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



**UNIVERSITY**

(Karunya Institute of Technology & Sciences)

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

**Supplementary Examination – June – 2017**

|  |  |  |  |
| --- | --- | --- | --- |
|  |  |  |  |
| **Code :** | **14CE3044** | **Duration :** | **3hrs** |
| **Sub. Name :** | **REMOTE SENSING AND GIS** | **Max. marks :** | **100** |

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

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Q. No. | Sub Div. | Questions | Course  Outcome | Marks |
| 1. | a. | Write short notes on the following topics:   1. Black body 2. Stefan’s Boltzmann equation 3. Wein’s displacement law | CO1 | 12 |
| b. | Explain the components of ideal remote sensing with a neat sketch. | CO1 | 8 |
| (OR) | | | | |
| 2. | a. | Enumerate different types of image interpretation. Explain them with relative merits and demerits. | CO1 | 10 |
| b. | Recall the various sensors and its resolutions and applications. | CO1 | 10 |
| 3. | a. | Where do you use the following terms: back scattering , dispersion, absorption, transmission and reflection of waves. | CO1 | 8 |
|  | b. | Discuss in detail about the image classification techniques. | CO1 | 12 |
| (OR) | | | | |
| 4. | a. | What are the keys used in image interpretation? Explain. | CO1 | 10 |
|  | b. | Discuss with examples about the various map characteristics. | CO1 | 10 |
| 5. | a. | Compare vector and raster data structures. | CO1 | 10 |
|  | b. | Explain the necessity of atmospheric correction of images and how it is done? | CO1 | 10 |
| (OR) | | | | |
| 6. | a. | Explain the various co-ordinate systems. | CO1 | 12 |
|  | b. | Explain the four basic procedures for inputting spatial data into a GIS. | CO1 | 8 |
| 7. | a. | Describe in detail about the buffering and overlay analysis in GIS. | CO1 | 12 |
|  | b. | Briefly explain the digital elevation modelling. | CO1 | 8 |
| (OR) | | | | |
| 8. | a. | Explain the application of GIS in groundwater modelling. | CO1 | 10 |
|  | b. | Explain the following  i. Site selection for artificial recharge.  ii. Reservoir sedimentation. | CO1 | 10 |
|  | | **Compulsory**: |  |  |
| 9. | a. | Discuss about the various projections used in image processing. | CO1 | 15 |
|  | b. | Enumerate about the database models. | CO1 | 5 |

ALL THE BEST