Theorem (2.4) If f : x → y is lower weakly semi-precontinuous, for every fuzzy pre- semiopen set V in F(v) Ċ SPint F(SCIV).

Theorem (2.5) Iff : x → y is fuzzy upper weakly semi-precontinuous for every fuzzy pre-semiopen set V in Y , F(V) Ċ SPint F(SCIV).

Theorem(2.6) If f : x → y is fuzzy lower weakly semi-precontinuous on X ,Then SPCL f(V)Ċ F(SCLV)for any fuzzy open set V in Y.

Theorem (2.7) If f: x → y is fuzzy upper weakly semi-precontinuous on X, Then SPCL f(V)Ċ F(SCLV) for any fuzzy open set V in Y.

Theorem (2.8) Let f : x → y is fuzzy multifunction then following are equivalent :

(a) F is lower weakly semi-precontinuous.
(b) For any fuzzy open set V in Y,F(V)Ċ SP int F(SCLV) int F(SCLV) and F(V) Ċ F(SCLV).

Theorem (2.9) Let f : x → y is fuzzy lower weakly semi-precontinuous if for each fuzzy open V,F(SCLV) is fuzzy semi pre-open set.

Definition(2.2) For a fuzzy multifunction f :x → y the F^-(A) and F^+(A) of a fuzzy set λ in Y are defined as follows:
$F^-(\lambda)$ = f (x) ε X : F(x)qλ
$F^+(\lambda)$ = f (x) ε X: F(x)λ

Definition (2.3) A fuzzy multifunction f: (x,τ) → (y,σ) is said to be :

(a) Fuzzy upper continuous at a point x of X for any fuzzy open set λ of Y such that F(x) ≤ λ there exist u ε τ containing x such thatF(u) ≤ λ for all u ε U.
(b) Fuzzy upper continuous at a point x of X for any fuzzy open set λ of Y such that F(x)qλ, there exist u ε τ containing x such that F(u)qλ for all u ε U.
(c) For upper (resp.fuzzy lower) continuous if it is fuzzy upper (resp.lower) continuous at every point of X.

Definition (2.4): A fuzzy multifunction f :x → y is called:

(a) A fuzzy lower weakly α-continuous at a point x ε X if for every fuzzy open set λ in Y with x ε X such that F^-(λ).There exist a nbd u of x_0 in X such that U Ċ F^- ((Cl(λ)
(b) A fuzzy upper weakly α-continuous at a point x ε X if for every fuzzy open set λ in Y with x ε X such that F+(λ).There exist a nbd u of x_0 in X such that U Ċ F+ ((Cl(λ))

3. Lower and Upper Weakly α-Continuous Fuzzy Multifunctions

Definition (3.1): For a fuzzy multifunction f :x → y is called:

(a) Fuzzy lower weakly α-continuous at a point x ε X if for every fuzzy open set λ in Y with x $_0$ε F^-(λ).There exist a α-nbd u of x_0 in X such that UĊF^-(α(cl(λ)).
(b) Fuzzy lower weakly α-continuous at a point x ε X if for every fuzzy openset λ in Y with x_0 ε F^+(λ). There exist a α-nbd u of x_0 in X such that U Ċ F^+(α (cl(λ)).
(c) Fuzzy lower weakly α-continuous on X if it is respectively so as each x_0 ε X.
(d) Fuzzy weakly α-continuous on X if it is fuzzy lower weakly α- continuous and fuzzy upper weakly continuous.

Theorem (3.1) Let f : x → y is fuzzy multifunction,Then following are equivalent:

(a) F is fuzzy weakly α-continuous.
(b) For any fuzzy open set in Y,F^-(λ)Ċ α int F^-(α cl(λ)).
Proof: Evident.

Theorem (3.2): Let f : x → y is fuzzy lower weakly α-continuous if for each fuzzy open set λ,F^-(cl(λ)) is fuzzy α-open set.

Proof: Straight forward.

References

[1] Ajamal N and Sharma R.D.Fuzzy subcontinuity inverse fuzzy subcontinuity and a new category of fuzzy topological spaces. Fuzzy sets and systems,73(1995),13-24.
[2] Chang C.L.Fuzzy topological spaces J.Math.Anal.24(1968),182-190.
[3] Ekici.E.On some types of continuous functions,Appl.Math.E-Not 4(2004),21-25.
[4] Ewert J. On normal fuzzy topologiical spaces ,Mathematics,31(54)(1989),39-45.
[5] Ewert J.Fuzzy valued maps ,Math,Nachr,137(1998),79-87.
[6] Mukherjee, M.N. and Malakar,S.,On almost continuous and weakly continuous fuzzy multifunctions,Fuzzy sets and Systems,41(1991),113-125.
[7] Nanda S. On Fuzzy topological spaces, Fuzzy Sets Systems 42(1991),259-262.
[8] Papageorgiou, N.S,Fuzzy topology and fuzzy multifunctions, jour.Math.Anal,Appl, 109(1985),397-425..
[9] Thakur S.S.and Malviya R, Pairwise fuzzy irresolute mappings, Math Bohemica 121(3)(1996),273-280.
[10] Zadeh A.Fuzzy sets ,Inform and Control,8(1965),338-358.