अध्याय 1

**“kks/k %& izd`fr ,oe~ vk/kkjHkwr vo/kkj.kk,**

**(Research – Nature and fundamental Concepts)**

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| --- |
| **vuqla/kku “kks/k dk vFkZ ,oa ifjHkk’kk**  **Meaning and Definition of Research** |

“kks/k vaxzsth Hkk’kk ds “kCn Research dk fgUnh :ikUrj gSA vaxzsth Hkk’kk dk Research “kCn nks vyx&vyx “kCnksa “re” rFkk search ls feydj cuk gS ftldk vFkZ gksrk gS iqu% [kkst ;k dqN नया tkuus vkSj ekywe djus lEcU/kh [kkst bl vFkZ esa vuqla/kku ;k “kks/k ,d ,slh xfrfof/k gS] ftles uohu Kku dh [kkst ,oa miyC/k Kku dks lR;kfir djus dk iz;kl fd;k tkrk gSA ;g ,d mPp ckSf)d fØ;kdyki gS ftlesa “kks/kdrkZ ;k vuqlU/kkudrkZ miyC/k Kku es lgkjs uohu rF;ks vkSj lwpukvksa dh [kkst dh tkrh gSA Research “kCn dk vFkZ buds izkjfEHkd v{kjks }kjk Li’V fd;k xk;k gSa %&

**R** – fpUru dk rdZ;qDr jkLrk (Rational way of thinking)

**E**- fo”ks’kK rFkk lkaxksikx izfriknu (Expert & Exhaustive Treatment)

**S**- lek/kku gsrq [kkst (Search for solution)

**E**- ;FkkFkZrk (Exactness)

**A**- fo”ys’k.k (Analysis)

**R** – rF;ksa esa lEcU/k (Relationship of facts )

**C**- vkykspukRed voyksdu] lrZr vfHkys[ku] jpukRed lksp] /kuhHkwr

lkekU;hdj.k (Critical observation, carful recording, Constructive attitude and condensed generalizations)

**H**- bZekunkj vkSj dfBu ifjJe (Honesty & hardworking)

vuqlU/kku@”kks/k vius vki esa ,d dkQh xaHkhj rdZlaxr vkSj oSKkfud fof/k ls iwjk fd;k tkus okyk dk;Z gS vkSj bl n`f’V ls blds O;kid vFkZ ,oa izd`fr dks le>us gsrq fofHkUu fo)kuks dh ifjHkk’kk, fuEUkkfdr gS %&

**“kks/k dh ifjHkk’kk**

**Definitions of Research**

**ih0 oh0 ;kax %** vuqlU/kku ,d ,slh O;ofLFkr fof/k gS ftlds }kjk uohu rF;ksa dks [kkstus vFkok iqjkus rF;kas dh fo’k;oLrq] mudh Øec)rk] vUrlEcU/k] dk;Z&dkj.k O;k[;k vkSj muesa fufgr uSlfxZd fu;eksa ds iqf’Vdj.k dk dk;Z fd;k tkrk gSA

(Research may be defined “as the systematic method of discovering new facts or verifying the old facts, their sequences, interrelationships causal explanations and the nature laws which govern them – Young, P.V. 1966:15)

**bZ- ts- eslu ,oa MCY;w ts- czsEcy %** vuqlU/kku ls rkRiZ; Kku gsrq oSKkfud tkWp iM+rky esa iz;qDr ,d ,slh O;ofLFkr ,oa laxfBr [kkst ls gS tks fnu izfrfnu dh leL;kvks dk lek/kku <Ww<us ds gekjs vO;fLFkr izR;uks ls dkQh vyx gksrh gSA

(By the term research we mean a systematic organized search for knowledge used in scientific investigation – rather than the more haphazard many of us use for everyday problems.

