



**COMANDO DA AERONÁUTICA
DIRETORIA DE ENSINO DA AERONÁUTICA
UNIVERSIDADE DA FORÇA AÉREA**

**PROCESSO SELETIVO PARA ADMISSÃO DE ALUNO REGULAR NO
PROGRAMA DE PÓS-GRADUAÇÃO EM CIÊNCIAS AEROESPACIAIS**

DOUTORADO - TURMA 2021

PROVA DE COMPREENSÃO DE LÍNGUA INGLESA

Orientações para a prova:

- 1) É permitido somente uso de dicionário convencional (não eletrônico), de uso individual e exclusivo, inglês/inglês.
- 2) O tempo **máximo** de realização da prova é de 3 horas.
- 3) Utilize caneta esferográfica azul ou preta.
- 4) Desligue ou silencie seu aparelho celular.
- 5) Só será permitido ao candidato se retirar do local de prova após decorridos 60 minutos.
- 6) Só será permitido ao candidato levar o caderno de questões após decorridos 120 minutos.

BOA SORTE!

NOVEMBRO / 2020

READ THE TEXT.

International perspectives on space weapons

Existing International Agreements

Existing international agreements that limit different types of space activities provide insight into other nations perspectives on space weapons and which activities and capabilities they want to restrict. No agreements exist today that completely limit space weapons within any of the six categories of the framework. However, some agreements limit certain types of space weapons that are subsets within the categories listed above. One of the first international agreements to limit activities in space was the Partial Test Ban Treaty of 1963.

The treaty came about in part because both the United States and Soviet Union were testing nuclear weapons in space and, in the process, discovering the grave effects these weapons had on the overall space environment. In 1961 and 1962, the Soviet Union conducted a series of high-altitude nuclear tests with relatively low-yield warheads (1.2 to 40 kilotons), which prompted the United States to begin a high-altitude test program of its own.

On July 9, 1962, the United States detonated a massive 1,400-kiloton warhead at an altitude of 400 km over the Pacific in a test known as Starfish Prime. The Soviets followed suit by detonating a 300-kiloton warhead at an altitude of 290 km over Kazakhstan on October 22, 1962, followed days later by two similar tests at lower altitudes. Notably, the Soviet tests occurred during the Cuban Missile Crisis, a period of particularly heightened tensions between the Soviet Union and the United States.

Since the Partial Test Ban Treaty was signed in August 1963, however, no nuclear tests have been conducted in space by any nation. Using the above framework, the Partial Test Ban Treaty prohibits the testing and use of nuclear warheads on Earth-to-space and space-to-space kinetic weapons. Specifically, the treaty says that the parties to it agree "to prohibit, to prevent, and not to carry out any nuclear weapon test explosion, or any other nuclear explosion, at any place under its jurisdiction or control: (a) in the atmosphere; beyond its limits, including outer space." It does not, however, affect the development, testing, deployment, or use of non-nuclear space weapons. This treaty is widely accepted, with 104 signatory nations. Notably, France, China, and North Korea are among the few remaining countries that have not signed the treaty and are not bound by its limitations.

The Outer Space Treaty of 1967 is arguably the most important international agreement for space. A total of 89 nations are signatories, and 109 nations are party to the treaty. While it includes a number of critical provisions for how space and the activities within it are governed, it does little to prohibit

the development, testing, deployment, and use of space weapons. Article III of the treaty says that nations should carry out activities in space "in accordance with international law, including the Charter of the United Nations." Article IV of the treaty prohibits nuclear weapons from being placed into orbit. Article IV also prohibits the testing of any type of weapon (nuclear or conventional) on the moon and other celestial bodies. Specifically, it says that parties to the treaty agree "not to place in orbit around the earth any objects carrying nuclear weapons or any other kinds of weapons of mass destruction, install such weapons on celestial bodies, or station such weapons in outer space in any other manner." It further states that "the establishment of military bases, installations and fortifications, the testing of any type of weapons and the conduct of military maneuvers on celestial bodies shall be forbidden."

Thus, the Outer Space Treaty effectively prohibits nuclear-armed space-to-space and space-to-Earth kinetic weapons. It also prohibits all forms of space-to-space weapons from being tested and used in military maneuvers on other celestial bodies. What is most notable about the treaty, however, is what it does not restrict. It does not prohibit conventionally armed space-to-space weapons in Earth orbit, in deep space, or in orbit around other celestial bodies nor does it prohibit conventionally armed space-to-Earth weapons. Moreover, it does not prohibit any Earth-to-space weapons, although the Partial Test Ban Treaty separately restricts nuclear-armed Earth-to-space kinetic weapons and was already in effect by the time the Outer Space Treaty was negotiated. Another major international space agreement that helps define, but not limit, actions in space is the Liability Convention of 1972. Article I of the treaty defines several terms that are important for understanding space weapons and the weaponization of space.

