امتحان الفصل الدراسي الأول

End of Term1 Exam

18
2019
العام الدراسي
Academic Year

Student No.			رقم الطّالب
Student Name			اسم الطّالب
Grade & Stream	Grade 9 / General		الصف والمسار
Subject:	Science		المادة

This table is to be filled by markers

يملأ هذا الجدول بدقّة تامّة من قبل لجنة التّقدير.

رقم السّؤال Question No.	الدّرجة Mark		المقدّر1 Marker 1	المقدّر2 2 Marker	المراجع Reviser
	رقماً In Figures	كتابةً In Words			
Part I					
Part II					
Part III					
الدّرجة المستحقّة Allotted Mark					

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Subject: Science
Nbr of Pages: (7)

Grade 9
General Track

End of Term 1 Exam
Academic year 2018/2019

Question 1

45

Underline the correct answer for items (1-15):

1. How does ultraviolet radiation help form atmospheric ozone?

- depletion of O_3 molecules
- depletion of O_2 molecules
- bonds O and O_2
- bonds 3 atoms of O

2. Which precaution should you take when you see the symbol below?

- Wear heat-resistant gloves
- Do not touch broken glass
- Wear protective clothing
- Contents are radioactive

3. How do you write the distance 1,392000 km in scientific notation?

- 1392×10^6 km
- 13.92×10^6 km
- 139.2×10^6 km
- 1.392×10^6 km

4. Three students measured the length of a stamp. the table below shows their results . The accepted value is 2.71 cm. Which student's measurements were most accurate?

- Student 1
- Student 2
- Student 3
- Both students 1 and 2

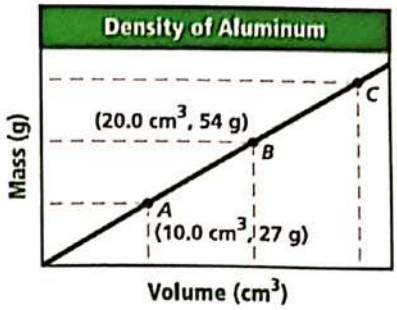
Measured of Values for a Stamp's Length			
	Student 1	Student 2	Student 3
Trial 1	2.60 cm	2.70 cm	2.75 cm
Trial 2	2.72 cm	2.69 cm	2.74 cm
Trial 3	2.65 cm	2.71 cm	2.64 cm
Average	2.66 cm	2.70 cm	2.71 cm

5. Which of the following is not an SI base unit?

- kilogram (kg)
- meter (m)
- second (s)
- cubic centimeter (cm^3)

6. The slope of the line in the graph below shows the density of Aluminium. What is the Aluminium density?

- ✍ 0.37 g/cm³
- ✍ 0.27 g/cm³
- ✍ 2.7 g/cm³
- ✍ 3.7 g/cm³



7. Which of the following has a charge of +1?

- ✍ Electron
- ✍ Proton
- ✍ Neutron
- ✍ Atom

8. Which scientist developed the model of the atom shown below?

- ✍ Chadwick
- ✍ Thomson
- ✍ Rutherford
- ✍ Bohr

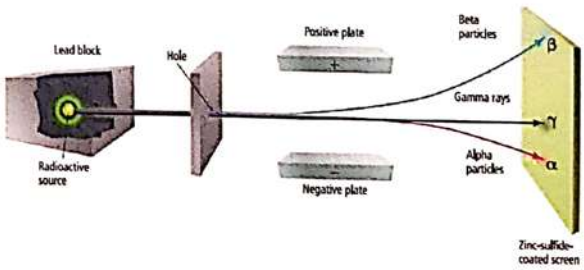
9. Use the table below. Find which two atoms are isotopes.

- ✍ Atoms 1 & 2
- ✍ Atoms 3 & 2
- ✍ Atoms 3 & 1
- ✍ Atoms 4 & 1

Atom	Protons	Neutrons	Electrons
1	8	10	8
2	10	9	10
3	9	9	9
4	8	11	8

10. The radioactivity diagram illustrates that an electric field will deflect radiation in different directions. This depends on the .....

- ✍ electric charge of the radiation.
- ✍ mass of the particles of radiation.
- ✍ number of electrons in the radiation.
- ✍ speed of the radiation.



11. What is the missing particle in the equation below?

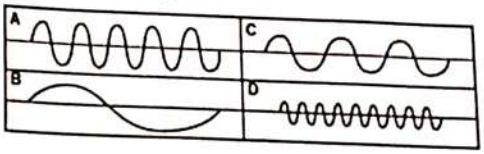
- ✍ ${}^{0}_{-1}\beta$
- ✍ α
- ✍ γ
- ✍ 2γ

$${}^{131}_{53}I \rightarrow ? + {}^{131}_{54}Xe$$

12. Which diagram shows the wave with the highest frequency?

A B

C D



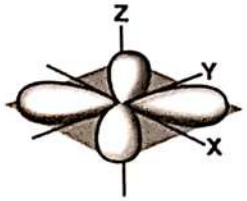
13. Using Planck's constant 6.626x 10 $^{-34}$J.s, what is the amount of energy carried by a photon with a frequency of 5.71x10^{14}Hz?

