**Zeggai Ibrahim Secondary School Level :3rd year /S**

**Time allowed :2H**

**A/Part one: Reading (15 pts)**

**Read the text carefully then do the activities.**

Telescopes are used by astronomers to explore the universe. They come in all shapes and sizes depending on their function. Generally, bigger telescopes are better if you want to see faint, far-away things, because **they** can gather more light and have better resolution.. NASA scientists use different types of telescopes to look for and study supernovas. Both NASA’s Hubble Space Telescope and Chandra X-ray Observatory have captured images of supernovas .

Supernovas are often seen in other galaxies. But they are difficult to see in our own Milky Way galaxy because dust blocks our view.. NASA’s Chandra telescope discovered the remains of a more recent supernova. It exploded in the Milky Way more than a hundred years ago. So what is a supernova ? A supernova is the death of a star. **Supernovas fall into two different types . Type I supernova results from mass transfer inside a binary system consisting of a white dwarf star and an evolving giant star.**The **white dwarf** steals matter from its companion star. Therefore,**the former** accumulates too much matter. This causes the star to explode, resulting in a supernova.

The second type of supernova occurs at the end of a single star’s lifetime. As the star runs out of nuclear fuel, some of its mass flows into its core **Which** becomes so heavy that it cannot withstand its own gravitational force. This latter collapses,and results in the giant blowing up of a supernova. The sun is a single star, but it does not have enough mass to become a supernova.. A supernova burns for only a short period of time, but it can tell scientists a lot about the universe.It also plays a key role in distributing elements throughout the universe. When the star explodes, it shoots elements and debris into space. These elements travel on to form new stars, planets and everything else in the universe.

***1-Choose the best answer*:**

1. **the text is** A-Narrative B-Expository C- Argumentative

**2.The text is extracted from :**a- a scientific book b- web site c-nerwspaper article

**2.Say whether the following statements are true or false according to the text.**

a-Telescopes are all of the same size and shape.

b-The sun can become a supernova .

c-A supernova is the birth of a star.

d-The study of supernova is worthless.

**3) Answer the following questions according to the text:**

a-Why is it difficult to see supernovas in our own Milky Way Galaxy ?

b-What did chandra discover ?

c-How does the white dwarf accumulate a large amount of mass ?

d-why can’t a star endure it’s force of gravity ?

***4- Who or what do the words in bold (underlined) refer to in the text***? They §1 which § 3 the former §2

**B/Text Exploration**

**1) A. Find in the text words that are synonyms of the following :**

**a) vanishes§3 b) blow up §3 c) various§1**

**2)complete the following table**

|  |  |  |
| --- | --- | --- |
| **Verbs** | **Nouns** | **Adjectives** |
| **Explode**  **…………………………………**  **Discover** | **……………………….**  **……………………………..**  **…………………** | **………………………….**  **Different**  **………………………….** |

**3)- Choose the right conjunction to connect the sentences below.**

**Although –unlike –unless –such……..that**

**a-Scientist will have better resolution .they will use big telescopes**

**b-The telescope is sophisticated .it can’t capture images of all the universe.**

**c-The sun doesn’t have enough mass .The other stars have enough .**

**D-The star’s core becomes heavy .the star can’t withstand its gravitational force .**

**4)-Ask question about the underlined words .**

1. The hubble telescope weighs **more than 11 tons** **.**
2. It exploded in the Milky Way **more than a hundred years ago.**

**5- Complete the following table :**

|  |  |
| --- | --- |
| **Sigular** | **Plural** |
| **Phenomenon**  **Death**  **Observatory**  **Life** | **…………………………….**  **…………………………**  **………………………….**  **…………………………….** |

**6-Classify the following words according to the pronunciation of their final s**

**Galaxies –images –telescopes –planets .**

**PART 2 : Written expression (5 pts )**

**-Topic 1 :Use the following notes to write a short paragraph dicribing the moon .**

**-Earth Satellite :diameter :3,476km**

**-Average distance from the sun 384,400km**

**-Orbit west to East direction (28)days revolve the Earth**

**-No atmosphere no water .**

**-composition :rocky**

**-Age about 4,6billion years**

**-Neil Armstong (astronomer )**

**-Topic 2 :Write a composition on the benifits of space telescopes in the field of space discoveries .**