

Reg.No. _____

**Karunya 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 – 2016

Code : 14MT2029
Sub. Name : Studio Acoustics

Semester : 2016-17 ODD
Duration : 3hrs
Max. marks : 100

ANSWER ALL QUESTIONS (5 x 20 = 100 Marks)

Q. No.	Sub Div.	Questions	Course Outcome	Marks
1.	a.	List down and explain in detail all possible ways in which the sound will interact with a surface.	1,2	20
(OR)				
2.	a.	Draw a plan view of a studio with the following components keeping in mind all the principle of acoustics: 1. Two Control room 2. Two Studio 3. Lounge 4. Store room 5. Sound lock corridors Give proper layout and dimensions. Can include components more than what mentioned above.	1,2,3	20
3.	a.	Draw the anatomy of human ear and explain the outer, middle and inner ear and their functionality.	1	20
(OR)				
4.	a.	What are the various methods of measuring the absorption coefficient of a particular material? Explain each one of them in detail.	1,2	20
5.	a.	Design a Schroeder's one dimensional diffusers with prime number 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 of 1 unit would 1m.	2,3	20
(OR)				
6.	a.	Mention and explain the various ways to achieve acoustic variability in a studio.	1,2	10
	b.	What are the three types of Modal resonances. Explain each one of them in detail.	1	10
7.	a.	Discuss the practical ways to isolate and acoustically treat studio floors situated in various places.	2	20
(OR)				
8.	a.	Discuss the various ways in which you can achieve isolation for a studio walls and ceiling. Also suggest the optimum acoustic treatment that may be given for treating the walls and ceiling of a Large scale studio.	2	20
<u>Compulsory:</u>				
9.	a.	Discuss the various acoustic treatment that should be given to the control room setup of a home based recording studio.	1,2,3	20

ALL THE BEST