

B.Sc. Semester - 5 (CBCS) Examination**Oct/Nov. – 2019****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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1(a) Answer the following question (any one). (7)

- (1) Write a note on R-C coupled amplifier.
- (2) Explain the push-pull amplifier.

1(b) Answer the following question (any one). (4)

- (1) Give the comparison of different type of coupling.
- (2) Write a short note on class A power amplifier.

1(c) Answer the following question (any three). (3)

- (1) coupled amplifier is widely used for voltage amplification.
- (2) Transformer coupling is used for amplification.
- (3) For dc signal amplification, coupled amplifier is used.
- (4) The change of output wave shape from the input wave shape of amplifier is known as
- (5) Class power amplifier has the low collector efficiency.

2(a) Answer the following question (any one). (7)

- (1) Explain the switching action of a transistor with help of output characteristics.
- (2) Write a note on monostable multi vibrator.

2(b) Answer the following question (any one). (4)

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

2(c) Answer the following question (any three). (3)

- (1) A switch has states.
- (2) A switch that has the fastest speed of operation is switch.
- (3) Astable multivibrator has stable states.
- (4) Bistable multivibrator is also known as
- (5) A positive clipper removes half cycle of the input signal.

3(a) Answer the following question (any one). (7)

- (1) Explain transistor series feedback voltage regulator.
- (2) Write a note on linear amplifier.

3(b) Answer the following question (any one). (4)

- (1) Write a short note on regulated power supply.
- (2) Explain: classification of ICs based on structure.

- 3(c) Answer the following question (any three).** (3)
- (1) The circuit removes the a.c. component in rectifier output.
 - (2) Zener diode is used for regulation.
 - (3) Full form of Op-Amp is
 - (4) IC is also known as
 - (5) ICs have poor isolation between components.
- 4(a) Answer the following question (any one).** (7)
- (1) Write a note on inductive and capacitive pressure transducer.
 - (2) Explain in detail: LVDT.
- 4(b) Answer the following question (any one).** (4)
- (1) Explain strain gauge.
 - (2) Write a short note on resistance temperature detector.
- 4(c) Answer the following question (any three).** (3)
- (1) A transducer is one which needs an external power supply.
 - (2) is a device which directly converts speed into an electrical signal.
 - (3) Thermistor has temperature co-efficient.
 - (4) Thermistor is the short form for
 - (5) Photovoltaic devices convert light energy directly into energy.
- 5(a) Answer the following question (any one).** (7)
- (1) Write a note on CRT.
 - (2) Write a note on IC-555 timer.
- 5(b) Answer the following question (any one).** (4)
- (1) Explain CRO with block diagram.
 - (2) Write a note on D-flip-flop.
- 5(c) Answer the following question (any three).** (3)
- (1) A is a measuring instrument which can measure voltage, current and resistance.
 - (2) Full form of CRO is
 - (3) A is a circuit with many inputs but only one output.
 - (4) flip-flop has only one input.
 - (5) flip-flop can be used to build counter.