**- Mason, E.J. and Bramble, W.J, 1997**

**lh0 vkj dksBkjh %** vuqlU/kku in ls rkRiZ; ,d ,slh O;ofLFkr fof/k ls gS ftlesa lksikuks ds :i esa leL;k dh igpku] ifjdYiuk dk fuekZ.k] rF;ksa vkSj çnÙkks dk ladyu] lapkfyr rF;ks dk fOk”ys’k.k rFkk dqN ,sls fu’d’kkZs ij igqWprk fufgr jgrk gS ftudh vfHkO;fDr leL;k fo”ks’k ds gy vFkok lS)kfUrd vk/kkj ds :i esa lkekU;hd`r /kkjk.kkvksa es :i esa fn[kkb nsA

(The term research refers to the systematic method consisting of enunciating the problem, formulating a hypothesis, collecting the facts of data, analyzing the facts and reaching certain conclusions either in the form of solutions, towards the concerned problem or in certain generalizations for the some theoretical formulations – Kothari, C.R., 1990: 20)

**ih0,e0dqd0 ds vuqlkj %& ^^**vuqla/kku fdlh leL;k ds izfr bZekunkjh ,oa O;kid :i es le>nkjh ds lkFk dh xbZ [kkst gS] ftlesa rF;ksa fl)kUrks rFkk vFkksZ dh tkudkjh dh tkrh gSA vuqla/kku dh miyfC/k rFkk fu’d’kZ izkekf.kd rFkk iqf’V;ksX; gksrs gS ftlls Kku esa c`f) gksrh gSA\*\*

**tkWu0 MCyw0 cSLV ds vuqlkj %&** ^^vuqlU/kku vf/kd vkSipkfjd] O;ofLFkr rFkk xgu izfØ;k gS ftlesa oSKkfud fof/k fo”ys’k.k dks iz;qDr fd;k tkrk gSA vuqla/kku esa O;ofLFkr Lo:i dks lfEefyr fd;k tkrk gS ftlesa QyLo:i fu’d’kZ fudkys tkrs gS vkSj mudk vkSipkfjd vkys[k rS;kj fd;k tkrk gSA

**czwl MC;w VdeSu %** vuqlU/kku ls rkRiZ; iz”uks dk mÙkj iznku djus gsrq fd;s tkus okys gekjs lqO;fLFkr izR;uks ls gSA blds }kjk vewZr ,oa lkekU; mÙkj Hkh izkIr gks ldrs gS tSlk fd vk/kkjHkwr vuqlU/kku esa gksrk gS vFkok blds }kjk cgqr gh Bksl vkSj fof”k’V mÙkj izkIr gks ldrs gSA tSlk fd izk;% iznZukRed ;k vuqiz;qDr vuqla/kku esa gksrk gSA nksuks gh izdkj es vuqla/kkuksa esa “kks/kdÙkkZ rF;ksa dh [kkst djrk gS vkSj bu rF;ksa dh O;k[;k djds fdlh lkekU;hdj.k dh i`f’V djrk gSA

(Research is a systematic attempt to provide answer to questions. It may yield abstract and general answer as basic research after does or it may give extremely concrete and specific answer as demonstrations or applied research after does. In both kinds of research the investigation uncovers facts and then formulates a generalization based on an interpretation of these facts.

- Tuchman, Bruce W., 1999: 4)

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| **“kks/k@vuqlU/kku dh fo”ks’krk**  (Characteristic of Research) |

fofHkUu fo)kuks }kjk nh xbZ mijksDr ifjHkk’kkvksa ds fo”ys’k.k ds vk/kkj ij “kks/k dh fuEukfdar fo”ks’krk, Li’V gksrh gS %&

1½ vuqla/kku dh izfØ;k ls uohu Kku dh o`f) rFkk fodkl fd;k tkrk gSA

2½ blesa lkekU; fu;eks rFkk fl)kUrks esa izfriknu ij cy fn;k tkrk gSA

3½ vuqla/kku dh izfØ;k oSKkfud O;ofLFkr rFkk lqfu;ksftr gksrh gSA

4½ blesa fo”oluh;rk rFkk oS/k izfof/k;ks dks iz;qDr fd;k tkrk gSA

5½ ;g rkfdZd rFkk oLrqfu’< izfØ;k gSA

6½ vuqlU/kku dh izfØ;k esa çnÙkks ds vk/kkj ij ifjdYiukvks dh iqf’B dh tkrh gSA

7½ blesa O;fDrxr i{kks] Hkkoukvksa rFkk fopkjks dks egRo ugh fn;k tkrk gSA bu izHkkoks ds fy, lko/kkuh j[kh tkrh gSA

