  - (2) Astable multivibrator is an electronic circuit with ..... feedback.
  - (3) Monostable multivibrator has ..... stable states.
  - (4) ..... multivibrator is also known as flip-flop.
  - (5) A positive clipper removes ..... half cycle of the input signal.
- Q. 3(a) Answer the following question (any one). (7)
- (1) Explain regulated power supply.
  - (2) Explain classification of ICs by structure.

- Q. 3(b) Answer the following question (any one). (4)
- (1) Write a short note on ordinary d.c. power supply.
  - (2) Explain differentiator.
- Q. 3(c) Answer the following question (any three). (3)
- (1) The ..... circuit removes the a.c. component in rectifier output.
  - (2) A zener diode is used as a ..... regulating device.
  - (3) Full form of IC is .....
  - (4) Draw the symbol of op-amp.
  - (5) ..... ICs have poor isolation between components.
- Q. 4(a) Answer the following question (any one). (7)
- (1) Write a note on self generating inductive transducers.
  - (2) Explain in detail: LVDT.
- Q. 4(b) Answer the following question (any one). (4)
- (1) Explain resistive position transducer.
  - (2) Write a short note on capacitive pressure transducer.
- Q. 4(c) Answer the following question (any three). (3)
- (1) ..... is device which converts energy from one form to another form.
  - (2) Bellow type transducer is used for ..... measurement.
  - (3) Thermistor is ..... type transducer.
  - (4) Photoconductive cell is also known as .....
  - (5) Photoemissive cell are convert light energy into ..... energy
- Q. 5(a) Answer the following question (any one). (7)
- (1) Write a note on DVM.
  - (2) Explain R-S flip-flop.
- Q. 5(b) Answer the following question (any one). (4)
- (1) Write a short note on CRO.
  - (2) Write a short note on D flip-flop.
- Q. 5(c) Answer the following question (any three). (3)
- (1) The deflection type instrument is also known as ..... instrument.
  - (2) A ..... is a measuring instrument which can measure voltage, current and resistance.
  - (3) A ..... is a circuit which has many inputs and one output.
  - (4) A flip flop can be used as a ..... device in computer.
  - (5) ..... flip flop has only one input.

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