Quiz 1 – “What is Music?”

Quiz on Chapter 1 of Daniel Levitin’s “This is Your Brain on Music”.

1. Which of the following was, at some point in time quite a while ago, banned by the Catholic Church?
   (a) Polyphony – more than one musical part playing at a time
   (b) The musical interval of an augmented fourth – *Diabolus in musica*
   (c) both (a) and (b)
   (d) neither (a) nor (b)

2. Which dimension of music is credited as the source of the boos that Dylan received at the 1965 Newport Folk Festival?
   (a) pitch
   (b) timbre
   (c) rhythm

3. A temporal construction determined by sequence of note durations.
   (a) pitch
   (b) timbre
   (c) rhythm
   (d) volume

4. That quality of a note which has been notoriously defined as “that which remains when you disregard loudness and pitch”.
   (a) pitch
   (b) timbre
   (c) rhythm
   (d) volume

5. The psychological construct pertaining to a note that relates (nonlinearly and in poorly understood ways) to how much energy an instrument creates – how much air it displaces – and to what an acoustician would call the amplitude of the note’s tone.
   (a) pitch
   (b) timbre
   (c) rhythm
   (d) volume
6. A psychological construct pertaining to a note that is related both to the actual frequency of the note’s tone (a physical concept) and to its relative position within a musical scale.
   (a) pitch  
   (b) timbre  
   (c) rhythm  
   (d) volume

7. The difference between music and a random or disordered set of sounds has to do with the way that the certain fundamental attributes of sonic perception combine, and the relations that form among them. (True/False)

8. A product of rhythm and loudness cues, this higher-order musical concept refers to the way in which notes are grouped together across time.
   (a) melody 
   (b) harmony 
   (c) meter 
   (d) key

9. A framework for interpreting a piece of music based on the relative importance of pitches (a distributional concept), the relative likelihood of particular intervalic occurrences (a structural concept), and other factors, this higher-order musical concept is considered to the cornerstone of tonal music.
   (a) melody 
   (b) harmony 
   (c) meter 
   (d) key

10. Relationships between pitches of sets of notes, and patterns of progression involving these relationships, this higher-order musical concept serves an import function of contextualization which tends to heighten expectation.
    (a) melody 
    (b) harmony 
    (c) meter 
    (d) key

11. The succession of notes in a piece that are most salient in your mind.
    (a) melody 
    (b) harmony 
    (c) meter
12. What did Miles David believe to be the most important part of his solos?
   (a) the notes he played
   (b) the space between the notes he played

13. When asked what practical use radio waves might have, the physicist who was the first to transmit radio waves – this dyed in the wool theoretician – reportedly shrugged, “None”.
   (a) Daniel Dennet
   (b) Heinrich Hertz

14. Relative to pitch, the terms high and low are culturally universal. (True/False)

15. The distance travelled and the rate of oscillation are independent for a vibrating string. (True/False)

16. Pitch, color, and taste are generally considered to be examples of
   (a) psychological phenomena
   (b) physical phenomena

17. This philosopher pithily pointed out, when endeavoring to emphasize the distinction between psychological and physical phenomena, that “Heat is not made up of tiny hot things”.
   (a) Daniel Dennet
   (b) Heinrich Hertz

18. The pitches corresponding to each of the keys on a keyboard are equally easy to discern. (True/False)

19. According to Levitin, this the primary means by which musical emotion is conveyed – mood, excitement, calm, romance, danger.
   (a) rhythm
   (b) volume
   (c) timbre
   (d) pitch

20. What one word refers to: “An abstract prototype that is derived from specific combinations of key, tempo, instrumentation, and so on”?