8½ “kks/k dk;Z esa xq.kkRed rFkk ifjek.kkRed çnÙkks dh O;oLFkk dh tkrh gS vkSj mudk fo”ys’k.k djds fu’d’kZ fudkys tkrs gSA

9½ “kks/k dk;Z esa /kS;Z j[kuk gksrk gS rFkk blesa “kh?kzrk ugh dh tk ldrh gSA

10½ izR;sd “kks/k dk;Z dh viuh fof/k rFkk izfof/k;ka gksrh gS tks “kks/k ds mn~ns”;ksa dh izkfIr esa gksrh gSA

11½ “kks/k dk;Z dk vkys[k lko/kkuhiwoZd rS;kj fd;k tkrk gS rFkk “kks/k izcU/k rS;kj fd;k tkrk gSA

12½ izR;sd “kks/k dk;Z ls fu’d’kZ fudkys tkrs gS vkSj lkekU;hdj.k dk izfriknu fd;k tkrk gSA

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| **foKku rFkk oSKkfud fof/k**  **(Science and scientific Method)** |

foKku] izd`fr dk fo”ks’k Kku gSA ;|fi euq’; izkphu le; ls gh izd`fr lEcU/kh Kku izkIr djrk jgk gS] fQj Hkh foKku vokZphu dky gh nsu gSA bl ;qx esa bldk vkjEHk gqvk vkSj FkksMs le; ds Hkhrj gh blus cM+h mUufr dj yh gSA bl izdkj lalkj esa ,d cgqr cM+h Økafr gqbZ vkSj ,d ubZ lH;rk dk tks foKku ij vk/kkfjr gS] fuekZ.k gqvkA

ljy “kCnksa esa dgs rks izd`fr dk Øec) v/;;u foKku dgykrk gS ;kfu foKku dh ifjHkk’kk bl izdkj gS foKku og O;ofLFkr ;k iq’V Kku gS tks fopkj] voyksdu v/;;u vkSj iz;ksx ls feyrk gSAfoKku ySfVu Hkk’kk ds Skientia ls cuk “kCn gS ftls fganh esa foKku rFkk vaxzsth esa lkabl dgk tkrk gSA foKku dk “kkfCnd vFkZ gksrk gS] tkuuk vFkkZr~ izd`fr dh fdlh oLrq ds ckjs esa O;ofLFkr Kku] izd`fr dh leLr ?kVuka, rFkk muds ckjs esa iz;ksx ,oaf la)kUrks ds vk/kkj ij Øec) v/;;u ls Kku izkIr djuk gh foKku gSA

O;fDr us vius thou dks vkSj vf/kd lq[kh cukus ds fy, <sjks vfo’dkj fd;s gSZA vkt ds ;qx dks foKku dk ;qx dgk tk, rks dksbZ vfr”k;ksfDr ugh gksxh] D;ksafd foKku ds c<+rs dne us gekjs thou esa vfo”oluh; ifjorZu yk fn;k gSA tks dqN Hkh gekjs lk/ku gS os foKku dh gh nsu gSA foKkuksa }kjk Kku dh izkfIr] lR; dh [kkst vkSj leL;kvksa ds lek/kku gsrq ftl fo”ks’k fof/k dk iz;ksx fd;k tkrk gS mls gh oSKkfud fof/k dgk tkrk gSA

lkekU;r% oSKkfud fof/k ls rkRiZ; ml fof/k ls gksrk gS ftlds }kjk oSKkfud vius fo’k; oLrq dk v/;;u ,d fu;f=ar ifjfEifr esa djds ,d oS/k lkekU;hdj.k djrs gSA

oSKkfud fof/k es vFkZ dks Li’V djus ds fy, dqN izeq[k ifjHkk’kk,sa fuEukafdr gS%&

