****

**UNIVERSITY**

(Karunya Institute of Technology & Sciences)

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

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

**End Semester Examination – Nov/Dec - 2016**

|  |  |  |  |
| --- | --- | --- | --- |
|  |  | **Semester :** | **2016-17 ODD** |
| **Code :** | **12MT248** | **Duration :** | **3 hrs** |
| **Sub. Name :** | **3D VIDEO AND GRAPHICS** | **Max. marks :** | **100** |

|  |  |  |
| --- | --- | --- |
| **Q. No.** | **Questions** | **Marks** |
| **PART-A(10X1=10 MARKS)** | | |
| 1. | What does “stereo” stand for in Stereopsis? | (1) |
| 2. | Define: Diplopia. | (1) |
| 3. | Expand “CCD” in camera terminology. | (1) |
| 4. | In light which focuses closer to the lens, “red” or “blue”? | (1) |
| 5. | What is a DIBR system? | (1) |
| 6. | Expand DVB. | (1) |
| 7. | Name the unit used to measure the output of a projector. | (1) |
| 8. | Expand “DTH” in broadcasting terminology. | (1) |
| 9. | Which year was the 3D consortium established? | (1) |
| 10. | Give application of MPEG-2. | (1) |

|  |  |  |
| --- | --- | --- |
| **PART B(5 X 3= 15 MARKS)** | | |
| 11. | Define: Chromostereopsis. | (3) |
| 12. | Name any two features that are expected from a true 3D system. | (3) |
| 13. | Give the application of a digital cinema distribution master. | (3) |
| 14. | What does LCoS stand for? What is its application. | (3) |
| 15. | Give the mission of 3D@Home Consortium. | (3) |

|  |  |  |  |
| --- | --- | --- | --- |
| **`PART C(5 X 15= 75 MARKS)** | | | |
| 16. | a. | Explain the various types of Parallax and how they affect the depth perception in stereoscopic displays. | 6 |
| b. | List out an elaborate on the various depth cues used by the human brain to interpret depth information. | 9 |
| (OR) | | | |
| 17. | a. | With Diagrams explain the types of camera configurations and arrangements that are used in stereoscopic productions. | 8 |
| b. | In order to guarantee an appropriate stereoscopic viewing comfort what are the rules/guidelines to be followed during production. | 7 |
|  |  |  |
| 18. |  | With Diagrams explain the various types of Auto stereoscopic display systems that have been commercialized. | 15 |
| (OR) | | | |
| 19. | a. | What is a multi-viewpoint display system? | 3 |
| b. | List and explain the stereoscopic systems that require glasses for the audience to experience depth. | 12 |
|  |  |  |
| 20. |  | With neat diagrams explain the various encoding/compression schemes used to send stereoscopic data on pre-existing networks. | 15 |
| (OR) | | | |
| 21. | a. | Explain the working of MPEG-2. And elaborate how it is adapted for stereoscopic data encoding. | 10 |
| b. | Summarize the working of Video+Depth representation for stereoscopic data. | 5 |
|  |  |  |
| 22. | a. | With a neat diagram explain the working of DLP based projection systems. | 10 |
| b. | Compare and contrast the DLP technology with the 3LCD technology based projection systems. | 5 |
| (OR) | | | |
| 23. |  | List out and elaborate on the various types of wired connections that are used to connect the set top box with the 3D display. | 15 |
| 24. |  | List and Elaborate on the aims of the 3D phone project. | 15 |
| (OR) | | | |
| 25. |  | What are the aims and accomplishments of projects “ATTEST” and “HELIUM 3D”? | 15 |

ALL THE BEST