UNIT 10. SPACE TRAVEL

I. Read the passage and do the tasks that follow.

Space Tourism means ordinary members of the public buying tickets to travel to space and back. Like any other business, once space tourism gets started it will develop progressively. It may go through several phases. Starting with a relatively small-scale and relatively high-priced "pioneering phase", the scale of activity will grow and prices will fall as it develops. Finally, it will become a mass-market business, like aviation today.

During the pioneering phase, customers will be relatively few, from hundreds per year to thousands per year; prices will be high, $50,000 and up; and the service will be nearer to "adventure travel" than to luxury hotel-style.

The mature phase will see demand growing from thousands of passengers per year to hundreds of thousands per year. Tickets to orbit will cost less and flights will depart from many different airports. Orbital facilities will grow from being just clusters of modules to large structures constructed in orbit for hundreds of guests, permitting a wide range of orbital entertainments.

During the mass phase, ticket prices will fall to the equivalent of a few thousand US dollars, and the number of customers will be from hundreds of thousands to millions of passengers per year. And aviation is still growing fast at today's level of 1 billion passengers per year. So there is no reason to suppose that space travel will ever stop growing. There is certainly no limit to the possible destinations.

Task 1. Read the passage again, and then decide whether the statements are true (T) or false (F).

1. When space tourism develops, the ticket prices will drop.
2. During the pioneering phase, customers have to pay high costs in order to stay in luxury hotel-style spaceships.
3. The more space tourism develops, the less aviation grows.
4. Maybe some day in the future, space tourism is as popular as aviation.

Task 2. Finds words in the passage to match these definitions.

5. gradually (paragraph 1): _____

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6. the flying of aircraft (paragraph 1): _____

7. a unit that forms part of something bigger (paragraph 3): _____

8. the path taken by a spacecraft going round a planet (paragraph 3): _____

III. Read the passage and do the tasks that follow.

Space Exploration

For centuries, people dreamed about leaving the Earth and travelling to other worlds. Then, in 1957, the Soviet Union, now Russia, made the first small step into space by punching a small satellite, called Sputnik. The Space Age began.

Early space activities were dominated by the United States and the Soviet Union. However, as time went by, Europe and Japan also learned how to build their own satellites and rockets. Today, countries such as China, India, South Korea, Israel and Brazil are developing their own space industries.

During the last 50 years, unmanned probes have been sent towards all of the planets in the solar system, as well as many satellites, asteroids and comets while space buggies have driven over the surfaces of the moon and Mars. The sun has also been explored in great detail by a fleet of spacecraft.



Many space observatories, such as the Hubble Space Telescope, have been launched to look at the distant universe. They have sent back some amazing pictures taken in visible light. But they can also observe stars and galaxies at wavelengths that are invisible to human eyes - radio, infrared, ultraviolet, X-rays and gamma rays. The flood of discoveries has changed the way we look at the universe.

More than 500 people have also flown in space since Yuri Gagarin paved the way in 1961. 20 people have travelled to the moon and 12 of them have walked on the moon. Space stations have been built, and astronauts have learned to live and work in space for many months, or even years.

Task 1. Read the statements and decide whether they are true (T), or false (F), or not given (NG).

9. There was a race in space exploration between the United States and the Soviet

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Union in the early stage.

10.Several countries besides the United States and Russia have sent humans into space.

11.All the planets in the solar system have been investigated by using probes.

12.The pictures taken by the Hubble Space Telescope may be clearer than those taken before.

Task 2. Finds words/phrases in the passage to match these definitions.

13.man-made objects that have been sent into space and that move around a planet _____ (paragraph 2):

14.vehicles shaped like a tube, which are used for travel into space(paragraph 2): _____

15.spacecraft without people on board which obtain information and send it back to ____ the Earth (paragraph 3):

16.small planets that go round the sun (paragraph 3): _____

17.objects that look like bright stars that move around the sun (paragraph 3): _____

18.vehicles designed for use by astronauts on the last three missions of the Apollo _____ project (paragraph 3):

IV. Choose the word or phrase among A, B, C or D that best fits the blank space in the following passage.

Neil Armstrong was the first person (19)_____on the moon. He was born in Ohio on August 5, 1930. While he was in college, he left to serve in the U.S. Navy. He flew planes during the Korean War. Then he came back to college and finished the degree he (20)_____. He later (21)_____ a master's degree too.



Armstrong became an astronaut in 1962. He was the commander of Gemini 8 in 1966. Neil Armstrong (22)_____the first successful connection of two vehicles in space.

Armstrong's second flight was Apollo 11 in 1969, and he was the mission commander. He flew with Buzz Aldrin and Michael Collins. Armstrong and Aldrin landed on the moon in a lunar module named "Eagle". With more than half a billion people (23)_ on television, Armstrong (24)_____the ladder and said, "That's one small step for a man, one

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giant leap for mankind." and Aldrin (25)____him shortly. They explored the surface for two and a half hours, collecting samples and taking photographs.

