

CORRECTION TO “SPECIAL GENERATING SETS OF PURELY INSEPARABLE EXTENSION FIELDS OF UNBOUNDED EXPONENT”

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Theorem 6 is incorrect without the following definition:

Definition. A subfield F/K of L/K will be called *quasi-discrete* over K if

$$F = \bigcap_{i=1}^{\infty} K(F^{p^i}) \otimes K(A_1 \cup A_2 \cup \dots)$$

and *discrete* over K if

$$F = K(A_1 \cup A_2 \cup \dots)$$

where $A_1, A_2, \dots$, are subsets of F created in the manner of [2, Theorem 11, p. 339] and this reference is as given in the original publication.

Theorem 6. *The purely inseparable extension L/K has a maximal subfield F having a subbasis over K if and only if there exists in L a maximal modular subfield F which is Galois and quasi-discrete over K .*

Proof. Suppose F is a maximal modular subfield of L/K which is Galois and quasi-discrete over K . Let $A_1, A_2, \dots$, be subsets of F constructed in the manner of [2, Theorem 11, p. 339] such that

$$F = \bigcap_{i=1}^{\infty} K(F^{p^i}) \otimes K(A_1 \cup A_2 \cup \dots).$$

Since F/K is Galois $\bigcap_{i=1}^{\infty} K(F^{p^i}) = K$. Hence

$$F = \bigcap_{i=1}^{\infty} K(F^{p^i}) \otimes K(A_1 \cup A_2 \cup \dots) = K(A_1 \cup A_2 \cup \dots).$$

Consequently, F has a subbasis over K . The Converse follows immediately from Lemma 5. $\square$