B1 Exam Instructions for exam.Net version:

18 out of 30 points to pass

- 1. The test lasts 60 minutes. You can finish and submit the exam at any time. When the 60 minutes is up your exam will close and be submitted automatically. When you have submitted the exam you may leave the public meet without saying anything; results will be available on Infostud within 10 days. (For esoneri results will be posted in the course Classroom)
- 2. You cannot use books or support of any kind and no talking is allowed during the test period.
- 3. You should use the "side by side" screen mode so you can see the original text on the left and the text where you will insert your answers on the right of the screen. Answer ALL the questions within the text of the exam.
- 4. Once you have begun the exam do not leave the browser window until you finish and click "Submit"
- 5. If you have problems or questions during the exam, use the exam.net chat window (the icon in the lower left of your screen). DO NOT USE MEET AUDIO TO ASK QUESTIONS as you will disturb other students.

Missions to Mars, the Moon and Beyond Await Earth in 2021. By Michael Roston

Source https://www.nytimes.com/2021/01/04/science/space-astronomy-launches.html

- 1. About a month after the new year has started on Earth, three spacecraft will pull into the vicinity of Mars. These explorers, which launched in July last year, will be heralds of a busy year of space exploration, launches and astronomical occurrences.
- 2. The United Arab Emirates, China and the United States all launched robotic missions to Mars last summer, seeking shortened voyages during the period every two years when Earth is closest to the red planet. The three spacecraft will join a bustling community of explorers either in orbit or on the planet's surface.
- 3. The first to arrive will be the Emirati Hope orbiter, the first deep space explorer of the Arab country's small but ambitious space program. The mission will study the Martian atmosphere, sending valuable data back to scientists on Earth. It is to reach its destination on Feb. 9.
- 4. China's Tianwen-1 mission is also to arrive at Mars on Feb. 10. After orbiting the planet for a time, it will send a lander containing a rover to the surface in May. Landing intact on the solar system's fourth planet is perilous, and only NASA has done it more than once. A successful landing there would extend China's record of impressive spaceflight achievements, especially after last year's Chang'e-5 mission to the lunar surface then back to Earth with a fresh cache of moon rocks.

- 5. Soon after, on Feb. 18, NASA's Perseverance rover will arrive and immediately plunge toward the surface of Mars. If it lands successfully, the rover will seek signs of extinct life in a dried out crater lake and riverbed. But first it will deploy Ingenuity, a small helicopter. That device has its own mission of carrying out the first powered flight from the surface of another planet.
- 6. NASA has in the past decade relied on private companies to build and operate spacecraft that could ferry cargo, and now people, to the International Space Station. It is trying a similar approach with Commercial Lunar Payload Services. The program has contracted with a number of private companies to build robotic lunar landers that will carry cargo from NASA and other customers to the moon's surface.
- 7. The first company, Pittsburgh's Astrobotic, is scheduled to launch its Peregrine lander to the moon in June. It could be followed in October by Nova-C, a spacecraft built by Intuitive Machines of Houston.

READING Headings

Choose which paragraph (1-5) in the text above matches the heading below, inserting the paragraph number after each title. (1 point each)

Example: Intense Year Starts with Mars. Paragraph _ 1

- 1. The US Lands Last / Paragraph _ 5
- 2. China Keeps on Track for Success / Paragraph _ 4
- 3. Three Countries, Three Launches / Paragraph 2
- 4. Small but of Great Scientific Importance / Paragraph _ 3

READING Comprehension

Decide if the following statements are true (T) or false (F) or choose (N) if there is no evidence for a statement. (1 point each)

Example: The article was written on an airplane. N

- 1. France is currently planning a mission to Mars. _ N
- 2. The Arab Emirates have never before sent an explorer into deep space. T
- 3. The Chinese mission plans on sending a rover to Mars' surface immediately upon reaching the planet's orbit **F**
- 4. The US mission's principal research question concerns the possible presence of life on Mars in the past. T
- 5. Private companies have been building craft to ferry cargo to the moon for decades. **F**

READING Reference

What do the underlined words refer to, in your own words or using words from the text? (1 point each)

Example: About a month after the new year has started on Earth _ 2021

- 1. <u>These explorers</u>, which launched in July last year (par 1)..._ three spacecraft
- 2. It is to reach its destination on Feb. 9. (par 3) Mars
- 3. Landing intact on the solar system's fourth planet is perilous, and only NASA has <u>done it</u> more than once. (par 4) **landed on Mars**
- 4. <u>The program</u> has contracted with a number of private companies. (par 6) <u>NASA</u>

READING Analysis

Answer the following question in one sentence (3 points)

1. What has changed about the way NASA acquires space craft in the past decade? It has started contracting private companies

WRITING Multiple-choice cloze

Read the text below and choose the best word from the list to replace the blanks. Write your answer directly in the text after the number. (1 point each)

added and are end frame important successor the years

The most scientifically ex.) **important** mission of 2021 has been a long time coming. The launch of 1.) **the** James Webb Space Telescope, effectively a 2.) **successor** to the Hubble telescope, has been postponed for 3.) **years**, plagued by technical problems and mounting costs. NASA 4.) **and** the world's astronomers and planetary scientists 5.) **are** eager to see it get off the ground at the 6.) **end** of October. The agency settled on that time 7.) **frame** after the coronavirus pandemic and other problems 8.) **added** another delay to the existing schedule. Two other NASA explorers will also head out into the solar system.

The Double Asteroid Redirection Test spacecraft, launching in July, aims to test whether a spacecraft could deflect a future asteroid that was headed toward Earth's

surface. To do that, it will visit Didymos, a pair of near-Earth asteroids that travel around the sun together, and attempt a collision to nudge the orbit of the smaller rock.

WRITING Communication

Answer in your own words in the space below the question. (6 points) Write a comment in which you express your anger at the expenditure of money on space when the economy is suffering on earth. Mention specifically two of the NASA missions and suggest that the benefits do not outweigh the costs.

I believe this is an excessive expenditure of funds which could be used better to boost the economy on earth. For example, NASA's James Webb Space Telescope and the Double Asteroid Redirection Test cost millions.