They left behind an American flag, and a plaque reading, "Here men from the planet Earth first (26)_____upon the moon. July 1969 A.D. We came in (27)__ for all mankind."

After almost a day, they blasted off. They docked with Collins in (28) _____around the noon. All three then flew back to the Earth.

19.**A.** walk	**B.** walking	**C.**to walk	**D.**walked
20.**A.** starts	**B.**started	**C.**would start	**D.**had started
21.**A.** took	**B.**make	**C.**earned	**D.**scored
22.**A.** performed	**B.**operated	**C.**functioned	**D.**carried
23.**A.** watch	**B.**to watch	**C.**watching	**D.**watched
24.**A.**lowered	**B.**climbed down	**C.**descended	**D.**stepped
25.**A.**joined	**B.**connected	**C.**joined in	**D.**involved
26.**A.**went	**B.**set a foot	**C.**set food	**D.**set feet
27.**A.**silence	**B.**freedom	**C.**communication	**D.**peace
28.**A.**space	**B.**orbit	**C.** height	**D.**distance

V. Read the passage, and choose the correct answer A, B, C or D for each question.

The Shuttle Era Comes to an End

The set of Space Shuttle missions run by NASA captivated the world and proved that reusable spacecraft could be used to bring astronauts and cargo into space. The Space Shuttle programme had a total of six separate orbiters, five of which actually went into space. The first-made orbiter was only used to gather data about how the shuttles would glide back to the earth. This shuttle would be brought up into the air by a specially modified Boeing 747 and released to glide down without any power of its own.

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The Space Shuttle Era ran from the first launch on April 12, 1981, and ended when the final shuttle landed on July 21, 2011. During this time, there were 135 missions flown. Of the five shuttles that did go into space, two met with disasters that killed all the crew members aboard.

The first disaster happened on January 28, 1986when Space Shuttle *Challenger* ran into severe problems and exploded less than two minutes after take-off. It was a major blow to NASA as a school teacher was on board the orbiter, and the launch was being watched by children from schools across the United States. The second disaster came on February 1, 2003. After having completed its mission, Space Shuttle *Columbia* was returning to the earth from space. During damage done to a wing during its launch, the orbiter disintegrated as it hit the earth's atmosphere during re-entry.

Because the Space Shuttle programme was running, it largely made possible the construction of the International Space Station (ISS). The shuttles brought astronauts to the station, replenished supplies, and carried actual pieces to the Space Station up from the earth.

As the Space Shuttle Era came to an end, many space lovers have been left wondering, "What's next?" There is still plenty to explore, so we will all just have to wait and see.

29. What was captivated in the passage?

A. The world **B.** An astronaut **C.**A mission **D.**A space shuttle

30. How many orbiters are there in the Space Shuttle programme mentioned in the passage?

A.Four **B.**Five **C.** Six **D.** Seven

31. What were considered to be unfortunate?

A.The supplies **B.**The disasters **C.** The Space Stations **D.**The different eras

32. When did the second disaster take place?

A.1981 **B.**1986 **C.**2003 **D.** 2011

33. Who was mentioned as being on board the Space Shuttle *Challenger*?

A.A doctor **B.**A teacher **C.** A reporter **D.**A scientist

VI. Read the passage, and choose the correct answer A, B, C or D for each question.

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Voyager 1: Boldly Going Where None Has Gone

The Voyager 1 spacecraft was launched in 1977 to study the outer planets of our solar system. It sent back some of the iconic photographs of Jupiter and other outer planets that were the best views ever seen and certainly much better than any of the views astronomers were able to get with Earth-based telescopes. However, the mission of the spacecraft turned out to be more than just looking at planets.

In August of 2012, Voyager 1 became the first man-made object to leave our solar system. It has escaped the gas bubble from the sun and is moving in the space between stars. It is in territory that has never been explored.

The Voyager 1 spacecraft is traveling at about 38,000 miles per hour and has a very small amount of computer memory as part of its equipment. As a comparison, an average smartphone has 270,000 times more memory than Voyager 1, and the spacecraft doesn't have a processor like anything we have today. When Voyager 1 sends messages to the earth, they take about 17 hours to reach us traveling at the speed of light. Voyager 1 is currently more than 18 billion kilometers away from the earth.

There is enough power on Voyager 1 to power the craft and send measurements from its science instruments until 2020. At that point, some instruments will be shut down over the years until 2025. It is possible that information from the craft could still be received as far out as 2036. It is no wonder that Voyager 1 has been hailed as "the little spacecraft that could".

34.How fast is Voyager 1 going?

A. At 270,000 kilometers per hour **B.**At 17 miles per second

C. At 38,000 miles per hour **D.**At 18 billion kilometers per hour

35.When did Voyager 1 leave the solar system?