**dkyZ ih;jlu** ds vuqlkj %& oSKkfud fof/k dk foKkuks dh lHkh “kk[kkvksa esa leku :i ls ,d gh :i jgrk gS vkSj ;gh og fof/k gS ftldk iz;ksx ,d rkfdZd rFkk izf”kf{kr efLr’d }kjk fd;k tkrk gSA foKkuksa esa tks ,sC; utj vkrk gS og mudh fo’k; lekxzh dh otg ls ugh cfYd muds }kjk iz;ksx esa ykbZ tkus okyh oSKkfud fof/k ls gSA dksbZ Hkh og O;fDr tks fdlh Hkh izdkj es rF;ksa dk fdlh Hkh :i esa oxhZd`r djrk gS] mues fufgr lEcU/kks dks ns[krk gS vkSj muds Øe dk o.kZu djrk gS] oSKkfud fof/k dk gh vuqlj.k dj jgk gksrk gS vkSj fuLlansg vius bl :i esa mls oSKkfud gh dgk tk;sxkaA

(The scientific method is one and the same in the branches of science and that method is the method of all logical trained mind… the unity of all sciences consists alone in its method, not in material, the man who classifies fact of any kind whatever, who sees their mutual relation and describes their sequence is applying the scientific method and is a man of science.

Pearson Karl, 1957 )

**Msyks ds vuqlkj &** oSKkfud fof/k vkSj dqN ugh cfYd ,d fu;ec) fpUru gh gSA okLro esa ;g ,d laxfBr lkekU; vuqHkwfr gSA

(Scientific method is nothing more than thinking according to a set of rules, infect, it is “Organized common sense”.)

**Dellow, 1970**

**edfeyu ds vuqlkj &** oSKkfud mikxe vFkok fof/k iwNrkN dh ,d rkfdZd fof/k gS] Kku dk Hk.Mkj ughA bldk mi;ksx v/;;u esa fdUgh fo”ks’k {ks=ks iz;ksx “kkyk ifjfLFkfr;ks vFkok tfVy fl)kUrks dk izfriknu djus okys fo}ku uj&ukfj;ks rd gh lhfer ugh gSA

(The scientific method or approach is a logical method of inquiry, not a body of knowledge It is not tied to particular fields of study to laboratory situations or to men and women in white coat developing complex theories

- MC million, 2004.

mijksDr ifjHkk’kkvksa ls ;g Li’V gS fd oSKkfud fof/k ls rkRiZ; ,d lqfu;ksftr rFkk Øec) lksikuks ds rgr fd;s tkus okys ,d laxfBr rFkk O;ofLFkr iz;klks ls gksrk gS ftuds ek/;e ls çLrqr leL;k dk lek/kku fo”oluh; oS/k rFkk oLrqfu’B rjhdks ls izkIr fd;k tkrk gSA lek/kku }kjk izkIr fu’d’kkZs dks lekU;hd`r Hkh fd;k tkrk gSA

**oSKkfud fof/k dh fo”ks’krk,s**

**(Characteristics of scientific method)**

oSKkfud fof/k dh fuEukafdr fo”ks’krk,s gS %&

**1½ lR;kiu”khyrk (verifiability)** : lR;kiu gh ,slk xq.k gS ftlds dkj.k oSKkfud fof/k;ka vU; fof/k;ks dh rqyuk esa vf/kd izkekf.kd ekuh tkrh gSA blds vUrxZr fdlh Hkh fl)kUr dks cyiwoZd ugh vfirq izs{k.k] ijh{k.k rFkk iz;ksxks ds vk/kkj ij lR;kfir fd;k tkrk gSA

