

Dr. Babasaheb Ambedkar Open University
Term End Examination February – 2026

Course	: BCAMUL	Date	: 01-March-26
Subject Code	: BCAMUL-105	Time	: 11:30am to 01:45pm
Subject Name	: Digital Audio	Duration	: 02.15 Hours
		Max. Marks	: 70

Section A

Answer the following (Attempt any three) (30)

1. Explain sound waves in detail. Discuss the properties of sound waves
2. Explain the types of audio cables and audio connectors.
3. Explain the construction, working principle, and directional characteristics of microphones.
4. Explain the working of a sound mixer.
5. Discuss compression, equalization, and types of equalizers used in audio processing.

Section B

Answer the following (Attempt any four) (20)

1. Explain channel equalization in a sound mixer.
2. Define microphone impedance and explain its importance in audio systems.
3. Differentiate between PFL and Solo in a sound mixer.
4. Explain lossy and lossless compression with examples.
5. What is an audio limiter? Explain its role in preventing signal clipping.
6. What is MP3 format? Explain its features and uses.

Section C

Part – A (Multiple Choice Questions) (10)

- 1 The number of cycles per second of a sound wave is known as:
A Amplitude B Wavelength
C Frequency D Velocity
- 2 Balanced audio signals mainly use which type of cable?
A Single core/shielded cable B One pair/shielded cable
C Coaxial cable D Optical cable
- 3 A dynamic microphone works on the principle of:
A Electromagnetic induction B Electrostatic force
C Piezoelectric effect D Optical conversion
- 4 Which microphone generally has a flatter frequency response?
A Dynamic microphone B Carbon microphone
C Ribbon microphone D Condenser microphone
- 5 Which control adjusts the signal level when it enters the mixer channel?
A Fader B Equalizer
C Input Gain D Pan control
- 6 PFL stands for:
A Post Fade Level B Pre Fade Listen
C Phase Frequency Loop D Pre Frequency Level

- 7 Audio compression is mainly used to:
A Increase file size B Increase distortion
C Add noise D Reduce bandwidth usage
- 8 Which audio effect creates a sense of space and room ambience?
A Reverb B Chorus
C Flanger D Phaser
- 9 MP3 is an example of:
A Lossless compression B Lossy compression
C Uncompressed format D Analog format
- 10 Which audio format requires the least storage space?
A WAV B AIFF
C MP3 D RAW

Part – B (Do as Directed)

(10)

State whether the following statements are true or false

- 1 Sound waves travel due to variations in air pressure created by a vibrating object.
- 2 RCA connectors are used only for balanced audio transmission.
- 3 The diaphragm is the main component responsible for converting sound waves into vibration in a microphone.
- 4 Low impedance microphones are preferred for long cable runs.
- 5 Input gain should be continuously adjusted during live mixing instead of using channel faders.
- 6 Pre-fader auxiliary sends are independent of the channel fader level.
- 7 Graphic equalizers use a single control knob to adjust all frequencies.
- 8 Chorus effect is used to reduce background noise in audio signals.
- 9 WAV files use lossy compression to reduce file size.
- 10 Highly compressed audio formats are suitable for streaming and portable devices.
