Audio Production and Sound Reinforcement

T076

> **Marks: ....../100**

TVET NATIONAL EXAMINATIONS

LEVEL 5, 2022-2023

QUESTION PAPER

OPTION/TRADE: MULTIMEDIA

SUBJECT/EXAM: Audio Production and Sound Reinforcement

DURATION: 3 HOURS

INSTRUCTIONS TO CANDIDATES:

This Exam paper is composed of Three Sections (A, B, and C).

Follow the instructions given below, and answer the indicated questions for a total of 100 marks

Section **A**: Fourteen (14) questions, all Compulsory   **55 marks**

Section **B**: Among the five (5) questions, attempt any three (3) **30 marks**

Section **C**: Among the two (2) questions, attempt any one (1) 15 **marks**

Section A: Fourteen (14) questions, all Compulsory   /55Marks

01. Choose the correct answers:

1. If the frequency of sound is below 20Hz it is known as**/1mark**

a) Audible
b) Infrasonic
c) Ultrasonic
d) None of the above

2. Large amplitude of sound vibrations will produce   **/1mark**

a) Feeble sound

b) Shrill sound

c) Loud sound

d) Gruff sound

3. Earthquake produces which kind of sound before the main shock wave
   begins   **/1mark**

a) Ultrasound

b) Infra sound

e) Audible sound

d) None of the above

4. Which one of the following factors determines the pitch of a sound? **/1mark**

a. The amplitude of the sound wave

b. The distance of the sound waves from the source

c. The frequency of the sound wave

d. The phase of different parts of the sound wave

e. The speed of the sound wave

5. The is defined as the number of cycles of a periodic wave occurring per unit time.   **/1mark**

a) Wavelength

b) Period

c) Frequency

d) Amplitude

02. Define a sound reinforcement system.   **(5 marks)**

03. What is the difference between AD and DA audio converters? **(5 marks)**

04. Answer by true**(T)** or false**(F).**   **(5 marks)**

a. Sound waves that humans can actually hear is between 0-20 Hz b. Slow and big attack is types of attack envelope of sound

c. The unit for frequency is hertz.

d. Sounds may be generally characterized by pitch, loudness, and quality.

e. Timbre is combination of fundamental frequency, harmonics, and overtones that give each voice, musical instrument differ from other

05. What is the difference between mix balance and tonality?   **(4marks)**

06. Differentiate audio fade in and fade out.   **(4marks)**

07. Complete the following sentences using one of the words in brackets: (normalization, fades, waveform, multitrack session, clipboard, noise reduction, sound remover, compression, plugins).   **(5 marks)**

A.................. is an image that represents an audio signal or recording.

b. ....is the process of removing noise from an audio signal.

 c. The process of lessening the dynamic range between the loudest and quietest parts of an audio signal is called...
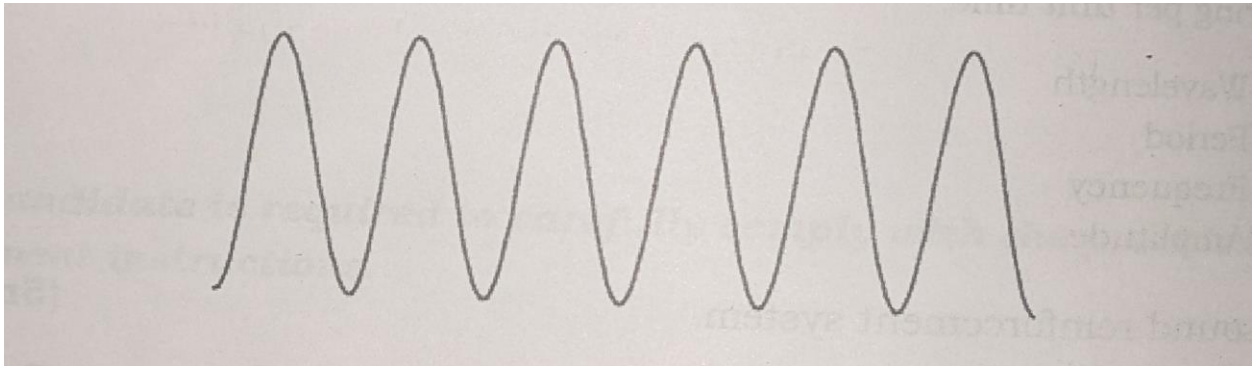
d. In.............the editor panel provides several elements that help you mix and edit different tracks sessions.

e. A much faster way to get your feature is called...............

08. Give any two (2) special effects which are used in audio editing. **(2 marks)**

09. Give the types of sound wave.   **(3marks)**

10. Identify possible number of wave length (complete turn) found in the sound wave below: (**2marks)**

11. Differentiate audio input transducer from audio output transducer.

(4 marks)

