THE UNIVERSE

I. In two minutes try to tick the right answers to the questions below. Then read the text following it and check whether your answers were correct.

1. Which theory of the universe is Cosmic Microwave Background radiation used to explain?
   - ○ Steady State
   - ◉ Big Bang
   - ○ Intelligent design
2. What type of star is more likely to form a black hole?
   - ○ Lightweight stars
   - ○ Medium weight stars
   - ◉ Heavyweight stars
3. Approximately how long has our sun been shining for?
   - ○ 1 billion years
   - ◉ 5 billion years
   - ○ 10 billion years
4. What type of star is our sun?
   - ◉ Yellow dwarf
   - ○ Red giant
   - ○ White dwarf
5. In the formation of a star what do hydrogen nuclei fuse to form?
   - ○ Carbon
   - ○ Helium
   - ○ Neon
6. What is the average lifespan for stars similar to our sun?
   - ○ 1 billion years
   - ○ 10 billion years
   - ○ 100 billion years
7. What does a massive star form when it has fused its available hydrogen and helium?
   - ○ Red supergiant
   - ○ Red giant
   - ○ Green giant
8. What is formed when a massive star begins to collapse and then explode?
   - ○ Neutron star
   - ○ Black hole
   - ○ Supernova
9. When is a neutron star formed?

- The remains of a massive star have a low density
- The remains of a massive star have no density
- The remains of a massive star have a high density

10. When is a black hole formed?
    - The remains of a massive star have a low density
    - The remains of a massive star have no density
    - The remains of a massive star have a high density
11. Why can't light escape from a black hole?
    - The gravitational pull is too weak
    - The gravitational pull is too strong
    - There is no light in a black hole
12. About how long ago do scientists believe the universe began?
    - 137 million years
    - 1,370 million years
    - 13,700 million years
13. Which is the main scientific theory for the origin of the universe?
    - The Big Bang Theory
    - The Oscillating Universe Theory
    - The Steady State Theory
14. Which piece of evidence supports the Big Bang theory?
    - The more distant galaxies are moving the slowest.
    - The more distant galaxies are moving the quickest.
    - The more distant galaxies are moving towards us.
15. What is the name for the change in the light emitted by a moving object?
    - Red shift
    - Blue shift
    - Ultra violet shift
16. About how many galaxies are there in the universe?
    - A million
    - A hundred million
    - A billion
17. What does SETI stand for?
    - Send Earth Tourists Instead
    - Search for Extra-Terrestrial Intelligence
    - Search for Extra-Terrestrial Intellect
18. What keeps planets in their orbits?

- Gravitational pull from each of the planets
- Gravitational pull from the sun
- Radiation from the sun

19. Which of the following is not a dwarf planet?
    - Neptune
    - Pluto
    - Ceres

II. Find words or phrases in the text that correspond with synonims or definitions below;

The Universe
collect - gather
very little - tiny
become bigger and digger - enlarge
draw together, reduce - contract
here: reduce to small pieces or particles by pounding - crunch
involving main features - overall

Stars and galaxies
huge, vast, large - immense
cencerned with, referring to - involved

The birth of a star
between or among stars - interstellar
the very center of an object - core
lose colour or light, or become less clearly visible - fade
an event that will inevitably happen in the future - fate

Space probes
enter upon, start an activity - undertake
a small part of something intended as representative of the whole - sample
gained - obtained

SETI
trace, proof - evidence
discover or determine the existence - detect
of the sky or heaven, celestial - extraterestrial

III. Watch the video and answer the questions below: (source: www.bbc.co.uk)

1. Where is the VLT situated?

Atacama desert, Chile; Paranal Observatory based more than 2000 metres above sea level.

2. What does it consist of?

   4 big individual units and small movable telescopes that can be linked together to increase the size of the VLT's mirror. Each unit has a gigantic mirror 8 metres in diameter.

3. How big telescope can be generated with the VLT?

   A teleskope with 130 metres in diameter.

4. What problems can atmospheric turbulence cause?

   Twinkling stars, blurry images.

5. How is the VLT different from other telescopes?

   It has no eye-pees; astronomers point at the stellar objects using computers.

6. What will happen to the VLT after the new telescope has been bulit?

   They will work together or complement each other.