

## MMT ASSIGNMENT 2&3

### Question A

1 c)

The main perception is that change in pitch of the sound. Even harmonics will resonate and impersonate the song as it is but with less power. But on keeping odd harmonics the noise based in the sound got effected because we won't get a sharp sound than we get a broad sound but as in even harmonics we get sharp sounds.

2 d)

The main perception is changed in the amplitude of the sound. Because the most of the energy is inside the fundamental and the first harmonics so the sound sharpness is decreased linearly with the change in removing the harmonics unlike the even and odd resonate changes.

### Question B

1 Part 1)

The metronome is approximately same and the tempo's observed are approximately from 60-185 for a wav file we observed. with this we estimated the min tempi and max tempi

1 Part 2)

Factors such as variations in musical interpretation, tempo changes within the music, and limitations of computational algorithms may contribute to observed discrepancies. We got some discrepancies around from 5-10 tempo change

1 Part 3)

Variations in tempo may arise due to musical dynamics, expressive performance, or structural changes within the music. We got a lot of discrepancies in tempo limitations.

2)

So in this I prefer I am getting more information through chromogram than mfcc and spectrogram and the outputs are more meaningful in similarity through chromogram

On increasing the frame length and the hop size we can adjust the similarity and the data images. But as we reduce the frame length and the hop size we can get more and more clearer similarity and observation