

Weekly Homework
12th Week

الإدارة المركزية للتعليم العام
إدارة تنمية مادة العلوم



2026

Integrated Sciences

1st Secondary
First Term

إشراف

د. عزيزة رجب خليفة
مستشار مادة العلوم

إشراف عام

د. هالة عبدالسلام خفاجي
رئيس الإدارة العامة للتعليم العام

مكتب مهتشار
مادة العلوم

سعيد محمد
محمد عبد اللطيف
عبدالله مصطفى

إعداد

عمرو مالي
مجدي فتحي

مراجعة

محمد عبداللطيف
محمد عنتر



Unit Two
Lesson (2)

Choose the correct answer:

- 1) The Ozone gases is formed in the atmosphere by the effect of
 - a) Infrared radiation.
 - b) Ultraviolet radiation.
 - c) Gamma rays.
 - d) X-rays.
- 2) In the atmosphere, Nitrogen (N_2) , Oxygen (O_2) molecules and atomic oxygen absorb photons of electromagnetic spectrum with wavelengths shorter than.....
 - a) 240 nm
 - b) 420 nm
 - c) 250 nm
 - d) 120 nm
- 3) Ultraviolet rays can be produced by special lamps used in
 - a) sterilizing surgical instruments.
 - b) check fracture bones in the hospitals
 - c) detect counterfeit banknotes in stores.
 - d) (a) and (c).
- 4) When the bond between the two oxygen atoms in an oxygen molecule is broken due to photodissociation are formed.
 - a) two oxygen ions (O^{-2}).
 - b) two single oxygen atoms (O).
 - c) one oxygen atom (O) and one oxygen ion (O^{-2}).
 - d) two single oxygen atoms (O) and two oxygen ions (O^{-2})

- 5) Formation of ozone (O_3), causes the absorption of photons in the ultraviolet region with wavelengths ranging from to
- a) 250-300 b) 240-310 c) 200-240 d) 150-300
- 6) Ozone is a molecule made up of Oxygen atoms.
- a) two b) three c) four d) five
- 7) Which of the following represent the right equations describe the formation of ozone gas?
- a) O_2 (gas) + UV rays \rightarrow O (gas) + O (gas)
b) O_2 (gas) + UV \rightarrow O_3
c) O_2 (gas) + O (gas) \rightleftharpoons O_3
d) (a) and (c)
- 8) is the process in which the chemical bonds of the oxygen molecule are broken as a result of light absorption.
- a) Photosynthesis. b) Photodissociation.
c) transpiration. d) dissolving.
- 9) is the gradual deterioration of the protective ozone layer in the atmosphere.
- a) Ozone formation. b) Ozone Layer Depletion.
c) Ozone gas. d) None of the all.
- 10) Ultraviolet (UV) rays affect certain immune cells, such as
- a) helper T-cells. b) nerve cells
c) liver cells. d) kidney cells.

- 11) The chlorofluorocarbons (CFCs) resulted from
- a) photosynthesis process.
 - b) industrial activities.
 - c) respiration process.
 - d) transpiration process.
- 12) As a result of ozone layer depletion, a greater amount of harmful reaches Earth surface.
- a) infrared radiation.
 - b) Ultraviolet radiation.
 - c) X-rays.
 - d) Microwaves.
- 13) Increased exposure to ultraviolet (UV) rays leads to damage in skin cells.
- a) DNA
 - b) CFC
 - c) CO₂
 - d) None of all.
- 14) The damage of skin cells can cause that may result in skin cancers.
- a) Genetic mutations.
 - b) Melanoma.
 - c) Anemia.
 - c) (a) and (b)

Write the scientific term:

- 15) The gradual deterioration of the protective ozone layer in the atmosphere.
- 16) A layer in the atmosphere that protects the Earth from the harmful radiations.



Second: Esay questions

1- Give reasons:

- a) Ultraviolet rays can be used in sterilizing surgical instruments.
- b) We must avoid using cleaning substances which contain bromine and chlorine compounds.

2- Mention at least one use for UV rays in:

- a) Medical field.
- b) Banknotes field.

3- Mention the negative effects of UV rays on:

- a) Eyes.
- b) Immune system.
- c) Skin.

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Group (A)

Choose the correct answer:-

- 1) Deterioration of Ozone occurs mainly due to the release of chemical compounds containing and
 - a) Chlorine , Bromine.
 - b) Chlorine , Nitrogen.
 - c) Nitrogen , Oxygen.
 - d) Hydrogen , Oxygen.

- 2) The absorption of rays by the eye's lens accelerates the development of cataract.
 - a) X-ray.
 - b) Gamma ray.
 - c) UV-ray.
 - d) radio waves.

- 3) An ozone molecule is formed by the combination of
 - a) two oxygen molecules (O_2)
 - b) two individual oxygen atoms (O)
 - c) three individual oxygen atoms (O)
 - d) one individual oxygen atom (O) and one oxygen molecule (O_2)

- 4) Which of the following options represents some of the health effects of ozone gas on humans?
 - a) Cataracts, skin cancer, and decline in bee populations.
 - b) Skin cancer, weakened immunity, and destruction of plankton.
 - c) Reduced photosynthesis, impaired brain development.
 - d) Allergies, bronchitis, and cardiovascular diseases.

5-Give reasons:

The using of fire extinguisher that contains halon gas must be avoided.

Group (B)

Choose the correct answer:-

- 1) Smog is formed as a result of the accumulation of products from all the following reactions except
 - a) the reaction of nitrogen and atmospheric oxygen during lightning.
 - b) the reaction of oxygen with sulfur under suitable conditions.
 - c) the reaction of hydrogen with oxygen under suitable conditions
 - d) the reaction of nitrogen oxides with hydrocarbons in the presence of sunlight.

- 2) What is the type of the bonds between the oxygen atoms in Ozone molecules.
 - a) Ionic bond.
 - b) Covalent.
 - c) Physical bond.
 - d) None of all.

- 3) What type of reaction is represented by the following equation?

$$:\ddot{\text{O}}=\ddot{\text{O}}: + \text{Photon} \longrightarrow :\ddot{\text{O}} + \ddot{\text{O}}:$$
 - a) Photodissociation.
 - b) Nuclear dissociation.
 - c) Thermal dissociation.
 - d) Ionic dissociation.

- 4) How the eyes of the human affected by UV rays?
 - a) development of the cataract.
 - b) the development of eyes cancer.
 - c) (a) and (b)
 - d) None of the all.

5) Give reasons:

The excess exposure to the UV may cause skin cancer.

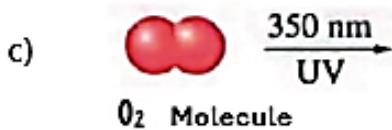
Group (C)

Choose the correct answer:-

1) Which of the following ultraviolet wavelengths causes photodissociation of the covalent bond in an oxygen molecule?

- a) 230 nm b) 240 nm c) 290 nm d) 305 nm

2) Which of the following could represent the first step in the formation of ozone gas?



3) Which of the following is considered from the effects of UV rays on the human skin?

- a) increase the rate of skin cancer. b) DNA damage in skin cells.
c) increase the genetic mutation. d) all the previous.

4) From the actions that should be followed to reduce the ozone layer depletion are

- a) using chlorine and bromine compounds in cleaning products.
b) avoid using (CFCs) compounds in cooling systems.
c) using fire extinguishers contains halons gas.
d) (a) and (c).

5-Give reasons:

The UV rays have a negative effect on the human immune system.