

B.Sc. Semester - 5 (CBCS) Examination
July-2025 (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.

Que-1(A) Answer the following question (Any One) (07)

- 1) Write a note on transformer coupled amplifier.
- 2) Explain in brief: classification of power amplifier.

Que-1(B) Answer the following question (Any One) (04)

- 1) Explain direct coupled amplifier.
- 2) Explain complementary symmetry amplifier.

Que-1(C) Answer the following question (Any three) (03)

- 1) coupled amplifier is widely used for voltage amplification.
- 2) coupled amplifier has poor frequency response.
- 3) For extremely low frequency signal amplification coupled amplifier is used.
- 4) If the collector current flows only for positive half cycle of the input signal, it is called class power amplifier.
- 5) Class power amplifier has the low collector efficiency.

Que-2(A) Answer the following question (Any One) (07)

- 1) Explain bistable multivibrator .
- 2) Write a note on positive and negative clippers.

Que-2(B) Answer the following question (Any One) (04)

- 1) Write a short note on integrating circuit.
- 2) Explain biased negative clamper.

Que-2(C) Answer the following question (Any three) (03)

- 1) A switch has states.
- 2) A multivibrator is an electronic circuit with feedback.
- 3) Monostable multivibrator has stable states.
- 4) Bistable multivibrator is also known as
- 5) A negative clipper removes half cycle of the input signal.

Que-3(A) Answer the following question (Any One) (07)

- 1) Explain transistor series feedback voltage regulator.
- 2) Explain operation of differential amplifier.

- Que-3(B) Answer the following question (Any One) (04)**
- 1) Write a short note on regulated power supply.
 - 2) Explain differentiator.
- Que-3(C) Answer the following question (Any three) (03)**
- 1) The pulsations are due to the presence of component in the 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) An ideal Op-Amp has an input resistance of
- Que-4(A) Answer the following question (Any One) (07)**
- 1) Write a note on resistive and inductive pressure transducer.
 - 2) Explain in detail: LVDT.
- Que-4(B) Answer the following question (Any One) (04)**
- 1) Explain strain gauge.
 - 2) Write a short note on thermistor.
- Que-4(C) Answer the following question (Any three) (03)**
- 1) A potential different is produced across two opposite faces when mechanical force is applied on it; this effect is called effect.
 - 2) Microphone is an transducer.
 - 3) Thermistor has temperature co-efficient.
 - 4) Write a full form of LVDT.
 - 5) LVDT has secondary coils.
- Que-5(A) Answer the following question (Any One) (07)**
- 1) Write a note on DVM.
 - 2) Explain J-K flip-flop.
- Que-5(B) Answer the following question (Any One) (04)**
- 1) Explain CRO.
 - 2) Write a short note on D flip-flop.
- Que-5(C) Answer the following question (Any three) (03)**
- 1) The deflection type 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.