Specifically, it defines damage in a way that is not specifically limited to kinetic effects, and it defines the launching state broadly as both the state that launches or procures a launch and the state from whose territory or facility the launch is conducted. Importantly, the treaty distinguishes different types of liability for space-to-Earth and space-to-space damage. Article II makes the launching state absolutely liable for space-to-Earth damage, regardless of fault. Article III makes the launching state liable for space-to-space damage "if the damage is due to its fault or the fault of persons for whom it is responsible." The Liability Convention has been ratified, signed, or otherwise accepted by 96 nations and international organizations.

The Moon Agreement of 1979 reaffirmed the prohibitions on weapons and military activities on the moon as stated in the Outer Space Treaty. However, it was only ratified by 18 nations, including Australia, Belgium, France, India, the Netherlands, Pakistan, Saudi Arabia, and Turkey. Notably, it was not signed by the United States, Russia, China, the United Kingdom, Germany, and most other nations, and thus it remains limited in its relevance.

The Partial Test Ban Treaty and Outer Space Treaty are the major widely accepted international agreements that limit space weapons activity and testing today. Although the treaties do not specifically define space weapons or the weaponization of space, the prohibitions on nuclear weapons being used in space and the stationing of nuclear weapons in orbit are clear indications that these activities are widely considered space weapons. These agreements do not, however, provide a comprehensive view of whether other capabilities and activities not covered by the treaties are considered space weapons and weaponization, leaving much room for differences in interpretations and definitions.

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Fonte: <<https://www.csis.org/analysis/international-perspectives-space-weapons>>

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BASED ON THE TEXT ABOVE, CHOOSE THE CORRECT ALTERNATIVE A, B, C or D.

QUESTION 1

Choose the statement which is **not** true regarding The Outer Space Treaty:

- A) The parties to the treaty agree not to place any objects carrying nuclear or conventional weapons in orbit around the Earth.
- B) It allows conventionally armed space-to-space weapons in orbit around celestial bodies.
- C) The parties should accomplish activities in outer space according to international law.
- D) It authorizes the establishment of military bases, installations and the conduct of military maneuvers on celestial bodies.

QUESTION 2

Read the sentence below and select the alternative which is **false**.

Although the Partial Test Ban Treaty says that the parties to it agree to prohibit, to prevent, and not to carry out any nuclear weapon test explosion, it does not affect the _____ of non-nuclear space weapons.

- A) trial
- B) growth
- C) usage
- D) concealing

QUESTION 3

According to the text, the Liability Convention of 1972 has a broader definition of launching state. Choose the correct alternative regarding such definition.

- A) The launching state only launches or procures a launch.
- B) The launching state is totally responsible for space-to-Earth damage, independently of fault.
- C) The launching state is only defined as the one whose territory or facility the launch is conducted.
- D) The launching state is always liable for space-to-space damage.

QUESTION 4

According to the text, _____.

- A) in 1961 and 1962, the Soviet Union detonated a massive 1,400-kiloton warhead at an altitude of 400 km in a test known as Starfish Prime.
- B) on July 9, 1962, the United States conducted a series of high-altitude nuclear tests with relatively low-yield warheads (1.2 to 40 kilotons).
- C) the Soviets detonated a 300-kiloton warhead at an altitude of 290 km over the Pacific on October 22, 1962.
- D) The Partial Test Ban Treaty took place partially due to the nuclear weapon tests in space carried out by the United States and the Soviet Union.

QUESTION 5

According to the text, the Partial Test Ban Treaty of 1963 was one of the international agreements that _____.

- A) supported other countries regarding the space weapons
- B) limited activities in space
- C) limited all kinds of space weapons
- D) banned the activities in space

QUESTION 6

According to the text, the Outer Space Treaty of 1967 _____.

- A) prohibits nuclear-armed space-to-space weapons; however, it allows the use of space-to-Earth kinetic weapons
- B) defines the use of military bases in outer space
- C) does not allow the testing of any kinds of weapons into space, on the moon, celestial bodies or in orbit around the Earth
- D) does not permit conventionally-armed space-to-space weapons in Earth orbit

QUESTION 7

Countries located in _____, mentioned in the text, are among the ones which have not signed the Partial Test Ban Treaty.

- A) Europe and Asia
- B) Europe and America
- C) Asia only
- D) Europe only

QUESTION 8

Choose the correct alternative regarding the existing international agreements.

