REVIEW OF LITERATURE

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The concept of fuzzy sets was introduced by Zadeh [83] in 1965. Several authors have applied this concept to various branches of mathematics. In 1968, Chang [20] introduced the notion of fuzzy topological spaces to generalize some of the basic concepts of general topology. Levine [44] introduced the concepts of generalized closed sets in general topology in 1970. As an extension of fuzzy topological spaces Atanassov [6] introduced the notion of Intuitionistic fuzzy sets in 1986. Using the notion of Intuitionistic fuzzy sets, Coker [22] defined the notion of Intuitionistic fuzzy topological spaces in 1997.

Since then various authors have studied various forms of generalized closed sets and various form of generalized continuous functions in fuzzy topological spaces. Here a brief survey of some of the articles published on these concepts are dealt.

1. 'Fuzzy sets'
Zadeh, L.A., (1965) [83]

In this article, the author has characterized the membership zero and one and the notions of inclusions, union, intersection, compliment, convexity are studied.

2. Generalized closed sets in topology
Levine, N. (1970) [44]

In this article, the author has characterized the behavior of unions, intersections and subspaces and the properties of generalized closed sets and generalized open sets are studied.

3. 'Semi-continuous and semi-closed mappings and semi-connectednesses

Banamali Ghosh (1990) [11]

In this article, the author has studied the characterization of semi-continuous and semi-closed mappings between fuzzy topological spaces. With fuzzy semi-open, fuzzy T_i-spaces are defined and these spaces are investigated under fuzzy semi-continuity.

4. 'Fuzzy strong semi-continuity and fuzzy precontinuity'

Bin Shahna, R.N. and Anjan Mukherjee (1991) [17]

In this article, the author has introduced the concept of fuzzy semi open (semi closed) sets, fuzzy semi-continuous mapping, almost continuous mapping, and weakly continuous mappings and characterized fuzzy α-open (α-closed) sets, fuzzy preopen (preclosed) sets.

5. Fuzzy weak semi-continuity

Bai Shi-Zhong (1992) [13]

In this article, the author has characterized the properties of fuzzy semicontinuous, fuzzy semiopen, fuzzy semiclosed and fuzzy pre-semi-open mapping and introduced and studied the weaker form of both fuzzy semicontinuous and fuzzy almost continuous mapping in fuzzy topological spaces.

6. Generalized mapping between fuzzy topological spaces

Kandil, A., Kerre, E.E., Nooh, A.A., El-Shafei, M.E., (1992) [41]

In this article, the authors have introduced and studied ϕ-operation on a fuzzy topology τ on a set X. Fuzzy ϕ ψ-open mappings (fuzzy ϕ ψ-closed) and fuzzy homeomorphism, fuzzy θ-open mappings (fuzzy θ-closed) and fuzzy δ-open mappings (fuzzy δ-closed).

7. Fuzzy weakly completely continuous functions
Bhaumik, R.N. and Anjn Mukherjee (1993) [19]

In this article, the authors have introduced generalization of fuzzy completely continuous functions and fuzzy weakly completely continuous function and its properties are studied.

8. The method of neighbourhood system fuzzy topology
Mingsheno Ying (1994) [51]

In this article, the author has introduced the theory of neighbourhood systems in fuzzy topology and treated the membership relation as a fuzzy relation is studied.

9. Fuzzy weakly semi-continuous functions
Dang, S., Behera, A. and Nanda, S. (1994) [27]

In this article, the authors have introduced fuzzy weakly semi-continuous functions between fuzzy topological spaces and the properties of these functions are characterized in terms of quasi coincidence, quasi neighbourhoods, 0-neighbourhoods.

10. Semi-generalized homeomorphism and generalized semi-homeomorphism in topological spaces
Devi, R. Balachandran, K. and Maki, H. (1995) [28]

In this article, the authors have introduced two new classes of mappings of generalized semi-homomorphisms and their properties are studied.

11. Some generalizations of fuzzy continuous functions
Balasubramanian, G. and Sundaram, P. (1997) [10]

In this article, the authors have introduced and studied fuzzy generalized connectedness, generalized fuzzy extremely disconnectedness and fuzzy generalized compactness.