**2½ fu”p;kRedrk (Definiteness)** : oSKkfud i)fr Li’V fuf”pr ,oa fof”k’V gksrh gS] fu”p;kRedrk ds fy, fo’k; lkexzh dks Li’V :i ls ifjHkkf’kr dh tkrh gS çnÙkks dk ladyu O;oLFkhdj.k ,oa laxBu] çnÙkks es fo”ys’k.k] lR;kiu rFkk fu’d’kZ dk;Z iw.kZr% fu;ksftr] O;ofLFkr rFkk fu;fU=r gksrh gS blh dkj.k blesa vkjEHk ds var rd fu”p;kRedrk dk egkSy gksrk gSA

**3½ oLrqfu’Brk (Objectivity)** : oSKkfud fof/k esa viuh izd`fr] izfØ;k vkSj ifj.kkeksa dh n`f’V ls dkQh oLrqfu’Brk ikbZ tkrh gSA ;g vkRefu’Brk] i{kikr vkSj )s’kiw.kZ LoS;s ls dkQh vf/kd nwj gksrh gSA

**4½ lkekU;rk (Generality)** : lkekU;rk oSKkfud izd`fr dh ,d vfuok;Z fo”ks’krk gSA oSKkfud i)fr ds }kjk fd;k tkus okyk vuqla/kku iz;kl lHkh ds Åij ykxw gksrk gSA ysfdu ;g rHkh laHko gksrk gS tcdh leL;k ls lEcfU/kr fu’d’kkZs dks oSKkfud vk/kkj ij fudkyk tk;sA oqYQ dk dFku gS fd ^^foKku ds O;fDrxr inkFkksZ vFkok oxksZ ls lEcfU/kr ugh j[krkA ;g eq[;rk izfrfuf/k :iks] fdLeksa vFkok oxksaZ ls lEcfU/kr fu’d’kZ ml bZdkbZ es iwjs oxZ ij ykxw gksrs gSA blls Li’V gksrk gS fd oSKkfud fu;e lkoZHkkSfed gksrs gSA bl izdkj dgk tk ldrk gS fd lkekU;rk bldh izeq[k fo”ks’krk,a gSA

**6½ iwokZuqeku {kerk (Predictability ):-** oSKkfud i)fr dh ikWpoh fo”ks’krk Hkfo’; dh vksj ladsr djus dh {kerk gksrh gSA bldk vFkZ ;gh gS fd orZeku esa tks dqN fn[kkbZ ns jgk gS og Hkfo’; esa Hkh leku ifjfEir esa ik, tkus ij lR; gh gksxkA mnkgj.k ds fy;s vxj fdlh O;fDr fo”ks’k ds O;fDrRo dk vxj oSKkfud fof/k dk iz;ksx djrs gq;s HkyhHkkWfr v/;;u dj fy;k tk;s rks ;g vuqeku yxk;k tk ldrk gS fd fdlh ifjfLFkfr fo”ks’k esa mlesa }kjk fdl izdkj dk O;ogkj visf{kr gSA

fdlh Hkh oSKkfud fof/k ds dqN lksiku gksrs gSA ,sls izeq[k lksiku (Steps) fuEukfdar ikWp gS &

1½ **leL;k dh igpku (Identification of a problem)** :- fdlh Hkh oSkkfud fof/k esa lcls igys ,d leL;k dh fuf”pr igpku dh tkrh gSA leL;k dh igpku dj mls Li’V “kCnksa esa ifjHkkf’kr fd;k tkrk gSA ,slk djus ds fy, “kks/kdrkZ leL;k ls lEcfU/kr Kku ,oa lwpukvksa dh ,d vkykspukRed leh{kk djrk gSA

2½ **izkDdYiuk dk fuekZ.k (For mutation of hypothesis )** :- oSKkfud fof/k esa leL;k dh igpku ds ckn ,d izkDdYiuk (hypothesis) rS;kj dh tkrh gSA leL;k ds lEHkkfor lek/kku dks gh oSKkfud Hkk’kk esa izkDdYiuk (hypothesis) dgk tkrk gSaaA

