Quiz 3

Due Nov 25 at 11:59p.m. **Points** 3.3 **Questions** 10
Available Nov 25 at 12a.m. - Nov 25 at 11:59p.m. 23 hours and 59 minutes
Time Limit 30 Minutes

This quiz was locked Nov 25 at 11:59p.m..

Attempt History

	Attempt	Time	Score
LATEST	Attempt 1	28 minutes	2.64 out of 3.3

Score for this quiz: **2.64** out of 3.3
Submitted Nov 25 at 8:50p.m.
This attempt took 28 minutes.

Question 1

0 / 0.33 pts

Intramolecular bonds within a sample of a hydrocarbon polymer are which of the following types of bonds?

- Ionic
- Covalent

orrect Answer

ou Answered

- Secondary
- Metallic

Question 2

0.33 / 0.33 pts

Which of the following polymer properties cannot be explained by the string model for polymers?

- Melting Behaviour
- Correct! Opacity
- Glass transition
- Stress relaxation
- All of the above can be explained by the string model

Question 3

0.33 / 0.33 pts

Which of the following statements about the melting temperature of a polymer is true?

- Correct! A temperature at which there is enough thermal energy to disrupt the intermolecular bonds in the crystalline region of a polymer
- A temperature at which there is enough thermal energy to disrupt the intramolecular bonds in the crystalline region of a polymer
- A temperature at which there is enough thermal energy to disrupt the intramolecular bonds in the amorphous region of a polymer
- A temperature at which there is enough thermal energy to disrupt the intermolecular bonds in the amorphous region of a polymer

Question 4

0.33 / 0.33 pts

Find the number average molecular weight for the following set of data.

Number of polymers	Molecular weight (g/mol)
1	850
5	650
10	450
3	250
1	150

Correct!

475

orrect Answers

475 (with margin: 10)

Question 5

0.33 / 0.33 pts

The principle quantum number best describes the following -

- Shape of the electron orbital
- Size of the electron orbital
- Orientation of the electron orbital
- The number of electrons

Correct!

Question 6

0.33 / 0.33 pts

Choose the correct electron configuration for silver (Ag, Z=47) in its ground state.

Correct!

- [Kr] 4d10 5s1
- [Ne] 3s2 3p1
- [Ne] 4p5 4d10 5s2
- [Kr] 4p5 4d10 5s2

Question 7

0.33 / 0.33 pts

Choose the possible quantum numbers for 2s electrons in an atom

Correct!

- n = 2, l = 2, ml = 1, ms = -1/2
- n = 2, l = 0, ml = 0, ms = +1/2
- n = 2, l = 0, ml = -1, ms = +1
- n = 3, l = 1, ml = 1, ms = +1/2
- None of the above

Question 8

0 / 0.33 pts

Which of the following statements is correct about an arsenic doped silicon semiconductor?

A. The band gap of this material would be larger than 4eV
B. The band gap of this material would be smaller than 4eV

C. This material has no band gap
D. The conductivity of this material is dominated by the electron mobility
E. The conductivity of this material is dominated by the hole mobility

A & D

A & E

orrect Answer

B & D

ou Answered

B & E

C

Question 9

0.33 / 0.33 pts

Which of the following statements is true about n-type semiconductors?

Electron excitation results in the generation of holes in the conduction band

Correct!

Electron excitation results in an electron from a level within the band gap being promoted into the conduction band

Electron excitation results in an electron being promoted from the valence band to the conduction band

Electron excitation results in the generation of a hole within the valence band

Question 10

0.33 / 0.33 pts

Determine the number of electrons per meter cubed in a silicon specimen with the following properties -- Express your final answer as a number which when multiplied by 10^22 will give the correct answer (As an example, the number of holes in this problem would be reported as 2.00 as an answer)

- Number of holes - 2.00 x 10^22 m-3
- Hole mobility - 0.05 m^2/V*s
- Electron mobility - 0.14 m^2/V*s
- Elementary charge - 1.602 x 10^-19 C
- Conductivity of silicon - 600 (Ohm*m)-1

Correct!

1.96

orrect Answers

1.96 (with margin: 0.03)

Quiz Score: **2.64** out of 3.3