(M) Sound Judgments (1/2)

M1. The correct historical order is: D, C, G, F, B, A, E

And the rules are:

$$c > k$$
$$j > g$$
$$b^h > \emptyset \ / \ m \ \underline{\ \ }$$
$$b^h > p$$
$$g > k$$
$$s > \emptyset \ / \ \underline{\ \ } \ \#$$

Working out an order of the steps relative to one another should be straightfoward by any method, e.g. by observing that the first word begins either b^h- or p-, and that the simplest conclusion is that this represents a historical change from one to the other (so all the forms with b^h- will be at 'one end' of the timeline).

This will give an ordering of the elements relative to one another (e.g. "this stage goes in between these other two"), but the next step is to tell which part is the beginning and which is the end. The trick to this is to realize that some changes are irreversible, specifically the mergers of c with already existent k (this is why the word kóro- is included) and later g with k. The statement in the rubric that sound changes *must* be regular means that the reverse of this can't happen; that would require an irregular change of k to g in some words but k in others. (A logical possibility is that k becomes g before on but not or; candidates should realize that this is not the most parsimonious analysis.)

M2. The rules given in the question are lettered below.

(A) o > ë	(B) nt > $\emptyset$ / __ #	(C) e > ə	(D) or > ur / __ #
(E) ē, ī, ū > e, i, u	(F) m > n / __ #	(G) t > c / __ e, ē	(H) d > ś / __ e, ē
(I) n > $\emptyset$ / __ #	(J) m > n / __ t	(K) u > ə	(L) k > ś / __ e, ē
(M) w > wʸ / __ i, ī	(N) g > k	(O) d > $\emptyset$ / __ #	(P) s > $\emptyset$ / __ #
(Q) ti > $\emptyset$ / n __ #			

The first thing to realize here is that (as the question suggests) only a partial order can be deduced. For example, 15 can be put anywhere in the ordering, because it doesn't have an effect on any other rules. The rules that can be ordered are the ones that make reference to each other's inputs and outputs.

The orderings are possible to work out (by a kind of *modus tollens*).

(D) comes before both (A) and (K)
In *akëntər, we have: -or > -ur (by (D)) > -ər (by (K)). If the order were (A) > (D), we would have: -or > -ër (by (A)) and (D) would fail to apply. If the order were (K) > (D), we would have: -or > -ur, but then no subsequent change to -ər because (K) has already applied earlier.
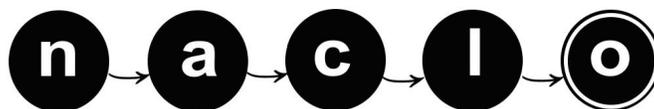
(G) and (H) both come before (C)
In *cə́kʷë, we have: té- > cé- (by (G)) > cə́ (by (C)). If the order were (C) > (G), we would have: té- > tə́ (by (C)) and (G) would fail to apply. The same reasoning applies to (H) in the word *śə́kə.

(C) comes before (E)
In *pacér, we have: -ë́- > -é- (by (E)), where (C) has already applied earlier. If the order were (E) > (C), we would have: -ë́- > -é- (by (E)) > -ə́- (by (C)).

(F) comes before (I)
In *kənté́, we have: -m > -n (by (F)) > Ø (by (I)). If the order were (I) > (F), we would have: -m > -n (by (F)), but then no subsequent deletion because (I) has already applied earlier.

(J) comes before (B)
In *śə́kə, we have: -əmt > -ənt (by (J)) > -ə (by (B)). If the order were (B) > (J), we would have: -əmt > -ənt (by (J)), but then no subsequent deletion of -nt because (B) has already applied earlier.

(I) comes before (Q)
In *akën, we have: -nti > -n (by (Q)), where (I) has already applied earlier. If the order were (Q) > (I), we would have: -nti > -n (by (Q)) > Ø (by (I)).

(L), (M), (N), (O), and (P) are unorderable with respect to any other rules.

A neat diagram of a solution might look like this, where a downward arrow means 'precedes'.

(L)   (M)   (N)   (O)   (P)