MUS227—Theory IV
Study Guide for Exam 3 — chapter 6 Straus

The exam will include short writing exercises and short analysis questions.

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TERMS / CONCEPTS
Serialism
12-Tone Row
Prime
Inversion
Retrograde
Retrograde Inversion
Aggregate
Trichord
Tetrachord
Hexachord
Segmental Invariance
Combinatoriality
Rotational Array
Trichordal Array
Axis of Symmetry

How to make a 12-tone matrix:
1. Find your original row (will be given on exam)
2. Transpose that row to start on zero
    —if EGFABC#DD#A#G#CF# (**4**759E123T806), subtract 4 (or add 8)…
    — (031579TE6482)
3. Write the complement of each number in the first column
    — going down vertically from 0 it would read (09E75321684T)
4. Transpose each row based on its starting number/pc until it is complete
    —second row starts with 9, so add 9 (or subtract 3) to original row (90T24678315E)

*NB: remember that R and RI rows are labeled by the last number that appears

To find discrete trichords in row:
1. Take each set of 3 pitches in order: 031 / 579 / TE6 / 482
2. Find prime form for each: (013) / (024) / (015) / (026) = answer
3. "Other trichords" means any group of 3 adjacent notes (315 / 79T / E64, etc.) which you would then put in prime form for your answer
4. For "**discrete tetrachords**," take each set of 4 pitches in order: 0315 / 79TE / 6482
5. Put them in prime form: (0135) / (0124) / (0246)

Hexachordal Combinatoriality
Two sets of 6 notes that form an aggregate together
[012345] + [6789TE] — NB: both are (012345) in prime form = self-combinatorial
To find the level at which 2 hexachords are combinatorial:

1. MEMORIZE THE CHART

	SELF	COMPLEMENT
TRANSPOSITION	R	P
INVERSION	RI	I

2. The type of combinatoriality present will be given
3. Decide what you want your answer to be and which process to use by looking at the chart (in your memory)
4. Find the level of transposition (X+n = Y) or inversion (n-X=Y) that allows the set to map onto itself or complement as determined by type of combinatoriality (chart)

Rotational Array

1. Start with a series (01567)
2. First number rotates to the last position and transposition occurs
   —Rotate: 15670 + T_7: 80127 + continue process

You will be given an array and asked to identify the level of transposition between rows

Trichordal Array

1. Start with a row made up of the P, R, I, RI versions of one trichord
2. Each row, column, and quadrant will create an aggregate

Helpful hints re: analysis:
You will be given a score and the row in P_0 form.

1. Make a 12-tone matrix with that row.
2. Label the pitches on the music with their integer number equivalent.
3. See if you can find patterns that match one or more rows in the music
   —look at each instrumental part separately or in combination (the row can travel between instruments — e.g., I play the first 3, you play the next 3, etc.)
4. Label each row with its form (P_x, I_x, R_x, RI_x) and circle the notes on the score
   —color coding helps differentiate, but as long as your notes are numbered, it will be easier for me to decipher what your circles mean

You may also be asked about relationships between intervals, trichords, tetrachords, hexachords, symmetry, musical construction (motives, common tones), etc.