12. How do you apply a compression effect to an audio recording in adobe audition?   **(5marks)**

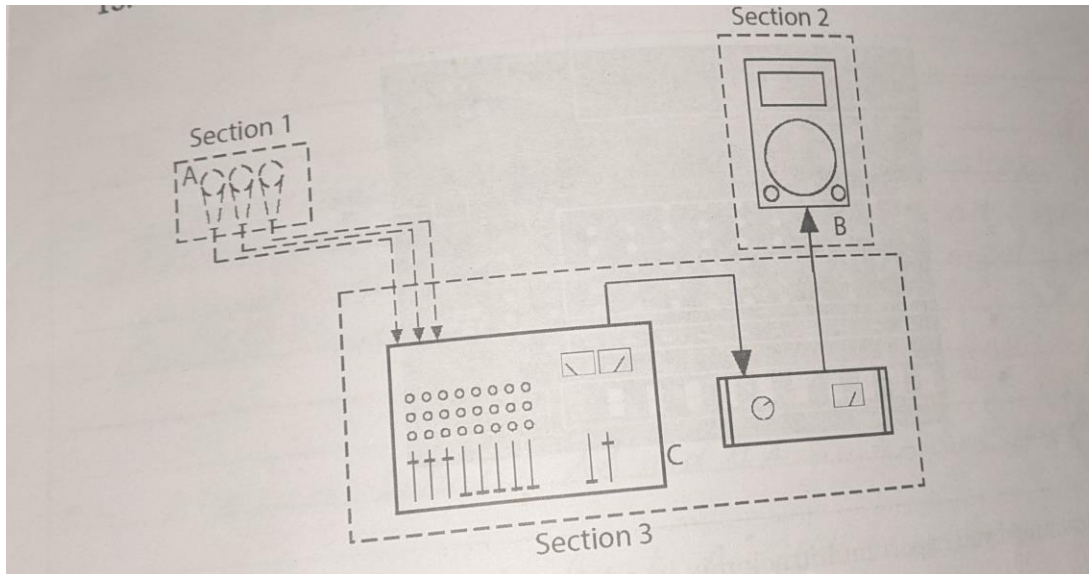**13.** Show the steps of changing output hardware when you are editing in adobe audition.   **(3 marks)**

14. How do you apply audio normalization to the clips in adobe audition? **(3 marks)**

15. The figure below indicates PA Sound System. **(10 marks)**

a. Name the section 1, Section 2 and Section 3

b. Distinguish the use of instruments A, B and C

16. Explain clearly at least five (5) types of loudspeakers. **(10 marks)**

17. a. How hard knee and soft knee work when compressing an audio recording? **(6marks)**

b. Differentiate parametric equalizer from graphic equalizer. **(4marks)**

18.a. Explain the following terms: **(5 marks)**

i. Bit rate

ii. Bit depth

iii. Sample rate

iv. Sampling rate

v. Audio file format

b. Justify why it is better to use glossy compressed formats rather than Lossless compressed formats. **(5marks**)

19. What criteria would you consider to place indoor speakers for a good sound? **(10marks)**
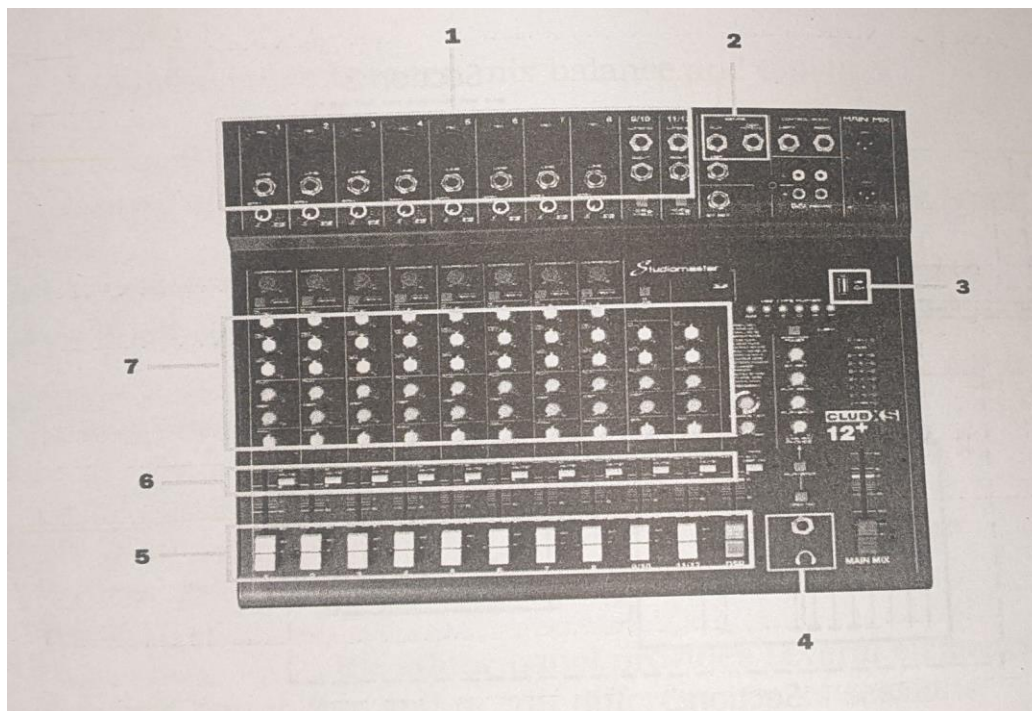
SECTION C: Attempt only one (1) question. **(15 marks)**

20. a. What is an audio mixer? **(1mark)**

b. Name the mentioned parts on the image below and discuss on the use of each part: **(14marks)**

21. How would you export multitrack mix in adobe audition? **(15marks)**

END OF ASSESSMENT!