Lesson 3 Progress Check

- Due No due date
- Points 100
- Questions 10
- Time Limit 15 Minutes
- Allowed Attempts Unlimited

Instructions

This quiz checks your understanding of lesson concepts.

- This is a timed assessment.
- You are allowed multiple attempts.
- Minimum passing score is 80%.

Take the Quiz Again

Attempt History

	Attempt	Time	Score
KEPT	Attempt 4	9 minutes	90 out of 100
LATEST	Attempt 4	9 minutes	90 out of 100
	Attempt 3	15 minutes	60 out of 100
	Attempt 2	15 minutes	50 out of 100
	Attempt 1	14 minutes	40 out of 100

Correct answers are hidden.

Score for this attempt: 90 out of 100
Submitted Nov 1 at 5:40pm
This attempt took 9 minutes.

Question 1
10 / 10 pts

According to the 2015 RAND study, *The U.S. - China Military Scorecard: Forces, Geography and the Evolving Balance of Power 1996-2017,* what risk do Chinese counterspace capabilities pose to US space functions?

US weather satellites are at highest risk of Chinese counterspace attack since they typically conduct operations in low-earth orbit and support military operations.

Chinese counterspace capabilities are not a risk to US space systems since they are designed to be for anti-ballistic missile systems only.

The risk to US space systems has decreased as a result of decreased Chinese investment in counterspace capabilities.

The risk to most US space functions appears to be growing faster than the US ability or effort to mitigate them; however, 2017 is projected to be characterized by continued parity.

According to the 2015 RAND study, the risk to most US space functions appears to be growing faster than the US ability or effort to mitigate them; however, 2017 is projected to be characterized by continued parity. (*The U.S. - China Military Scorecard: Forces, Geography and the Evolving Balance of Power 1996-2017,* (2015), pages 250-253)

Question 2
10 / 10 pts

According to DNI Clapper in his 2016 *Worldwide Threat Assessment of the US Intelligence Community*, what is a global threat to satellite communications and global navigation space systems, and does he believe this technology will continue to proliferate?

A global threat to satellite communications and global navigation space systems comes from electronic warfare systems. DNI assesses this technology will diminish in proliferation to new actors; however, our more advanced adversaries will continue to develop more sophisticated systems in the next few years.

A global threat to satellite communications and global navigation space systems comes from a complex foreign intelligence apparatus. DNI assess foreign intelligence technology will continue to proliferate to new actors and our more advanced adversaries will continue to develop more sophisticated systems in the next few years.

A global threat to satellite communications and global navigation space systems comes from electronic warfare systems. DNI assesses this technology will continue to proliferate to new actors and our more advanced adversaries will continue to develop more sophisticated systems in the next few years.

According to DNI Clapper in his 2016 Worldwide Threat Assessment, a global threat to satellite communications and global navigation space systems comes from electronic warfare systems. DNI assesses this technology will continue to proliferate to new actors and our more advanced adversaries will continue to develop more sophisticated systems in the next few years. (DNI *Worldwide Threat Assessment of the US Intelligence Community* (2016), page 9)

A global threat to satellite communications and global navigation space systems comes from antisatellite systems. DNI assesses this technology will continue to proliferate to new actors and our more advanced adversaries will continue to develop more sophisticated systems in the next few years.

Question 3

10 / 10 pts

According to AU-18, *Space Primer*, what is “one of the most discreet and deniable forms of attacking our space systems,” and why?

Downlink jamming, because it broadcasts a radio frequency signal of approximately the same frequency as the targeted downlink signal, but with more power.

Spoofing, because it takes over the space system by appearing as an authorized user.

According to AU-18, *Space Primer*, spoofing is one of the most discreet and deniable forms of attacking our space systems because it takes over the space system by appearing as an authorized user. (AU-18, *Space Primer*, page 276)

A ground segment attack, because the ground segment is often the most vulnerable of most space systems, subject to attack by a variety of means, ranging from physical attack to computer network intrusion.

Uplink jamming, because it affects a transponder’s ability to distinguish the true signal from a jamming signal.

Question 4

10 / 10 pts

In "Bringing Space Crisis Stability Down to Earth," Finch discusses the concept of “mutual understanding” between the U.S. and China. What US space capability does Finch highlight as being a source of misunderstanding for the Chinese?

- Space Fence
- Joint Interagency Combined Space Operations Center (JICSpOC)
- X-37B

In "Bringing Space Crisis Stability Down to Earth," Finch discusses the concept of “mutual understanding” between the U.S. and China. The US space capability Finch highlights as being a source of misunderstanding for the Chinese is the X37-B. ("Bringing Space Crisis Stability Down to Earth," page 20)

- Geosynchronous Space Situational Awareness Program (GSSAP)

Question 5

10 / 10 pts

The CNN Video, *War in Space: The Next Battlefield*, depicts what a space and cyber-attack on the U.S. might look like. According to this report, what are the potential ramifications of such an attack?

- ATM machines no longer function, cell phones lose their connectivity, and encrypted e-mails will no longer transmit.
- All of the answers are correct.
- Airplanes will lose their way, and infantry will have to rely on a map and compass.
- Military drones lose contact with the ground, GPS-guided weapons are rendered dumb, and warships lose contact with commanders.