21. When a speaker raises his or her voice at the end of a sentence they are signaling
   (a) that they are asking a question
   (b) that they are relating something
22. The (slow) predominantly step-wise downward motion of the melody in Grieg’s “Peer Gynt Suite No. 1, Morning Mood” conveys

(a) activity and movement
(b) peacefulness

23. The chromatic, ascending lines with occasional and playfully descending intervals on the way up convey

(a) activity
(b) peacefulness

24. The three preceding questions pertain to

(a) absolute pitch
(b) relative pitch
(c) random pitch

25. An associated melodic phrase or figure that accompanies the appearance/reappearance of an idea, person or situation is generally referred to as a/an

(a) leitmotiv
(b) aural avatar

The concept featured in the preceding question, as employed in Prokofiev’s Peter and the Wolf and Wagnerian opera, rings of

(a) absolutest meaning
(b) referential meaning

26. Which instrument might best be used to suggest solemnity, gravity, or weight.

(a) piccolo
(b) tuba

27. The basilar membrane of the inner ear contains hair cells that are frequency selective, firing only in response to a certain band of frequencies. Because the different frequencies are spread out across its surface topography, the membrane is considered to be a

(a) tonotopic map
(b) chronotopic map
(c) keyboard

28. A scale is a subset of a large number of pitches, and every culture selects these based on historical tradition or somewhat arbitrarily. (True/False)

29. The notion of the octave – frequency ratios of 1:2 or 2:1 – appears to have manifested itself in all cultures, and hence may be considered a musical universal. (True/False)
30. The first two notes of Hal Arlen’s melody “Over the Rainbow” make an octave. (True/False)

31. The octave concept underlies the fact that music is often described as having two “pitch dimensions” – one is ever increasing, and the other is cyclic with recurring “visits back home”. (True/False)

32. An interval is a distance between two notes. (True/False)

33. Melodic processing is
   (a) absolute – meaning that we define a melody by the actual notes used to create it
   (b) relative – meaning that we define a melody by the intervals that come between its notes.

34. The notes with compound names (e.g., C-flat and F-sharp) are second class citizens relative to those with atomic names (e.g., A, B, C). (True/False)

35. Each note in our musical system is
   (a) equally spaced with respect to frequency differences
   (b) equally spaced with respect to our ears

36. Which sequence of whole-step (W) / half-step (H) intervals defines a major scale?
   (a) WWHWWWH
   (b) WHWWHW
   (c) WWWWWW
   (d) WHWHWHWH

37. Experiments have shown that young children, as well as adults, are better able to learn and memorize melodies that are drawn from scales that contain unequal distances. (True/False)

38. As a rule, our knowledge of musical structure (as found, for example, in keys and scales) is
   (a) innate
   (b) learned

39. Two scales can contain exactly the same set of notes. (True/False)

40. Levitin suggests that the brain unconsciously determines which key a piece is in by means of a
   (a) distributional model – in which the number times each note it sounded, where they appear in terms of strong versus weak beats, and how long they last are the basis for the determination
   (b) structural model – in which the number of times each interval occurs and the patterns of intervalic appearance are the basis for the determination

41. Evidently, melodic processing and key finding are accomplished by our brains in rather different ways! (True/False)
42. Different scales tend to be associated with different emotions – and composers/performers are known to intentionally exploit these associations. (True/False)

43. A hierarchy of importance exists among major scale tones; some are more stable, structurally significant, or final sounding than others, causing us to feel varying amounts of tension and resolution. The most stable tone is the first degree, also called the tonic. Thus, all other tones in the scale seem to point toward the tonic, but they point with varying momentum. The tone that points most strongly to the tonic is the seventh scale degree. The tone that points least strongly to the tonic is the fifth degree. Music theorists have long understood this intuitively. But one hard working human, along with colleagues, showed that ordinary listeners have incorporated the principles of this hierarchy into their brains! Who is she?

(a) Diana Deutsch
(b) Carol Krumhansl
(c) Wendy Carlos

44. When an instrument creates energy at frequencies that are integer multiples of a fundamental frequency, we say that the sound is harmonic, and we refer to the pattern of energy at different frequencies as the overtone series. (True/False)

45. Knowledge of the overtone series for an instrument can be used to synthetically generate sounds which mimic those of the instrument. (True/False)

46. Additive synthesis may be used to create novel virtual instruments! (True/False)