A. In 1977 **B.**In 2012 **C.** In 2014 **D.**It hasn't left yet.

36.What is the difference between a smartphone and Voyager 1?

A. Smartphones are bigger. **B.** Voyager 1 has more processing power.

C. Smartphones have much more memory. **D.** Only Voyager 1 can send messages.

37.What will be shut down in 2020?

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A. Voyager 1 **B.** Some instruments of Voyager 1

C.The mission of Voyager 1 **D.** All equipment of Voyager 1

38.How can the original mission of Voyager 1 be described?

A. As groundbreaking **B.** As traditional

C. As imaginary **D.** As religious

VII. Read the passage, and choose the correct answer A, B, C or D for each question.

Space Tourism

If you are like most people, you probably dream of spending your next vacation sightseeing or relaxing in a tropical spot. But pretty soon, you may have the option of blasting into space and exploring the universe. It appears that space tourism may start to experience a boom that is sure to be out of this world.



Since ancient times, humans have surely dreamed about visiting space. However, it was just a fantasy until 1961, when Soviet cosmonaut Yuri Gagarin became the first person to fly into space. Yet in the years following, only a few highly-trained Soviet and American astronauts managed to leave the Earth's atmosphere. In the mid-1980s, the US began to relax some of its restrictions. In 1986, an engineer named Charles Walker became the first non-government employee to fly into space. A year later, an American teacher named Christa McAuliffe was chosen to be the first teacher in space. Unfortunately, the Space Shuttle she was on, *The Challenger,* crashed during takeoff, killing everyone on board. Space tourism got an unexpected boost from the collapse of the Soviet Union. With Russia's space programme in **dire** need of money, it became open to offers for space tourism. In 1990, a Japanese reporter was allowed to fly with a Russian crew into space, but the trip would cost his employer $28 million. In the late 1990s, a private company, MirCorp, started organizing trips to space for wealthy individuals. Now, many other companies are trying to do the same.

Still, most people who want to become space tourists face a major barrier: the price. Early space tourists have paid dozens of millions of dollars for a seven-to-ten-day stay outside the Earth. However, there are some indications that the price will come down in the near future. Some

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corporations are gearing up for this with big plans to make space a more hospitable place. The luxurious hotel chain Hilton has expressed interest in opening a space hotel in the next 15 to 20 years. Meanwhile, some experts believe that flights to and from the moon could become a common occurrence within a few decades. Hopefully someday soon we will all have the chance to get to know our solar system a little bit better.

39. What happened in 1961?

A. The first space tourist traveled into space.

B. An American astronaut landed on the moon.

C. The first human traveled into space.

D. The first Soviet space tourism company opened.

40. Who was Christa McAuliffe?

A. The first American space tourist

B. A businesswoman who supported space tourism

C. A Soviet official who banned space tourism

D. An American teacher who wanted to travel into space

41. What effect did the end of the Soviet Union have on space tourism?

A. It made space tourism more expensive.

B. It made space tourism become a reality.

C. It delayed the start of space tourism for many years.

D. It prevented people from flying into space for a decade.

42. The word "**dire**" in paragraph 2 is closest in meaning to _____.

A. necessary **B.** sufficient **C.** important **D.** serious

43. What is MirCorp?

A. A company that develops equipment for space tourism

B. A company that fights against bringing people into space

C. A Russian government agency that trains astronauts

D. An organization that plans trips for people who want to visit space

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44. Which of the following is NOT a space tourist?

A. A Canadian well-experienced pilot who is a member of NASA's programmes.

B. A millionaire who is willing to pay about 30 million dollars for the space flight.

C. A Japanese reporter whose company paid the expenses.

D. A person who takes part in the training programmes of NASA, and pays the cost of the flight.

45. Why aren't more people taking vacation in space?

A. Space tourism hasn't proven to be safe just yet.

B. Most governments have made it illegal to travel in space.

C. Many are waiting for the cost to come down.

D. Many have stated that there is not much to see in space.

46. What does the passage imply about the future of space tourism?

A. Eventually, space tourism will become cheaper.

B. It seems very unlikely that space tourism will ever be popular.

C. There will be few space tourists until more hotels are developed.

D. It really isn't worth it for common people to journey

47. All of the following are true about the future of space tourism EXCEPT that _____.

A. people will stay longer in space thanks to improvements in space technology

B. a Hilton space hotel will be opened on the moon in the next 15 to 20 years

C. not only very rich people can afford to become space tourists

D. the moon will soon become a popular destination in space tourism

48. It can be inferred from the passage that _____.

A. Christa McAuliffe has been the first teacher to come back from space

B. the Japanese reporter spent two weeks in space in 1990

C. Charles Walker had never been a pilot before joining the NASA's training programme

D. the US began to relax some restrictions because of the disaster of *The Challenger*

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