



# SCIENCE FORM 3

## MODULE 9: STARS AND GALAXIES

Arahan:

1. Modul ini mengandungi **tiga puluh dua** soalan. Semua soalan adalah dalam bahasa Inggeris.
2. Modul merangkumi **enam** konstruk yang diuji  
K1-Memahami soalan dalam Bahasa Inggeris  
K3-Memahami istilah sains dalam Bahasa Inggeris  
K5-Menguasai konstruk pengetahuan  
K6-Menguasai konstruk kefahaman  
K7-Menguasai konstruk kemahiran  
K10-Memahami pengajaran dan pembelajaran dalam Bahasa Inggeris
3. Murid hendaklah menulis maklumat diri dalam kertas jawapan objektif disediakan. Murid juga perlu memastikan maklumat konstruk, nombor soalan dan jumlah soalan seperti yang dibaca oleh guru di dalam ruangan disediakan dalam kertas jawapan objektif sebelum ujian.
4. Bagi **soalan objektif**, anda perlu menandakan jawapan dengan **menghitamkan pilihan jawapan** pada pilihan jawapan **A , B , C** atau **D** pada kertas jawapan objektif.

Contoh:

Antara berikut, yang manakah haiwan?

A. Pokok      B. Kambing      C. Kereta      D. Pen

A       B       C       D       E

5. Untuk **soalan subjektif**, jawapan hendaklah **ditulis pada kertas berasingan** yang disediakan oleh guru.
6. Bagi **soalan 29 hingga 32**, murid hendaklah mendengar arahan daripada guru.
7. Jawab **semua** soalan.

Modul ini mengandungi **14** halaman bercetak

1.

The atmosphere of the Sun consists of photosphere, chromosphere and corona

How many layers does the atmosphere of the Sun have?

- A 1
- B 2
- C 3
- D 4

2.

Sunspots, prominences and solar flares are examples of phenomena occurring on the surface of the Sun.

Which of the following is **not** a phenomenon that occurs on the surface of the Sun?

- A aurora
- B sunspots
- C prominences
- D solar flares

3.

A star is a big ball of hot gases consisting mostly of hydrogen and helium.

Which of the following is **true** about a star?

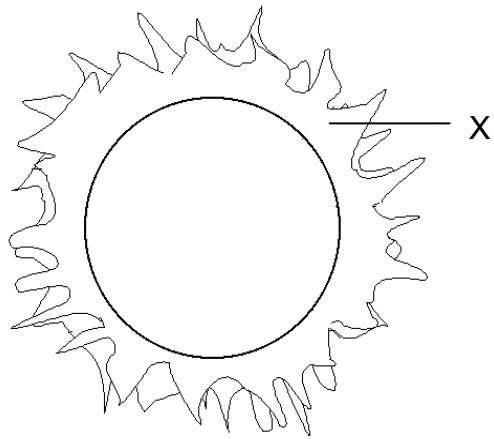
- A It is a small ball of hot gases
- B It consists of hydrogen and helium only
- C It is a big ball of cold gases
- D It consists large amount of hydrogen and helium gas

4. The brightness of a star depends on its size and temperature. The temperature of stars varies from  $3000^{\circ}\text{C}$  to  $50000^{\circ}\text{C}$ . Stars with higher temperature are blue. Star with lower temperature are red.

Choose the **correct** statement of a star.

- A Size and temperature of a star affect its brightness
  - B Red stars are hotter than blue stars.
  - C The lowest temperature of stars is  $50000^{\circ}\text{C}$ .
  - D Blue stars are colder than red stars.
5. A cloud of gases and dust in space is known as \_\_\_\_\_
- A star
  - B Sun
  - C nebula
  - D red giant
6. The dark depressions on the photosphere is called \_\_\_\_\_
- A corona
  - B sunspot
  - C solar flare
  - D prominence
7. The energy that is generated by the Sun is known as \_\_\_\_\_
- A nuclear fusion
  - B nuclear reaction
  - C nuclear formation
  - D nuclear absorption

8. The figure shows a structure of the Sun.



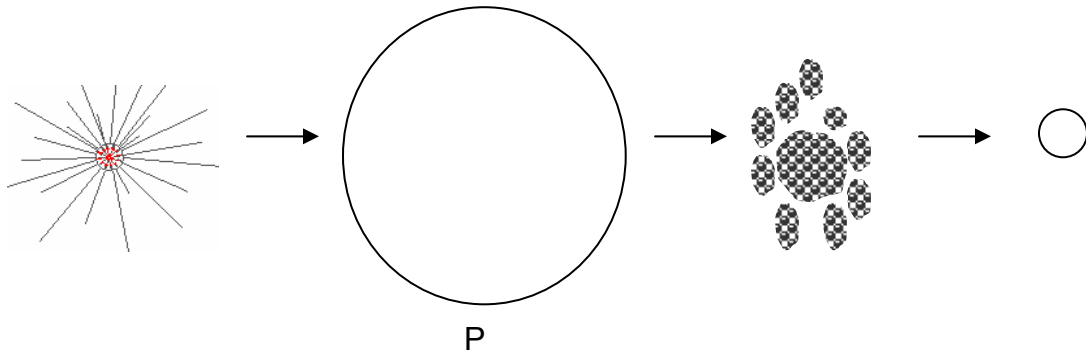
- X is a giant flame of hot gases projecting from the surface of the Sun.  
X is \_\_\_\_\_
- A sun spot
  - B solar flare
  - C prominence
  - D photosphere
9. \_\_\_\_\_ is an explosion that occurs during the death of a star.
- A galaxy
  - B satellite
  - C supernova
  - D super red giant
10. A small but condensed star is referred to as \_\_\_\_\_
- A nebula
  - B red dwarf
  - C white dwarf
  - D black hole

