

**B.Sc. Semester - 5 (CBCS) Examination**  
**Oct/Nov. - 2023(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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- Que.1(A) Answer the following questions. (any one) (07)
1. Write a note transformer coupled amplifier.
  2. Explain maximum collector efficiency of transformer coupled class – A power amplifier.
- Que.1(B) Answer the following questions. (any one) (04)
1. Explain direct coupled amplifier.
  2. Explain complementary symmetry amplifier.
- Que.1(C) Answer the following questions. (any three) (03)
1. Unit of power gain is .....
  2. .... coupled amplifier is widely used for voltage amplification.
  3. .... coupled amplifier has best frequency response for very low frequency.
  4. If the collector current flows only for positive half cycle of the input signal, it is called class ..... Power amplifier.
  5. The collector efficiency of series-fed class A amplifier is .....%.
- Que.2(A) Answer the following questions. (any one) (07)
1. Explain bistable multivibrator.
  2. Write a note on positive and negative clippers.
- Que.2(B) Answer the following questions. (any one) (04)
1. Write a short on switching action of transistor.
  2. Explain biased negative clamper.
- Que.2(C) Answer the following questions. (any three) (03)
1. Switch has ..... States.
  2. Astable multivibrator is also known as ..... Multivibrator.
  3. Monostable multivibrator has ..... stable states.
  4. .... multivibrator is also known as flip-flop.
  5. A negative clipper removes ..... Half cycle of the input signal.
- Que.3(A) Answer the following questions. (any one) (07)
1. Explain regulated power supply.
  2. Explain classification of ICs by structure.
- Que.3(B) Answer the following questions. (any one) (04)
1. Write a short note on transistor shunt voltage regulator.
  2. Explain advantages and disadvantages of ICs.
- Que.3(C) Answer the following questions. (any three) (03)
1. The pulsations are due to the presence of ..... component in the rectifier output.
  2. Zener diode is used as a ..... regulating device.
  3. Full form of IC is .....
  4. Draw the symbol of op-amp.
  5. An ideal op-amp has an input resistance of .....

- Que.4(A) Answer the following questions. (any one) (07)
1. Write a note on self-generating inductive transducers.
  2. Explain in detail: LVDT.
- Que.4(B) Answer the following questions. (any one) (04)
1. Explain strain gauge.
  2. Write a short note on capacitive pressure transducer.
- Que.4(C) Answer the following questions. (any three) (03)
1. .... is device which converts energy from one form to another form.
  2. LVDT has ..... Secondary coils.
  3. The temperature coefficient of thermistor is .....
  4. Photoconductive cell is also known as .....
  5. Photoemissive cell are convert light energy into ..... energy.
- Que.5(A) Answer the following questions. (any one) (07)
1. Write a note on DVM.
  2. Explain J-K flip-flop.
- Que.5(B) Answer the following questions. (any one) (04)
1. Write a short note on CRO.
  2. Write a short note on D flip-flop.
- Que.5(C) Answer the following questions. (any three) (03)
1. The deflection types instrument is also known as ..... instrument.
  2. Full form CRO is .....
  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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