525 nm 1.14 × 10^{-8} J 3.78 × 10^{-19} J 8.62 × 10^{47} J/s

14. Which type of orbit is shown in the picture below?

s d

p f



15. Which element has the electron configuration 1s^{2}2s^{2}2p^{6}3s^{2}3p^{6}4s^{1}3d^5?

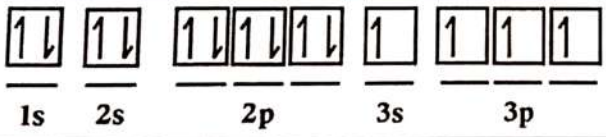
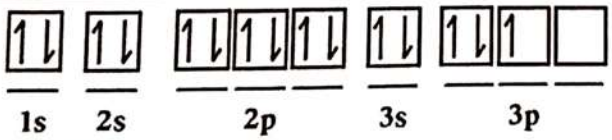
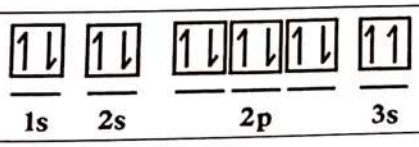
Titanium ($^{48}_{22}Ti$) Chromium ($^{52}_{24}Cr$) Sulfur ($^{32}_{16}S$) Selenium ($^{79}_{34}Se$)

Question 2

25

A. 16. Which rule for filling of orbitals by electrons is being broken in the orbital diagrams below. Use the name of the principle from the box.

Aufbau principle – Hund's principle – Pauli exclusion principle

Orbital Diagram	
	The rule of …….. is broken
	The rule of …….. is broken
	The rule of …….. is broken

B. 17-Use numbers to match each branch of chemistry in (A) with its areas of study (B) in the table below.

A	B
(.....) Biochemistry	1. components and composition of substances
(.....) Physical Chemistry	2. heat involved in chemical processes
(.....) Analytical Chemistry	3. the behavior and changes of matter and the related energy changes
(.....) Inorganic Chemistry	4. matter and processes of living organisms
(.....) Thermochemistry	5. most chemicals that do not contain carbon
	6. most chemicals that contain carbon

C. Solve the following

18 - The temperature in Dubai can reach 104^0F in summer. What is the temperature in degrees Celsius?

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19 - A metallic piece of 147g mass and a density of 7.0 g / cm^3 is placed in a 50ml graduated cylinder filled with 20ml of water. What will be the new height of water in the graduated cylinder after adding the metallic piece?

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D. 20.Match the scientist with his atomic theory in the statements below. Use the scientists' names from the box.

(Democritus – John Dalton – Aritsotle)

Matter is made up of tiny individual particles called atoms, atoms are indivisible	(.....)
Matter is formed by atoms and atoms move through empty space	(.....)
Empty space cannot exist in matter, and matter is made of earth, fire, water, and air	(.....)

Question 3

30

A. Write the scientific term in brakets using the suitable words from the following .

***atomic orbital – *theory– * mass number-*valence electrons-*atomic number-*law of mass conservation-*derived unit.**

21. Mass is conserved in any process, such as a chemical reaction. (.....)

22. Electrons in the atom's outermost orbitals. (.....)

23. A 3D zone around the atom nucleus that defines the probable electron location. (.....)

24. The sum of the number of protons and neutrons in the nucleus. (.....)

25. Explanation of a natural phenomenon based on many observations and investigations over time. (.....)

26. The unit is defined through the combination of basic units. (.....)

B. Explain scientifically the following :

27. The atom is electrically neutral.

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28. When white light passes through a prism, it is separated into different components.

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29. The limits in Bohr's Model.

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30. In an experimental process, to determine the effect of temperature on the solubility of salt in water, we need to keep constant the amount of water and salt and the time used in stirring.

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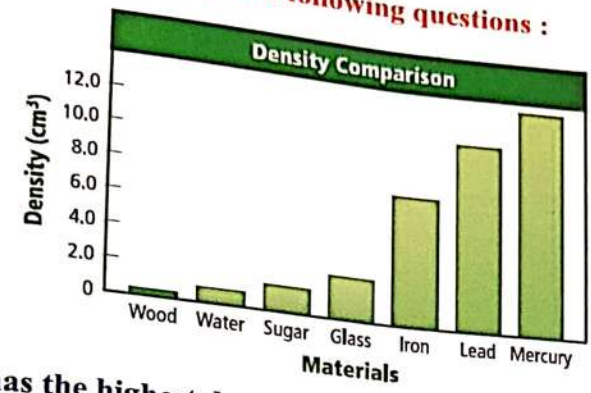
C. 31. Write the complete electronic configuration notation of the following elements :

$_{29}$**Cu** .....

$_{16}$**S** .....

D. Use the histogram below to answer the following questions : BONUS



32. Which substance has the highest density?

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33. Which substance has the lowest density?

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34. Which substance has a density of 11.4 g / cm³ ?

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35. Which substance has four times the density of glass?

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