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DATE: **4** **-04-2018 (9 AM)**

**ST. JOSEPH’S COLLEGE (AUTONOMOUS), BENGALURU-27**

UG – IV SEMESTER

SEMESTER EXAMINATION: APRIL 2018

PH OE 4116: The Universe and Me

**Time- 1 ½ hrs Max Marks-35**

(For supplementary candidates)

Do not write the register number on the question paper

Please attach the question paper along with the answer script.

This paper contains **2** printed pages and **3** parts

**PART A**

Answer any **10** of the following. (**1x10=10)**

1. Geocentric universe means

a) sun is the center of the universe b) earth is the center of the universe c) milky way galaxy is

the center of the universe d) none of the above

2. The distance of the sun from the earth is ------------

a) 1 light year b) 8 light minute c) 3.26 light minute d) none of the above

3. The sun after death becomes

a) a black hole b)a neutron star c)a white dwarf d)a red giant

4 The name of the galaxy we belong to

a) Andromeda b) Large Magellanic Cloud c) M-31 d) The Milky Way

5.The weakest radiation in the electromagnetic spectrum

a) radio waves b) X-ray d) micro waves d) light waves

6. Resolving power of a telescope is the power to

a) magnify The Image b)to collect more light c) see separate two objects close to each other

d) see far away objects.

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7.A theory that helps to know about the origin of the universe

a) Big bang theory b) gravitational law c) relativity theoryd) none of the above

8. Modern optical telescopes are mainly

a) reflective b) refractive c) both reflective and refractive d) none of them

9. The law that helps to calculate the age of the universe

a) Newton’s law b) Kepler’s law c) Quantum theory d) Hubble’s law

10.Name the type of galaxy that has well defined arms.

a) elliptical galaxy b)spiral galaxy c)irregular galaxy d) none of the above

11. The planet which is made up of gas in the solar system

a) Mars b) Mercury c) Venus d) Jupiter

12. The black hole cannot be directly detected because

a) The light cannot escape the black hole b) The black hole is a virtual reality c) Black Hole is

far away. d) none of above

**PART B**

Answer any **5** of the following. **(4x5=20)**

13. What is meant by one light year? Explain.

14. Advantages of a reflecting telescope over refracting telescope.

15. Explain supernova explosion.

16 What is a galaxy? Which are the different types of galaxies?

17.Which are the electromagnetic radiations that are completely blocked by the earth’s      atmosphere?

18.What is Red shift? Why do we say that galaxies are red shifted?  
  **PART C**

Answer any **1** of the following. Each question carries **5** marks**. (5x1=5)**

19. Where do you stand in the universe? - Universe vs. you?

20. Write a note on the evolution of stars.