Arabic consonants

Speakers of Arabic seem to classify consonants into groups, as shown below. In particular, Arabic roots avoid having two consonants from the same group in adjacent consonant positions.

Can any of these groups be **described** (and **distinguished** from all other groups) in terms of natural classes that are stated in terms of traditional phonetic properties? If so, what describes the class? If not, why not?

Consonant groups in Arabic:

- a. [f b m]
- b. [gkq]
- c. $[\theta \ \delta \ s \ z \ s^{\varsigma} \ z^{\varsigma}]$
- d. $[t d t^{\varsigma} d^{\varsigma}]$
- e. [nlr]

Notes:

- [t^c d^c s^c z^c] are "emphatic" consonants, produced with a simultaneous pharyngeal constriction.
- There is one more group involving certain pharyngeal and glottal consonants, but we won't discuss that group at this point.