11. The reaction shows how energy is generated by the Sun.



The reaction involves is known as

- A nuclear radiation
  - B nuclear fission
  - C nuclear fusion
  - D nuclear division
12. The figure shows the sequence in the death of a star.



What does P represent?

- A Supernova
  - B Red giant
  - C White dwarf
  - D Planetary nebula
13. The outermost layer of the Sun's atmosphere is \_\_\_\_\_
- A aurora
  - B corona
  - C photosphere
  - D chromosphere

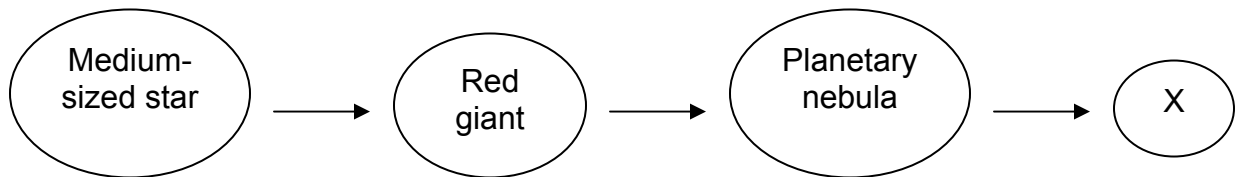
14. Which colour shows that the star is at its highest temperature?
- A Red
  - B Blue
  - C Green
  - D Yellow
15. Which of the following best describe a constellation?
- A Consists of galaxies
  - B Consists of natural satellite
  - C Used to forecast the weather changes
  - D A certain pattern in the sky formed by a group of bright stars
16. Which of the following is **true** about stars?
- A All stars have the same colours
  - B Stars are made up of dust and gases
  - C The biggest star is known as a giant star
  - D The brightness of a star depends on its surface only
17. Galaxies can be classified according to their shapes. The shapes include
- I spiral
  - II elliptical
  - III irregular
- A I and II
  - B II and III
  - C I, II and III

18. The atmosphere of the Sun consists of \_\_\_\_\_

- I photosphere
- II sunspot
- III chromosphere
- IV corona

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

19. The figure shows the death of a medium-sized star.



What is X?

- A Nebula
- B Black hole
- C White dwarf
- D Neutron star



20. The Sun is a star. This is because \_\_\_\_\_

I it gives out light

II it gives out heat

III it is small

A I and II

B I and III

C II and III

D I, II and III

21.

- A dark area on the surface of the Sun
- Consists of gases which are not so hot

The information above describes a phenomenon that occurs on the surface of the sun.

What is this phenomenon?

A Corona

B Sunspot

C Prominence

D Solar flare

22. The table shows the characteristics of layers of the Sun's atmosphere.

Layer	Characteristic
K	Bright red layer
L	Consists of hydrogen and helium gas
M	The outermost layer of the Sun

Which of the following represents K, L and M?

	K	L	M
A	chromosphere	Sun's core	corona
B	chromosphere	photosphere	corona
C	photosphere	Sun's core	chromosphere
D	photosphere	Sun's core	corona

23. Which of the following events will take place when a massive star blows itself apart?

- I A supernova explosion occurs.
- II The force of the explosion generates radiation.
- III The star collapses.

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

24. The flow chart shows the sequence of formation and death of stars.

Nebula → P → Red giant → Planetary nebula → White dwarf

Which of the following are **true** about P?

- I Has the same size as the Sun
- II Consists of hydrogen and helium
- III High density.

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

25.

Star	Temperature °C
P	40 000
Q	6 000
R	3 000

The table shows the temperature of the stars P, Q and R.  
Arrange the brightness of the stars in descending order from the brightest to the dimmest.

- A R → P → Q
- B P → Q → R
- C Q → R → P

26. The atmosphere of the sun consists of the three layers. They are photosphere, chromosphere and corona. Corona is the outermost layer of the Sun. Chromosphere is the layer between corona and the photosphere.

Arrange the atmosphere of the Sun from the outermost to the innermost layer.

- A Corona, chromosphere, photosphere
  - B Chromosphere, corona, photosphere
  - C Corona, photosphere, chromosphere
  - D Chromosphere, photosphere, corona
27. The statements below represent stages in the formation of a star.