12. Fuzzy semi-preopen sets and fuzzy semi-precontinuity
Thakur, S.S. and Surendra Singh (1998) [76]

In this article, the authors have introduced the concepts of fuzzy semi-preopen sets and fuzzy semi-precontinuous mapping in fuzzy topological spaces and their properties are discussed.

13. Fuzzy non-continuous mappings and fuzzy pre-semi-separation axioms
Bai Shi-Zhong and Wang Wan-Liang (1998) [12]

In the article, the authors have introduced fuzzy pre-semi-open mapping, fuzzy pre-semi-irresolute mappings, fuzzy pre-semi-separation axioms and fuzzy pre-semi-connectedness in fuzzy topological spaces and its properties are studied.

14. Fuzzy totally continuous and totally semi-continuous functions Anjan Mukherjee (1999) [4]

In this article, the author has introduced fuzzy totally continuous and fuzzy totally semi-continuous functions and the composition of these functions are studied.

15. Fuzzy weak totally semi-continuous and fuzzy weak totally precontinuous
Abd El-Hakeim, K.M. (2001) [1]

In this article, the author has introduced and studied the properties of fuzzy weak totally continuous, fuzzy totally precontinuous, fuzzy weak totally semicontinuous, fuzzy totally M-precontinuous and fuzzy totally irresolute mappings.

16. Fuzzy weakly semiopen functions

Migvel Caldas, Govindappa Navalagi, Rathesh Saraf (2002) [50]

In this article, the authors have introduced and characterized fuzzy weakly semi open functions between fuzzy topological spaces as a natural dual to fuzzy weakly semi continuous functions.

17. Generalized fuzzy strongly semi closed sets in fuzzy topological spaces

Oya Bedre Ozhakir (2002) [56]

In this article, the author has introduced the concept of generalized fuzzy strongly semi closed, generalized fuzzy almost-strongly semi closed, generalized fuzzy almost-strongly closed and studied their properties.

18. Generalization of some fuzzy functions

Erdal Eichi (2005) [30]

In this article, the author has introduced the notation of fuzzy slightly precontinuity, generalized fuzzy precontinuity, fuzzy weakly continuity, fuzzy continuity, fuzzy strongly continuity, fuzzy almost strongly continuity, fuzzy weakly continuity, fuzzy almost continuity and fuzzy super continuity and their properties are studied.

19. Fuzzy pre-semi-closed sets

Murugesan, S. and Thangavelu, P. (2008) [55]

In this article, the authors have introduced fuzzy pre-semi-closed sets in fuzzy topological spaces and investigated these properties. As an application to fuzzy pre-semi-closed sets, fuzzy pre-semi-$T_{1/2}$ spaces, fuzzy pre-semi-$T_{3/4}$ spaces and fuzzy semi-pre-$T_{1/3}$ spaces are introduced and their characterizations are studied.

20. Weak and strong forms of fuzzy irresolute maps
Sara F.R.K., Seema Mishra and Calda S.M. (2008) [69]

In this article, the authors have obtained the characterization of fuzzy semi-$T_{1/2}$ spaces using the concepts of Fsg-closed sets, which they call Fap- irresolute maps, Fap-semi closed maps, and fuzzy contra - irresolute maps.

21. Fuzzy almost pair wise semi-pre continuous mapping and fuzzy almost semi-pre open (semi-pre closed) mappings
Mohammed Jasim Mohammed (2009) [52]

In this article, the author has introduced the concepts of fuzzy semi preopen mappings in fuzzy topological spaces and fuzzy almost semi-pre continuous mappings and fuzzy almost pairwise semi-preopen (semi-pre closed) mappings are studied.

22. Fuzzy minimal generalized continuous functions
Parimelazhagan, R. and Nagaveni, N. (2010) [57]

In this article, the authors have introduced fuzzy minimal generalized continuous function and fuzzy minimal generalized closed functions and their properties are studied.

23. fbg-closed sets and fb-seperation axioms
Benchalli, S.S. and Jenifer Karnal, J. (2011) [14]

In this article, the authors have introduced fuzzy separation axioms with the help of fuzzy b-open sets and the properties of fuzzy b-generalized closed sets, fuzzy b-generalized continuous maps, fuzzy b-irresolute maps and fuzzy b $T_{1/2}$-spaces are studied.