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

****

**End Semester Examination – Nov/Dec – 2017**

|  |  |  |  |
| --- | --- | --- | --- |
|  |  |  |  |
| **Code :** | **14MT2029** | **Duration :** | **3hrs** |
| **Sub. Name :** | **STUDIO ACOUSTICS** | **Max. marks :** | **100** |

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

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Q. No. | Sub Div. | Questions | Course  Outcome | Marks |
| 1. | a. | Define: Inverse Square law. | CO1 | 2 |
| b. | Calculate the wavelength of a 1000Hz sound wave. Assume the speed of sound to be 344m/s. | CO1 | 2 |
| c. | List down and explain all the possible means/standards that one need to follow so as to build confidence in their clients. | CO1 | 16 |
| (OR) | | | | |
| 2. |  | Design a Schroeder’s one dimensional diffusers with prime number 5, 11, and 17. Draw the elevation of the prime number quadratic residue based well depths and mention the frequency range that would be diffused by the panel if the dimensions of the depths would be in meters. | CO2,  CO3 | 20 |
|  |  |  |  |  |
| 3. |  | Define Live room. Discuss the different construction philosophies that go behind the construction of a Live room. Mention the different materials used in creating a live room. Discuss your answer with suitable examples. | CO2 | 20 |
| (OR) | | | | |
| 4. |  | Write short notes on:  i. Internal Expansions. ii. Resonant Modes.  iii. Flutter Echoes. iv. Different types of Absorbers. | CO1 | 5+5  3+7 |
|  |  |  |  |  |
| 5. |  | Design a Studio assuming a floor space of 500 sq.m. The Studio may have more than 2 Control room and other facilties. Mention in detail with dimensions the acoustic treatment that can be given to the studio. | CO2,  CO3 | 20 |
| (OR) | | | | |
| 6. |  | List down and explain the different measurement techniques used for Room response measurement. | CO2,  CO3 | 20 |
|  |  |  |  |  |
| 7. |  | Write sort note on:  i. Non Environment type of room. ii. LEDE Room. iii. Direction dual Acoustics room. | CO1, CO2 | 7+6+7 |
| (OR) | | | | |
| 8. |  | List the different types of room proposed by Wolfgang W. Jensen, Don and Carolyn Davis, Tom Hidley and Sam Toyoshima in pursuit of creating a standard control room | CO2 | 20 |
|  | | **Compulsory**: |  |  |
| 9. |  | Discuss the various ways of dealing with the low frequency resonances early reflections, lateral reflection etc and other peculiarities in a small scale recording studio setup. | CO2,  CO3 | 20 |

ALL THE BEST