- A) The Partial Test Ban Treaty of 1963 was signed by few nations.
- B) The Outer Space Treaty of 1967 is considered one of the most widely accepted existing international agreements.
- C) The Liability Convention of 1972 helps limit actions in space.
- D) The Moon Agreement of 1979 was ratified by the same nations which signed the Outer Space Treaty.

QUESTION 9

According to the article, which agreement defines many important terms to understand space weapons and the weaponization of space?

- A) The Partial Test Ban Treaty.
- B) The Outer Space Treaty.
- C) Liability Convention.
- D) The Moon Agreement.

QUESTION 10

Based on the ideas conveyed by the text, choose the correct alternative.

- A) The treaties clearly define space weapons and the weaponization of space.
- B) All the treaties prohibit nuclear tests and the use of space weapons by its signatory nations.
- C) No nuclear tests have been conducted in space since the signature of the Partial Test Ban Treaty.
- D) The prohibitions on nuclear weapons being used in space and the stationing of nuclear weapons in orbit do not clearly indicate that these activities are generally considered space weapons.



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DOUTORADO

3ª etapa do Processo Seletivo - Turma 2021

GABARITO COMENTADO

QUESTÃO 1 - letra (D)

The Outer Space Treaty não autorizou o estabelecimento de bases militares, nem manobras militares em corpos celestes. Ao contrário, o tratado proíbe estabelecimento, instalações e fortificações de bases militares, também ficam vedados o teste de qualquer tipo de armamento, assim como manobras militares em corpos celestes. Tal resposta pode ser conferida no Artigo IV do referido tratado que consta no quinto parágrafo do texto.

QUESTÃO 2 - letra (D)

“Trial” é sinônimo de “testing”; “growth” é sinônimo de “development” e “usage” é sinônimo de “use”. A única palavra que não completa corretamente a sentença é “concealing” que é sinônimo de “hide, keep secret”. Essa resposta acerca do Partial Test Ban Treaty pode ser confirmada no trecho a seguir: “Specifically, the treaty says that the parties to it agree “to prohibit, to prevent, and not to carry out any nuclear weapon test explosion, or any other nuclear explosion, at any place under its jurisdiction or control: (a) in the atmosphere; beyond its limits, including outer space.” It does not, however, affect the development, testing, deployment, or use of non-nuclear space weapons.”

QUESTÃO 3 – letra (B)

O artigo II da Liability Convention deixa claro que a alternativa B é a única correta: “Article II makes the launching state absolutely liable for space-to-Earth damage, regardless of fault.” As palavras only e always fazem com que as outras alternativas sejam falsas.

QUESTÃO 4 – letra (D)

De acordo com o texto, o Partial Test Ban Treaty aconteceu em parte devido aos testes de armamento nuclear no espaço realizados pelos EUA e a União Soviética. Tal resposta se encontra no trecho a seguir: “The treaty came about in part because both the United States and Soviet Union were testing nuclear weapons in space and, in the process, discovering the grave effects these weapons had on the overall space environment.”

QUESTÃO 5 - letra (B)

Na última sentença do primeiro parágrafo pode ser constatado que o Partial Test Ban Treaty foi um dos primeiros acordos internacionais a limitar atividades no espaço. Tal afirmação pode ser confirmada em: “One of the first international agreements to limit activities in space was the Partial Test Ban Treaty of 1963.”

QUESTÃO 6 - letra (C)

The Outer Space Treaty, datado de 1967, proíbe o teste de quaisquer tipos de armamento seja no espaço sideral, na lua, em corpos celestes ou na órbita do planeta Terra. A resposta pode ser verificada no artigo IV do tratado em questão.

QUESTÃO 7 – letra (A)

É sabido que a França está localizada na Europa, e China e Coréia do Norte na Ásia, conforme pode ser confirmado no texto: “Notably, France, China, and North Korea are among the few remaining countries that have not signed the treaty and are not bound by its limitations.”

QUESTÃO 8 – letra (B)

Juntamente com o Partial Test Ban Treaty, o Outer Space Treaty é considerado um dos acordos mais aceitos internacionalmente até hoje. Essa resposta pode ser confirmada pelo seguinte trecho do texto: The Partial Test Ban Treaty and Outer Space Treaty are the major widely accepted international agreements that limit space weapons activity and testing today.

QUESTÃO 9 - letra (C)

O tratado que definiu termos importantes para compreensão dos armamentos espaciais e a armamentização do espaço foi o Liability Convention datado de 1972. Tal resposta encontra-se no Artigo I daquele Tratado.

QUESTÃO 10 – letra (C)

No início do quarto parágrafo do texto o autor confirma a informação da alternativa C com a seguinte frase: “Since the Partial Test Ban Treaty was signed in August 1963, however, no nuclear tests have been conducted in space by any nation.”