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 – Nov/Dec – 2017**

|  |  |  |  |
| --- | --- | --- | --- |
|  |  |  |  |
| **Code :** | **14VC2005** | **Duration :** | **3hrs** |
| **Sub. Name :** | **SOUND THEORY AND PRODUCTION** | **Max. marks :** | **100** |

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

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Q. No.** | **Sub Div.** | **Questions** | **Course**  **Outcome** | **Marks** |
| 1. |  | Explain in detail about the anatomy and working of the human ear with neat diagrams. | CO1 | 20 |
| (OR) | | | | |
| 2. |  | Explain in detail about the effect that obstacles have on sound. | CO2 | 20 |
|  |  |  |  |  |
| 3. |  | Calculate the RT60 of a room with the given dimensions.    Brick wall  curtain  12m  10 m  34 m  concrete  13mm board  wood  carpet  **Absorption coefficient:**  Plain brickwork - 0.04, Concrete - 0.05 ,13mm board - 0.2, Wood - 0.1, Curtain - 0.4, Carpet - 0.6 | CO3 | 20 |
| (OR) | | | | |
| 4. | a. | Given that the velocity of sound through air at 0 degree celcius is 331m/s and that the velocity of sound increases by 0.6 m/s for every degree rise in temperature, calculate the velocity of sound through air at a temperature of 45 degrees celsius. | CO3 | 5 |
|  | b | Assuming that the velocity of sound through hydrogen at 0 degree celcius is 322m/s and that the velocity of sound increases by 0.4 m/s for every degree rise in temperature, calculate the velocity of sound through hydrogen at a temperature of 6 degrees celsius. | CO3 | 5 |
|  | c | Assuming that the velocity of sound through wood at 0 degree celcius is 564m/s and that the velocity of sound increases by 2 m/s for every degree rise in temperature, calculate the velocity of sound through wood at a temperature of 24 degrees celsius. | CO3 | 5 |
|  | d | Assuming that the velocity of sound through steel at 0 degree celcius is 722m/s and that the velocity of sound increases by 3.2 m/s for every degree rise in temperature, calculate the velocity of sound through air at a temperature of 18 degrees celsius. | CO3 | 5 |
| 5. |  | Explain in detail about the brains perception of sound. | CO2 | 20 |
| (OR) | | | | |
| 6. |  | Explain in detail about input transducers and their classifications | CO1 | 20 |
|  |  |  |  |  |
| 7. |  | Elaborate upon the contents of a channel strip with a neat diagram | CO2 | 20 |
| (OR) | | | | |
| 8. |  | Explain in detail about compressor and its parameters. | CO1 | 20 |
|  | |  |  |  |
|  | | **Compulsory**: |  |  |
| 9. |  | Identify and explain the editing tools that are shown in the menu below.C:\Users\Jezreel\Desktop\Menu.jpg | CO3 | 20 |

ALL THE BEST