**Department: Physics**

**Subject: Astrophysics**

**Q1// Define only 5 of the following:**

**1- Meteoroids 2- Eccentricity (e) 3- A pogee 4- Prominences**

 **5- Comet 6- Light-Years 7- Semi-Major axis**

 **Q2//** **Choose the correct answers for the following:**

**1- Name the nearest planet to the Earth?**

1. **Jupiter (b) Mars (c) Mercury (d) Pluto**

**2- Electromagnetic waves that you can see are called**

**(a)Gamma rays (b)Infrared (c)Ultraviolet (d) Visible light**

**3- Which layer of the Sun is known for its visible surface and emits most of the sunlight that reaches Earth?**

**(a) Core (b) Corona (c) Photosphere (d) Chromosphere**

**4- The entire spectral classification of our Sun is:**

**(a) M5V. (b) G2Ib. (c) G2V. (d) K9III. (e) Not given.**

**5- Kepler's third law states that the square of the orbital period of a planet is proportional to what**

**(a) The cube of its semi-major axis**

**(b) The square of its eccentricity**

**(c) The radius of its orbit**

**(d) Non of them**

**6- Which electromagnetic wave has maximum wavelength?**

1. **X-rays (b) Gamma rays (c) Radio wave (e) None of the above**

 **7- Which is the smallest planet in the Solar System ?**

**(a) Mercury (b) Jupiter (c) Venus (d) Non of them**

**8- Which planet has the largest moon in the solar system, named Ganymede?**

 **(a) Jupiter (b) Saturn (c) Uranus (d) Venus**

 **9- The following planet(s) has(have) ring around it(them)?**

1. **Jupiter (b)Saturn (c) Uranus (d)All of the above**

**10- Hippocamp" is Moon of which planet?**

 **(a) Jupiter (b) Neptune (c) Saturn (d) Urans**

**Q3//** **A) What are the main differences between** **the Terrestrial Planets and Jovian Planets.**

**B)What the proton-proton chain (nuclear fusion) of the sun .**

**C)Draw relative Sizes in astronomy from very small to very large (meters)**

**D) Kepler’s laws apply to any celestial body orbiting, state them.**

**Q4//** **A) Temperature of the Sun Surface The wavelength of maximum solar emission is observed to be approximately 0.475μm What is the surface temperature of the sun (assumed as blackbody)?**

**B) Takes Venus 225 days to orbit it the sun if the Earth sun distance is 1\*1011 what is mean distance between the Venus and sun.**