J – Collision occurs and the temperature rises  
K – A nebula is pulled into its core  
L – Nuclear fusion takes place  
M – The nebula start to spin

Arrange the stages in the correct order.

- A J → K → L → M
- B K → M → J → L
- C M → J → K → L
- D L → J → M → K

28. The information shows stars with different degree of hotness.

K : The coolest star.
L : The moderate hot star.
M : The hottest star.

Which of the following is **correct** to represent the relationship between K, L and M and the colour of the star.

	K	L	M
A	Blue	Red	Yellow
B	Red	Yellow	Blue
C	Yellow	Red	Blue
D	Blue	Yellow	Red

**Question 29 to 32.**

**Listen carefully to the text read by the teacher. Then, answer the questions.**

29. A star can be classified based on its \_\_\_\_\_

- I temperature
- II brightness
- III size

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

30. Choose the **correct** statement related to the phenomena occurring on the surface of the Sun.

- A Sunspots are violent explosions on the surface of the Sun.
- B Solar flares are bright red arches or loops of hot gases projecting from the surface of the Sun.
- C Prominences are dark spots seen on the surface of the Sun.
- D Solar flares are violent explosions on the surface of the Sun

31. How is energy generated by the Sun?

- A Helium atoms undergo nuclear fusion to form hydrogen atoms.
- B Hydrogen atoms react with helium atoms to produce heat and light energy
- C Hydrogen atoms undergo nuclear fusion to form helium atoms and produced large amount of energy.
- D Helium atoms under high temperature in the core of the Sun split up.

32. Choose the **correct** statement.

- A Galaxies are divided based on their shapes which are spiral, elliptical and irregular.
- B A galaxy consists of millions of planets and their moons only.
- C The three types of galaxies are spiral, spherical and irregular.
- D Galaxies are divided based on their sizes .



KEMENTERIAN PELAJARAN MALAYSIA  
KERTAS JAWAPAN OBJEKTIF  
Ujian Diagnostik



Nama Pelajar: .....

Tahun/ Tingkatan : ..... 3 ..... Mata Pelajaran: SAINS .....

Nama Sekolah: ..... Modul: ..... 9 .....

**GUNAKAN PENSIL 2B ATAU BB SAHAJA.**  
**TENTUKAN TIAP-TIAP TANDA ITU HITAM DAN MEMENUHI KESELURUHAN RUANG.**  
PADAMKAN HINGGA HABIS MANA-MANA TANDA YANG ANDA UBAH  
**SILA HITAMKAN JAWAPAN DI BAWAH MENGIKUT HURUF JAWAPAN YANG ANDA PILIH**

- 1 (A) (B) (C) (D) (E)
- 2 (A) (B) (C) (D) (E)
- 3 (A) (B) (C) (D) (E)
- 4 (A) (B) (C) (D) (E)
- 5 (A) (B) (C) (D) (E)

- 31 (A) (B) (C) (D) (E)
- 32 (A) (B) (C) (D) (E)
- 33 (A) (B) (C) (D) (E)
- 34 (A) (B) (C) (D) (E)
- 35 (A) (B) (C) (D) (E)

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- 50 (A) (B) (C) (D) (E)

- 6 (A) (B) (C) (D) (E)
- 7 (A) (B) (C) (D) (E)
- 8 (A) (B) (C) (D) (E)
- 9 (A) (B) (C) (D) (E)
- 10 (A) (B) (C) (D) (E)

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- 52 (A) (B) (C) (D) (E)
- 53 (A) (B) (C) (D) (E)
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- 55 (A) (B) (C) (D) (E)

- 11 (A) (B) (C) (D) (E)
- 12 (A) (B) (C) (D) (E)
- 13 (A) (B) (C) (D) (E)
- 14 (A) (B) (C) (D) (E)
- 15 (A) (B) (C) (D) (E)

- 41 (A) (B) (C) (D) (E)
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- 43 (A) (B) (C) (D) (E)
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- 60 (A) (B) (C) (D) (E)

- 16 (A) (B) (C) (D) (E)
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- 24 (A) (B) (C) (D) (E)
- 25 (A) (B) (C) (D) (E)
- 26 (A) (B) (C) (D) (E)
- 27 (A) (B) (C) (D) (E)
- 28 (A) (B) (C) (D) (E)
- 29 (A) (B) (C) (D) (E)
- 30 (A) (B) (C) (D) (E)

	<u>Konstruk</u>	<u>No. Soalan</u>	<u>Jumlah Soalan</u>	<u>Bilangan Soalan Gagal Dijawab</u>	<u>Kegunaan Guru</u>
1	K1	1-4	4	<input type="checkbox"/>	<input type="checkbox"/>
2	K3	5-11	7	<input type="checkbox"/>	<input type="checkbox"/>
3	K5	12-19	8	<input type="checkbox"/>	<input type="checkbox"/>
4	K6	20-24	5	<input type="checkbox"/>	<input type="checkbox"/>
5	K7	25-28	4	<input type="checkbox"/>	<input type="checkbox"/>
6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7	K10	29-32	4	<input type="checkbox"/>	<input type="checkbox"/>
8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>