

Type: DES

Q1. Elements of communication plays a vital role in 'Sound Reproduction' – Justify. (3)

Q2. A pebble thrown into a pond will produce concentric circular ripples which move outward from the point. This is an example for which type of wave? Compare the energy transmission of this wave with the other type of wave which is based on propagation. (3)

Q3. Investigate the operations of Human Auditory Transduction. (4)

Q4. Mr. XYZ has recently joined RR studio, after completing his graduation. The studio owner had a big crisis post COVID-19 because he couldn't retain his experienced staff, since the studio had to be kept closed during the pandemic. Now training the manpower was a big challenge for the owner of the studio. To ensure optimal results after training, the owner used to give a task at the end of each session. In one of the session he asked 'what if I have to do, to solve the problem of converting a week signal to line level for further processing? Give the solution for this task. (3)

Q5. The customer in a M/s RR studio makes a request for a microphone which works on the principle of phase shift and also which will not respond to sound behind the microphone. Which microphone is applicable in this case? Explain. (3)

Q6. M/s RR studio has given two task for Mr. XYZ, which are as follows.

(A) If it is required to edit and play MIDI data, which device is required? Explain.

(B) It is required to creates music electronically. Which device is used? Explain. (4)

Q7. 'Tape Speed and track width determine the quality of Analog Recording System' – Justify this statement. (3)

Q8. With a neat sketch explain the steps involved in working of a tape deck. (3)

Q9. Which technique makes use of both dynamic pre-emphasis and de-emphasis? Explain the working of the same. (4)

Q10. Compare analogue and digital recording. (3)

Q11. Compact disc is superior to Vinyl Disc - Justify. (3)

Q12. Carrier wave in the form of a stream of pulses is encoded and stream is decoded to recover back the original amplitude. This is done in which technique? Explain. (4)

Q13. In RR studio, after getting the rigorous training, Mr. XYZ is now ready for the stage performance. However, his boss was not very much confident on him, at the same time did not wanted to further lose money on training him. Hence he sends him for small PA system, in which he had to do the miking. What guideline he should follow to do this task? (3)

Q14. 'Omnidirectional mic is good for speech recording, compared to unidirectional - Justify. (3)

Q15. In M/s RR studio, Mr. XYZ as very much successful in the initial task given by his boss. The next task given to him was to choose a miking techniques to create the perception of width, space, and location. How this can be done? (4)