Quiz 2 – “Foot Tapping”

Quiz on Chapter 2 of Daniel Levitin’s “This is Your Brain on Music”.

1. This is what we dance to and move our bodies to.
   (a) pitch
   (b) rhythm
   (c) tempo

2. At a neural level, playing an instrument requires use of ...
   (a) regions in our primitive, reptilian brain – the cerebellum and the brain stem
   (b) higher level (less primitive) brain systems – such as our motor cortex in the parietal lobe
   (c) planning regions – in the most advanced region of our brain, the frontal lobes
   (d) all of the above

3. When you tap your foot hard versus light, and how these hard and light taps group together to form larger units (or, the way in which beats are grouped together)
   (a) rhythm
   (b) tempo
   (c) meter

4. The lengths of notes
   (a) rhythm
   (b) tempo
   (c) meter

5. The pace of a piece of music (the rate at which you would tap your foot to it)
   (a) rhythm
   (b) tempo
   (c) meter

6. long-short-short-long-long rest(long) long-long
   (a) shave and a hair cut, two bits
   (b) Bum-Diddle-De-Um-Bum, That’s It!
   (c) commonly used “secret” knock on a door
   (d) all of the above
7. short-short-short-short-short-long
    (a) mickey mouse
    (b) mary had a little lamb

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9. Tempo and rhythm are independent features of melody in that one may be changed while the other remains the same. (True or False)

10. The basic unit of temporal measurement in a melody.
    (a) rhythm
    (b) beat
    (c) tempo
    (d) meter

11. Tempo is a major factor in conveying emotion. (True or False)

12. The average person seems to have a remarkable memory for tempo. (True or False)

13. The neural basis for processing tempo is probably located in the cerebellum. (True or False)

14. The basil ganglia are almost certainly involved in generating and shaping rhythm, tempo, and meter. (True or False)

15. STRONG-weak-weak
    (a) march
    (b) waltz
    (c) “My Favorite Things”
    (d) (a) and (b)
    (e) (a) and (c)
    (f) (b) and (c)
    (g) (a) and (b) and (c)

16. ONE-two-three-four
    (a) Twinkle, Twinkle Little Star
    (b) Jailhouse Rock
    (c) both of the above
17. synchopation
(a) when a note anticipates a beat – that is, when a musician plays a note a bit earlier than the strict beat would call for
(b) a very important concept that relates to expectation, and ultimately to the emotional impact of a song

18. In “That’ll Be the Day”, Buddy Holly violates our expectations not only with anticipations (synchopation), but also with word delay. What is meant by word delay?

19. He said that for him the essence of rock and roll song writing was to “Just say what it is, simple English, make it rhyme, and put a backbeat on it.” Who is he?
(a) Chuck Berry
(b) John Lennon

20. Chuck Berry reference it in “Rock and Roll Music”. John Lennon dramatically featured it in “Instant Karma”. The snair drum is generally associated with it. What is it?

21. Small-integer ratios of durations are easier to process neurally than large-integer ratios. But, as Eric Clarke notes, small-integer ratios are almost never found in samples of real music. This indicates that there is a quantization process – equalizing durations – occuring during our neural processing of musical time. In short, our brains do some rounding up or down in order that we might percieve durations as small-integer ratios (such as 2:1 or 3:1 or 4:1) when given the opportunity to do so. (True or False)

22. Theoretically, any ratio of pitch durations is possible, but in practice ...
(a) there are limitations to what we can perceive and remember
(b) there are limitations based on style and convetion
(c) both of the above

23. The most common meters in western music are 4/4, 3/4, and 2/4 time. (True or False)

24. Which of the following tunes are generally conceived in 5/4 time?
(a) Paul Desmond’s “Take Five” which is generally associated with the Dave Brubeck Quartet
(b) Lalo Shiffrin’s theme from Mission: Impossible
(c) both of the above
25. A lot of people like really loud music. Levitin suggests that this fact may in part be due to an “emergent” phenomenon in the brain – when many neurons are firing maximally a brain state *qualitatively* different from when neurons are firing at normal rates may be realized. (True or False)

26. Changes in loudness may have a profound effect on the emotional communication of music. (True or False)

27. When we tap our feet, we are predicting what is going to happen in the music next. But we also play a game of expectations in music with pitch, a game that is based on notions of key and harmony. (True or False)

28. All music has a key. (True or False)

29. How is a pitch like a flavor?

30. At the “harmonic level”, that is, at the level of pitches rather than timbres, some people find particular intervals or chords to be particularly pleasant or particularly unpleasant.

   (a) What word is used to refer to particularly pleasant sounding intervals and chords?

   (b) What word is used to refer to particularly unpleasant sounding intervals and chords?

31. Cognitive psychologist at McGill University whose work on audio streams has significantly influenced the field of music cognition and approaches to solving musical grouping problems.

   (a) The Gestalt psychologists – most notably Christian von Ehrnfels, Max Wertheimer, Wolfgang Kohler, and Kurt Koffka

   (b) Al Bregman

   (c) The music theorist Fred Lerdahl from Columbia University and the linguist Ray Jackendoff from Brandeis University (now at Tufts University)

   (d) Hermann von Helmholtz
32. They wondered how it is that a melody – composed of a set of specific pitches – could retain its identity, its recognizability, even when all of its pitches were changed. More generally, the were interested in the problem of configurations, or groups – that is, how it is that elements come together to form wholes.

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33. This nineteenth centuraiy scientist, who taught us much of what we now accept as the foundations of auditory science, described the grouping problem as an unconscious process that involved inferencing, or logical deductions about what objects in the world are likely to go together based on a numbe of features or attributes of the objects.

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34. They conceived of the Generative Theory of Tonal Music (GTTM) which consists of a set of rules, similar to the rules of grammar in spoken language, that govern musical listenting and composition.

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35. Which of the following is an example of grouping in music?

(a) The way the brain will construct for us a mental image of an instrument from its many overtones.
(b) The way the brain will construct a mental image of more than one instrument playing together.
(c) The way that sounds located from roughly the same location might be heard together.
(d) The way that sounds of similar loudness might be heard together.
(e) The way that sounds of similar rhythm might be heard together.
(f) The way that sounds of similar pitch might be heard together.

(g) The way that sounds of similar timbre might be heard together.

(h) The way that sounds of similar pattern (involving loudness, rhythm, pitch, timbre, or some combination of these) might be heard together.

(i) All of the above!