**Finitely Quasi Injective and Quasi FinitelyInjective**

**S-systems Over Monoids**

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**ABSTRACT:**

The notion of quasiinjectivity relative to a class of finitely generated subsystems namely finitely quasiinjective and quasi finitely injective systems over monoids are introduced and studied which are proper generalizationsof quasi injective systems . Several properties of these kind of generalizations are discussed . Conditions under whichsubsystems of finitely quasi injective system inherit this property . Characterizations of finitely quasi injective andquasi finitely injective systems over monoids are considered . The relationship between the classes of finitely quasiinjective with other classes of injectivity are studied. As a consequence, conditions to versus these classes are shown .

**PRINCIPALLY QUASI INJECTIVE SYSTEM OVER MONOID**

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**ABSTRACT :**

In this paper , principally quasi injective system has been introduced and studied , which is a generalization of quasi injective system . We obtain a characterizations of PQ-injective systems , conditions on which, subsystems inherit the property of PQ-injectivity , and conditions have been considered to versus PQ-injective system with class of injectivity. Finally , the relationship between maximal reversible subsystem of system and maximal left ideal of the endomorphism monoid of the system has been studied .

**Pseudo C-M-Injective and Pseudo C-Quasi Principally Injective Systems Over Monoids**

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**ABSTRACT :**

In this paper , the concepts of pseudo C-quasi injective and pseudo C-quasi principally injective systems over monoids are introduced which represents generalizations of quasi injective and quasi principally injective respectively . Characterization of these concepts are given. At the same time some properties of pseudo C-quasi principally injective systems are studied in terms of their endomorphism monoid. Relate the concepts ofHopfian, co-Hopfian and directly finite with pseudo C-quasi injective systems over monoids. Conditions are investigated under which subsystems are inherit pseudo C-quasi principally injective and pseudo C-quasi injective. The relationship among the class of pseudo C-quasi injective and pseudo C-quasi principally injective systems with some generalizations of injectivity(such as extending and continuous systems ) are considered .

**PSEUDO IC-INJECTIVE SYSTEMS OVER MONOIDS**

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**ABSTRACT :**

This paper is a continuation of the recent research concerning generalization of pseudo injective systems over monoids, namely pseudo C-M-injective and pseudo C-quasi principally injective systems over monoids. Recently, we adopt the concept of pseudo IC- injective systems over monoids which generalize that of pseudo injective. Several properties and characterization of this generalization is given. Relate the concept of pseudo IC- injective systems over monoids with weakly co-Hopfian and co-Hopfian property. Conditions are investigated under which subsystems are inherit pseudo IC-injectivity property. The relationship among the class of pseudo IC- injective systems with some generalizations of injectivity (such as extending and continuous systems) areconsidered.

**PSEUDO INJECTIVE AND PSEUDO QP-INJECTIVE**

**S-SYSTEMSOVER MONOIDS**

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**ABSTRACT :**

The concept of quasi injective S-systems over monoids is generalized to pseudoinjective by Yan and QP-injective S-systems by the authors. A new kind of generalization, namely pseudo quasi principally injective systems over monoids is studied.On the way, we complete an early result by Yan on pseudo injective S-systems andobtained analogous properties to that notion of pseudo injectivity on the moduletheory. Several properties of these kinds of generalizations are discussed. Conditionsunder which pseudo injective S-systems being quasi-injective are considered. Also,we obtain characterizations of pseudo quasi principally injective S-systems. Therelationship between the classes of pseudo injective S-systems with quasi injectiveS-systems and pseudo quasi principally injective S-systems with quasi principallyinjective S-systems are considered . As a consequence, conditions to versus these

classes are shown.

**Pseudo PQ-injective systems over monoids**

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**ABSTRACT :**

The purpose of this paper is to introduce a new kind of generalization of principally quasi injective S-systems over monoids (PQ-injective), (and hence generalized quasi injective), namely pseudo principally quasi injective S-systems over monoids. Several properties of this kind of generalization are discussed. Some of these properties are analogous to that notion of pseudo principally quasi injective class of general modules. Sufficient conditions are given for pseudo principally quasi injective S-systems to be principally quasi-injective and pseudo quasi principally injective S-systems. Characterizations of pseudo principally quasi injective S-systems are considered.

**QUASI PRINCIPALLY INJECTIVE S-SYSTEMS OVER MONOIDS**

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**ABSTRACT :**

This paper is a continuation of the recent research concerning generalization of quasi injective systems over monoids , namely principally quasi injective systems over monoids . Recently , we adopt the concept of quasi principally injective systems over monoids which generalizes that of quasi injective systems . We study their characterizations and properties , relate this concept with Hopfian and co-Hopfianproperty . Conditions are investigated under which subsystems are inherit quasi principalinjectivity . The relationship between the class of quasi principally injective systems with some generalizations of injectivity are considered.