ERRATUM TO: ON OBSTINATE IDEALS IN MV-ALGEBRAS

Mohammad Sina Asadzadeh[1], Gholam Reza Rezaei[2], Javad Jamalzadeh[3]

The paper referred to in the title was published in Politehn. Univ. Bucharest Sci. Bull. Ser. A Appl. Math. Phys., ***76****(2014), 53-62, contains a crucial unclarity, which makes some results are either obvious or wrong. This erratum is devoted to clarify some gaps in the concept of obstinate ideals in MV-algebras which studied in the original version of this article.*

Keywords: MV-algebra, obstinate ideal, supermaximal ideal, bipartite MV-algebra.

MSC2010: 03B50, 06D35.

The notion of obstinate ideals in MV-algebras were introduced and investigated in [3, 1] under the name of supermaximal ideals. Let us recall that, a proper ideal I of an MV-algebra A is called *obstinate* if $A = I \cup \neg I$, where $\neg I = \{\neg x : x \in I\}$. As an immediate consequence of the definition, the proper ideal $\{0\}$ of an MV-algebra A is an obstinate ideal if and only if $A = \{0, 1\}$. The simplest non-trivial Boolean algebra $\mathbf{2} = \{0, 1\}$ is simple and locally finite, hence:

Fact 1. Theorem 2.3, Lemmata 2.2, 2.3 and Corollary 2.4 of [4] are obvious.

Example. *Let* $A = \{0, a, b, 1\}$*, where* $0 < a, b < 1$*. Define* $\oplus, \neg$ *as follows:*

$\oplus$	0	a	b	1
0	0	a	b	1
a	a	a	1	1
b	b	1	b	1
1	1	1	1	1

$\neg$	0	a	b	1
	1	b	a	0

Then $(A; \oplus, \neg, 0)$ *is a Boolean algebra. The set* $I = \{0, a\}$ *is an obstinate ideal of* A*, but* $\{0\}$ *is not an obstinate ideal.*

According to the above example we have the following:

Fact 2. The implications $(i) \Rightarrow (ii)$ and $(i) \Rightarrow (iii)$ of Corollary 2.3 of [4] are wrong.

[1]Corresponding author: Department of Mathematics, University of Sistan and Baluchestan, Zahedan, Iran, e-mail: `msina.asadzadeh@pgs.usb.ac.ir`

[2]Department of Mathematics, University of Sistan and Baluchestan, Zahedan, Iran

[3]Department of Mathematics, University of Sistan and Baluchestan, Zahedan, Iran

An MV-alegbra A is called *bipartite* if there exists a maximal ideal M of A which generates A (see [2]). Every obstinate ideal is maximal, so if I is an obstinate ideal of A, then the quotient algebra of A by the ideal I is isomorphic to **2**, by Theorem 4.9 of [2]. Thus:

Fact 3. Corollary 2.2 and Theorem 2.4 of [4] are immediate.

Furthermore we have have the following fact:

Fact 4. Theorems 3.1, 3.2 and Corollary 3.1 of [4] are immediate from the implications $(vii) \Rightarrow (v)$, $(vi) \Rightarrow (vii)$ and $(ii) \Rightarrow (vii)$ of Theorem 5.1 of [2], respectively.

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