

Electronics In-Class Quiz II (page: x) Launch Meeting - Zoom x (3) WhatsApp x +

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## In19-S2-EN1013 - Electronics - I

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Question 6  
Not yet answered  
Marked out of 10.00  
Flag question

An NPN bipolar junction transistor has a  $h_{FE}$  of 300. If the minority carriers are neglected the percentage of emitted electrons (from emitter region) that is not caught in the electric field of the reverse biased Base-Collector junction will be;

Select one:

- ☐ i. 1 %
- ☐ ii. 99 %
- ☒ iii. 0.33 %
- ☐ iv. 3.33 %

[Clear my choice](#)

Next page

Quiz navigation

1	2	3	4	5	6	7	8
9	10	11	12				

Finish attempt ...

Time left 0:11:30

PREVIOUS ACTIVITY

Type here to search

10:08 AM 3/23/2021

Electronics In-Class Quiz II (page: x) Launch Meeting - Zoom x (3) WhatsApp x +

online.uom.lk/mod/quiz/attempt.php?attempt=169592&cmid=151848&page=4

## In19-S2-EN1013 - Electronics - I

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Question 5  
Not yet answered  
Marked out of 5.00  
Flag question

Which of the following is **not true** about the input coupling capacitor of an amplifier?

Select one:

- ☒ i. It blocks DC currents from going to the signal input.
- ☒ ii. It helps to superimpose AC input signal on DC bias.
- ☒ iii. It passes the input signal to the base terminal.
- ☒ iv. It helps to increase the voltage gain of the amplifier.

[Clear my choice](#)

Next page

Quiz navigation

1	2	3	4	5	6	7	8
9	10	11	12				

Finish attempt ...

Time left 0:12:40

PREVIOUS ACTIVITY

◀ Digital Electronics Lecture 3 - Mar 16, 2021

Jump to...

Type here to search

10:07 AM 3/23/2021

Which of the following is **not** a true statement regarding a BJT amplifier.

Select one:


- ☒ i. Common base amplifier has a static current gain less than unity.
- ☒ ii. Collector voltage drops when the collector current increases in a common emitter amplifier.
- ☒ iii. Common emitter amplifier introduces a phase inversion to the signal voltage.
- ☒ iv. There is a phase inversion between the input current and output current waveforms in a common emitter amplifier.

[Clear my choice](#)

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My courses

In19-S2-EN1013 (112405)

22 March - 28 March

Electronics In-Class Quiz II

Question 4

Not yet answered

Marked out of 10.00

Flag question

When a sinusoidal input signal is applied to a common-emitter BJT amplifier, the positive peaks of its output voltage waveform had flat tops (nearly rectangular shape) while the negative peaks remained sinusoidal. The flat positive peaks are due to;

Select one:

- ☐ i. Q-point moving off the load line
- ☒ ii. The BJT getting into cut-off region
- ☐ iii. None of the above
- ☐ iv. The BJT getting into saturation region

[Clear my choice](#)

Next page

PREVIOUS ACTIVITY

◀ Digital Electronics Lecture 3 - Mar 16, 2021

Jump to...

Quiz navigation

1	2	3	4	5	6	7	8
9	10	11	12				

Finish attempt ...

Time left 0:13:06

Type here to search



10:07 AM

3/23/2021

17

Electronics In-Class Quiz II (page: x) Launch Meeting - Zoom x (3) WhatsApp x +

online.uom.lk/mod/quiz/attempt.php?attempt=169592&cmid=151848&page=2

## In19-S2-EN1013 - Electronics - I

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**Question 3**  
Not yet answered  
Marked out of 5.00  
Flag question

When the voltage on the Base terminal is increased in a common emitter BJT amplifier, it's collector voltage,

Select one:

- ☐ i. Increases
- ☐ ii. Oscillates between two limits
- ☒ iii. Decreases
- ☐ iv. Remains constant

[Clear my choice](#)

[Next page](#)

**PREVIOUS ACTIVITY**  
Digital Electronics Lecture 3 - Mar 16, 2021

Jump to...

**Quiz navigation**

1	2	3	4	5	6	7	8
9	10	11	12				

Finish attempt ...

Time left 0:15:31

Type here to search

10:04 AM 3/23/2021

Electronics In-Class Quiz II (page: x) Launch Meeting - Zoom x (3) WhatsApp x +

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## In19-S2-EN1013 - Electronics - I

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**Question 2**  
Not yet answered  
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Forward resistance of the Base-Emitter junction of a BJT reads  $12\ \Omega$  when measured using (x 1 scale) resistance scale of an analog multimeter. It reads  $70\ \Omega$  when the scale factor of the meter is changed to (x10 scale). The variation in the two readings is due to,

Select one:

- ☐ i. thin base region
- ☐ ii. an error in the multimeter
- ☒ iii. different bias potentials applied by the multimeter
- ☐ iv. the presence of Base-Collector junction

[Clear my choice](#)

[Next page](#)

**PREVIOUS ACTIVITY**  
Digital Electronics Lecture 3 - Mar 16, 2021

Jump to...

**Quiz navigation**

1	2	3	4	5	6	7	8
9	10	11	12				

Finish attempt ...

Time left 0:16:50

Type here to search

10:03 AM 3/23/2021



Electronics In-Class Quiz II (page: x) Launch Meeting - Zoom x (6) WhatsApp x +

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## In19-S2-EN1013 - Electronics - I

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Question 1  
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Flag question

A BJT has a static current gain of 550 in common emitter configuration. What is the quiescent Base current needed to keep the Q point at the center of the DC load line when it's collector is connected to a 5V supply via a 560  $\Omega$  resistor.

Select one:

- ☒ i. 8.12  $\mu$ A
- ☐ ii. 8 mA
- ☐ iii. 4.47 mA
- ☐ iv. 2.12  $\mu$ A

[Clear my choice](#)

Next page

Quiz navigation

1	2	3	4	5	6	7	8
9	10	11	12				

Finish attempt ...

Time left 0:18:09

PREVIOUS ACTIVITY

Type here to search

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What is the bias resistor needed between the Base terminal and the 6 V power supply line when a BJT is connected in common-emitter amplifier configuration with fixed-bias, with a 40  $\mu$ A quiescent base current flowing.

Select one:

- ☐ i. 243.18 k $\Omega$
- ☐ ii. 116.25 k $\Omega$
- ☒ iii. 132.5 k $\Omega$
- ☐ iv. 470 k $\Omega$

[Clear my choice](#)