

Read the text carefully then do the activities.

**Text:**

In researches for the nature of light, an investigation that provided the basic element in the development of the wave theory was first performed by the English physicist Thomas Young in 1801, In his experiment, He identified the phenomenon called light waves interference.

Young flashes light from a single source and split it into two beams, then the two beams are recombined, the combined beam shows a pattern of light and dark fringes, Young was surprised to obtain a dark line when two light beams are combined, He concluded that the fringes result from the fact that when the beams recombine their peaks and troughs may not be in phase. When two peaks coincide they reinforce each other, and a line of light results; when a peak and a trough coincide they cancel each other, and a dark line results.

English scientists rejected Young's wave theory until the work of the French physicists François Arago and Augustin-Jean Frénel had confirmed it many years later.

**A) Comprehension and Interpretation**

(08 points)

1. Choose the general idea of the text:

(1 pt)

- a. The nature of light.
- b. Young's wave theory of light.
- c. The importance of light.

2. Are these statements true or false?

(2 pts)

- a. Before 1801, It was known that light is composed of waves.
- b. Young didn't expect the result he got from his experience.
- c. Light beams peaks and troughs are not always in phase.
- d. Young's wave theory of light was accepted just after his experience.

3. In which paragraph it is mentioned that Young didn't succeed to convince people that light is composed of waves?

(1 pt)

4. Choose the correct answer:

(1. pt)

The text is:

- a. Descriptive
- b. Narrative.
- c. Expository

5. Who /what do the underlined words refer to in the text?

(1 pt)

- a) He.... (§1)
- b) It..... (§3)

6. Answer the following questions according to the text.

(2 pts)

- a. What did Young identify in his experiment?
- b. What made him surprised?
- c. How did he explain his results?
- d. What was the English scientists' reaction?

**B)Text Exploration:**

(07 points)

1. Find in the text words that are closest in meaning to the following:

(1 pt)

a. brought = ..... (§1)

b. proved= ..... (§3)

2. Find in the text words that are opposites to the following:

(1 pt)

a. troughs ≠ ..... (§2)

b. accepted ≠ ..... (§3)

3. Fill in the following table:

(2 pts)

Word	Adjective
Tocsin	.....
truth	.....
Hair	.....
interest	.....

4. Rewrite sentence (b) so that it means the same as sentence (a)

(2 pts)

- a. A tsunami hit the city, last year.
- b. The city.....
- a. The disaster wasn't expected by people.
- b. People.....

5. Put the verbs between brackets in the correct tense:

- a. When we (to heat) water , it boils
- b. If I (not to be) here, they would kill her.

6. Underline the stressed syllable in the following words:

(1 pts)

Technology – Solution

**Written Expression**

(05 Points)

Choose one of the following topics:

Topic one:

Your friend needs your advice; He suffers from stress, sadness and lost of self-confidence. Write him a letter.

Topic two:

Imagine you are in a dilemma because you can't make up your decision about the type of BAC exam you will take.

Write a letter to an "agony aunt" to ask for her advice.

*Correction*

**A) Comprehension and Interpretation: ( 08 Points)**

1. b. young's theory of light → (1)
2. a. F → (0.5)  
b. T → (0.5)  
c. T → (0.5)  
d. F → (0.5)
3. In § 3 → (1)
4. c. expository → (1)
5. a. He → Thomas young → (0.5)  
b. It → Young's wave theory → (0.5)
6. a. The phenomenon called light waves interference → (0.5)  
  
b. He was surprised to obtain a dark line when two light beams are combined → (0.5)  
  
c. When two peaks coincide they reinforce each other and a line of light results, when a peak and a trough coincide they cancel each other and a dark line results → (0.5)  
  
d. English scientists rejected Young's wave theory → (0.5)

**B) Text exploration: (07 Points)**

1. a. brought = provided → (0.5)  
b. proved = confirmed → (0.5)
2. a. troughs ≠ peaks → (0.5)  
b. accepted ≠ rejected → (0.5)
3. Adjectives:
  - Toxic → (0.5)
  
  - True / truthful → (0.5)
  - Hairy / hairless → (0.5)
  - Interested / interesting → (0.5)
4. b. The city was hit by a tsunami last year. → (0.5)  
b. People didn't expect the disaster. → (0.5)
5. a. Heat → (0.5)  
b. Were not → (0.5)
6. a. Technology → (0.5)  
b. Solution → (0.5)

**C) Written expression: (05 Points)**

- Form (02 points)
- Content (03 points)