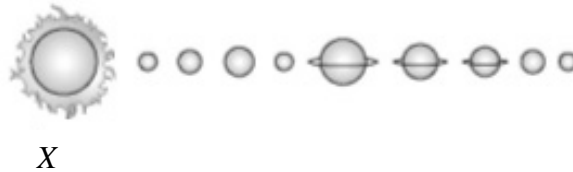


Chapter 26 Stars and Galaxies

Paper 1

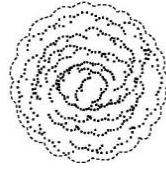
Answer **all** questions. Each question is followed by four options, **A**, **B**, **C** and **D**. For each question, choose **one** answer only.

1.



- The figure above shows the Solar System. Which of the following is **true** about X?
- A** X is a planet
 - B** Consists of oxygen
 - C** Has low temperature
 - D** Nuclear reaction takes place in its core
2. The Sun is born from a
- A** nebula
 - B** red giant
 - C** white dwarf
 - D** supernova
3. Which part of the Sun produces a lot of heat as a result of the nuclear reaction that occurs in it?
- A** Corona
 - B** Core
 - C** Photosphere
 - D** Chromosphere
4. Which of the following is **not** an effect of prominence and sunspot on Earth?
- A** Interference to telephone system
 - B** Interference to radio communications system
 - C** Volcanic eruptions and earthquakes
 - D** Produces aurora at the Earth's poles
5. Which of the following is the hottest star?
- A** A blue star
 - B** A yellow star
 - C** An orange star
 - D** A white star

6.



The figure above shows a cloud of dust and gas consisting of hydrogen and helium. How is it that the dust and gas can form a very hot and compact core during the birth of a star?

- A Very low pressure in space causes the dust and gas to become compressed.
- B The dust and gas contract and compress as a result of being pulled by gravitational force.
- C Very high temperature at the centre causes the dust and gas to attract one another.
- D The dust and gas combine as a result of the nuclear reaction in its centre.

7.

S: White core cools
T: Star expands
U: The material in the outer part of the star escapes into space

The steps shown above occur when a star dies. Which of the following is the **correct** sequence of events?

- A *S, T, U*
 - B *T, U, S*
 - C *U, T, S*
 - D *U, S, T*
8. Which of the following probably forms at the end stage in the death of a star with a size bigger than the Sun?
- A White dwarf
 - B Red giant
 - C Sunspot
 - D Neutron star
9. Which of the following is produced as a result of the collision of charged particles from the Sun with air molecules at the Earth's poles?
- A Typhoon
 - B Sunspot
 - C Aurora
 - D Prominence

10.

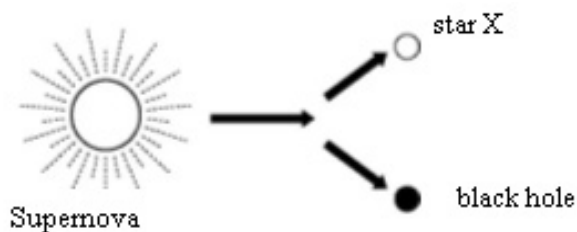


The figure above shows a galaxy. It is known that the Sun is situated in this galaxy. Which of the following is **true** about this galaxy?

- I It consists of millions of stars.
- II It is the only galaxy in space.
- III The Sun and other stars move around the centre of this galaxy.

- A I only
- B III only
- C I and III only
- D I, II and III

11.



The figure above shows the transformation of a star to become other objects after a big explosion. Which of the following is **true** about star X?

- I It spins and radiates radio waves in the form of pulses.
- II It cools and leaves a black body.
- III The star's core contracts and becomes a white dwarf.

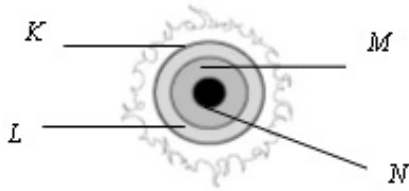
- A I only
- B III only
- C I and III only
- D I, II and III

12. Which of the following phenomena of the Sun interferes with the telephone, radio and television signals?

- I Sunspot
- II Solar flare
- III Prominence

- A I and II only
- B I and III only
- C II and III only
- D I, II and III

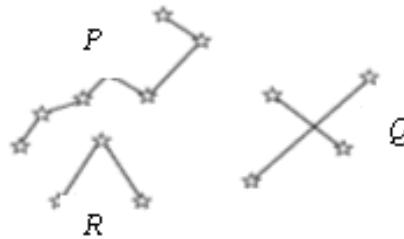
13.



The figure above shows the layers of the Sun. Which of the layers labelled *K*, *L*, *M* and *N* is responsible for supplying the energy for photosynthesis in green plants on Earth?

- A *K*
- B *L*
- C *M*
- D *N*

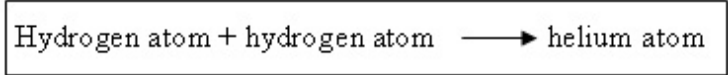
14.



The figure above shows constellations *P*, *Q*, *R* and *S*. Which of the following was used for direction by sailors in the past?

- I *P*
 - II *Q*
 - III *R*
-
- A I and II only
 - B I and III only
 - C II and III only
 - D I, II and III

15.

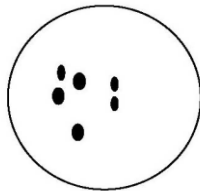


Which of the following celestial bodies is formed by the fusion of hydrogen atom as shown in the reaction above?

- A Comet
- B Star
- C Meteor
- D Asteroid

Paper 2

Answer the question.



The figure above shows a phenomenon that occurs frequently in the Sun.

(a) Name the phenomenon shown in the above figure.

(b) At which part of the Sun's layers does this phenomenon occur?

(c) What causes this phenomenon?

(d) Name **two** other phenomena that occur in other layers of the Sun.

(i) _____

(ii) _____

(e) Name **two** communications systems on Earth that are disrupted by charged particles coming from the Sun.

Answers:

Paper 1

1	D	11	A
2	A	12	D
3	B	13	D
4	C	14	A
5	A	15	B
6	B		
7	B		
8	D		
9	C		
10	C		

Paper 2

- (a) Sunspot
- (b) Photosphere
- (c) The region is much cooler than other regions on the Sun's surface.
- (d) (i) Solar flare
(ii) Prominence
- (e) Radio and television broadcasts / telephone calls