The CNN Video, *War in Space: The Next Battlefield*, depicts what a space and/or cyber-attack on the U.S. might look like. According to this report, the potential ramifications of such an attack include military drones losing contact with the ground, GPS-guided weapons being rendered dumb, and warships losing contact with commanders. (*War in Space: The Next Battlefield*[Video], approximate time: 02:30-03:30)

Question 6

10 / 10 pts

In "Bringing Space Crisis Stability Down to Earth," Finch discusses the linkage between strategic stability and the space domain. How does Finch describe the importance of this linkage?

- Weaknesses in other domains can be mitigated in the space domain, providing an overall strategic stability calculus that can balance potential crises.

Strategic stability is dependent on space security. As the U.S. and Russia increase in capability in the space domain, actions by either state in space must be transparent in order to manage crisis dynamics.

Understanding how space fits into strategic stability, and how actions in space can affect or drive crisis dynamics, is imperative to reduce the risk of miscalculation.

In "Bringing Space Crisis Stability Down to Earth," Finch discusses the linkage between strategic stability and the space domain. Finch describes the importance of this linkage as: Understanding how space fits into strategic stability, and how actions in space can affect or drive crisis dynamics, is imperative to reduce the risk of miscalculation. ("Bringing Space Crisis Stability Down to Earth," page 16)

Strength in the space domain is the determinant of strategic stability, and weakness in space can affect, or even drive, miscalculation.

Incorrect

Question 7

0 / 10 pts

According to an argument in *Space Domain Mission Assurance: A Resilience Taxonomy*, why does the concept of resilience need to be defined?

Without a definition and method to measure resilience, it is not possible to plan for alternative future space system architectures and deployment strategies.

Without a definition and method to measure resilience, space mission assurance will be left to be decided by contractors who are not concerned about the potential threat.

According to an argument in *Space Domain Mission Assurance: A Resilience Taxonomy* (2015), the concept of resilience needs to be defined because without a definition and method to measure resilience, it is not possible to plan for alternative future space system architectures and deployment strategies. (*Space Domain Mission Assurance: A Resilience Taxonomy*, (2015), page 1)

All of the answers are correct.

Without a definition and method to measure resilience, future space systems will not take mission assurance into account, and will continue to operate under the assumption that space is a benign environment.

Question 8

10 / 10 pts

According to Gen Shelton in “Military Space: At a Strategic Crossroad” (2013), what are four areas that need to be addressed as they relate to the future of US space forces?

The four areas that need to be addressed are 1) space situational awareness, 2) spacelift, 3) missile warning, and 4) intelligence, surveillance, and reconnaissance.

The four areas that need to be addressed are 1) Title 10 and Title 50 issues, 2) limitations due to existing space treaties, 3) the Westphalian perspective on access to space, and 4) division between the DoD and Intelligence Community.

None of the answers are correct.

The four areas that need to be addressed are 1) our means of protecting mission-critical constellations, 2) our acquisition practices, 3) our operational constructs, and 4) our domestic and international relationships.

According to Gen Shelton in “Military Space: At a Strategic Crossroad” (2013), the four areas that need to be addressed as they relate to the future of US space forces are 1) our means of protecting mission-critical constellations, 2) our acquisition practices, 3) our operational constructs, and 4) our domestic and international relationships. (“Military Space: At a Strategic Crossroad,” page 4)

Question 9

10 / 10 pts

At the 2016 National Space Symposium, Gen Hyten presented a new organize, train, and equip strategy for Air Force Space Command (AFSPC). What organization was stood up at Schriever AFB, CO to address the need for space forces to be able to operate in an environment where a conflict extends into space?

Joint Space Operations Center (JSpOC)

Space Mission Force (SMF)

Global Operations Center (GOC)

Joint Interagency Combined Space Operations Center (JICSpOC)

At the 2016 National Space Symposium, Gen Hyten presented a new organize, train, and equip strategy for Air Force Space Command (AFSPC). The Joint Interagency Combined Space Operations Center (JICSpOC) was stood up at Schriever AFB, CO to address the need for space forces to be able to operate in an environment where a conflict extends into space. (Hyten, National Space Symposium Keynote (2016), page 5)

Question 10

10 / 10 pts

According to Gen Shelton in “Military Space: At a Strategic Crossroad,” what factors define the “strategic crossroad,” and why are they important to the potential future for space forces?

The factors are 1) an inability to manage conflicts against multiple peers and 2) a challenging domestic political climate. They are important to the potential future for space forces because our near-peers continue to advance in their space capabilities while the U.S. continues to struggle with how to prioritize its limited resources.

The factors are 1) a significant increase in congestion in space and 2) a significant increase in contest in space. They are important ot the potential future for space forces because space is no longer a benign operating environment, and must now be treated as a warfighting domain.

None of the answers are correct.

The factors are 1) a radically different operating environment and 2) a declining budget. They are important to the potential future for space forces because the status quo approach is inadequate, and alternatives must balance required capability, affordability, and resilience.

According to Gen Shelton in “Military Space: At a Strategic Crossroad” (2013), the factors define the “strategic crossroad,” are 1) a radically different operating environment and 2) a declining budget. They are important to the potential future for space forces because the status quo approach is inadequate, and alternatives must balance required capability, affordability, and resilience. (“Military Space: At a Strategic Crossroad,” pages 4-7)

Quiz Score: 90 out of 100