Reg.No. \_\_\_\_\_\_\_\_\_\_\_\_



**UNIVERSITY**

(Karunya Institute of Technology & Sciences)

(Declared as Deemed-to-be University under Sec.3 of the UGC Act, 1956)

**End Semester Examination – April/May– 2017**

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| **Code :** | **14PH2017** | **Duration :** | **3hrs** |
| **Sub. Name :** | **ASTROPHYSICS** | **Max. marks :** | **100** |

**ANSWER ALL QUESTIONS (5 x 20 = 100 Marks)**

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| Q. No. | Sub Div. | Questions | Course  Outcome | Marks |
| 1. | a. | Discuss the three laws of planetary motion by Johannes Kepler with neat diagrams. | CO1 | 15 |
| b. | What are comets? How are they classified? | CO1 | 5 |
| (OR) | | | | |
| 2. | a. | Explain in detail the geocentric theory proposed by Claudius Ptolemius with necessary diagrams. | CO1 | 15 |
| b. | Write short notes on Kuiper belt. | CO1 | 5 |
| 3. | a. | Define the life cycle of a star elaborately. | CO2 | 15 |
|  | b. | What are apparent and absolute magnitudes? | CO2 | 5 |
| (OR) | | | | |
| 4. | a. | Black holes are the most mysterious objects in the universe. Illustrate the answer in detail. | CO2 | 15 |
|  | b. | Explain how the distances between the stars are found out using parallax method. | CO2 | 5 |
| 5. | a. | Write short notes on the following terms.  Magnifying power of a telescope.  Resolving power of a telescope. | CO3 | 15 |
|  | b. | What are the information that can be learnt from radio telescopes? | CO3 | 5 |
| (OR) | | | | |
| 6. | a. | Hubble Space telescope has been a great milestone in the annals of space history. Elaborate the answer with five important discoveries made by Hubble Space Telescope. | CO3 | 15 |
|  | b. | Name the salient features that can be obtained by infrared telescopes. | CO3 | 5 |
| 7. | a. | How are galaxies classified according to their shapes and sizes? | CO4 | 15 |
|  | b. | Write short notes on Milky Way galaxy. | CO4 | 5 |
| (OR) | | | | |
| 8. | a. | How are galaxies formed from a cloud of gas and dust? Illustrate the discussion with neat diagrams. | CO4 | 15 |
|  | b. | What are superclusters of galaxies? | CO4 | 5 |
|  | | **Compulsory**: |  |  |
| 9. | a. | Explain Big Rip Theory and Big Crunch Theory in detail. | CO5 | 15 |
|  | b. | State and explain Hubble’s Law. | CO5 | 5 |

**All The Best**