3) **fuxeukRed fpUru }kjk izkdYiuk ls ,d vk”k; ij igqWpuk (Arriving at implication of hypothesis through deductive reasoning)** oSKkfud fof/k es rhljs dne esa fuxeukRed fpUr**u** (deductive reasoning) }kjk izLrkfor izkDdYiuk (Suggested hypothesis) ls dqN fuf”pr vk”k; (implication) ij igqWpus dh dksf”k”k dh tkrh gSA ;gkW ;g r; fd;k tkrk gS fd ;fn izkDdYiuk lp gqbZ rks fdu rF;ksa dk izs{k.k fd;k tk;sxk rFkk fdu&fdu rF;ksa dk izs{k.k ugh fd;k tk;sxkA

**4½ lcwrksa dk laxzg.k ,oa fo”ys’k.k (Collection and analysis of evidence) :** bl pj.k esa izLrkfor izkDdYiukvks (Sugguled hypothesis) ls fuxfer vk”k; (deduced implication) dh tkWp fofHkUu L=ksrks ls lcwr laxzg djus rFkk mudk fo”ys’k.k djds fd;k tkrk gSA

**5½ izkDdYiuk dh tkWp (Verification of hypothesis ):-** oSKkfud fof/k ds bl pj.k esa prqFkZ lksiku ls izkIr vkWdMks ds vk/kkj ij izkDdYiuk dh tkWp dh tkrh gS ;fn izkDdYiuk tkWp ds vk/kkj ij [kjk fl) gksrh gS rks mls Lohdkj fd;k tkrk gS vU;Fkk mls vLohd`r fd;k tkrk gSA

bl izdkj ls Li’V gS fd oSKkfud fof/k es dqN fuf”pr lksiku gksrs gSA dksbZ Hkh fof/k rHkh oSKkfud dgh tk;sxh tc og mi;qDr lksikuks ls gksdj xqtjrh gSA

**“kks/k ds mn~ns”;**

**(Purpose of Research)**

“kks/k leL;kvks dh fofo/krk vf/kd gS blesa pkj izeq[k mn~ns”; gksrs gS %& lS)kfUrd mn~ns”;] rF;kRed mn~ns”; lR;kRed mn~ns”; rFkk O;ogkfjd m)s”;A budk laf{kIr fooj.k fuEukafdr gS %&

**1½ lS)kfUrd mn~ns”; (Theoretical objectives)** vuqlU/kku esa oSkkfud “kks/k dk;Z }kjk u;s fl)kUrks rFkk u;s fu;eks dk izfriknu fd;k tkrk gSA bl izdkj ds “kks/k dk;Z esa vFkkZiu gksrk gSA blesa pj esa lEcU/kks dks izdV fd;k tkrk gS vkSj muds lEcU/k esa lkekU;hdj.k fd;k tkrk gSA bues uohu Kku esa o`f) gksrh gS] ftudk mi;ksx f”k{k.k rFkk funsZ”ku dh izfØ;k dks izHkko”kkyh cukrk gSA

**2½ rF;kRed mn~ns”; (Factual Objectives)** f”k{kk ds vUrxZr ,sfrgkfld “kks/k dk;kZs }kjk u;s rF;ks dh [kkst dh tkrh gSA buds vk/kkj ij orZeku dks le>us ls lgk;rk feyrh gSA bu mn~ns”;ks dh izd`fr o.kZukRed gksrh gSA D;ksafd rF;ksa dh [kkst djds mudk vFkok ?kVukvks dk o.kZu fd;k tkrk gSA uohu rF;ksa dh [kkst f”k{kk&izfØ;k esa fodkl rFkk lq/kkj esa lgk;d gksrh gS] funsZ”ku izfØ;k dk fodkl rFkk lq/kkj fd;k tkrk gSA

**3½ lR;kiu mn~ns”; (Extablishment of Truth objectives )** nk”kZfud “kks/k dk;ksZ }kjk uohu lR;ks dk izfriknu fd;k tkrk gSA budh izkfIr vfUre iz”uksa ds mÙkjks esa Hkh tkrh gSA nk”kZfud “kks/k dk;kZs }kjk f”k{kk ds mn~ns”;ks fl)kUrks rFkk f”k{k.k fof/k;ks rFkk ikB~;Øe dh jpuk dh tkrh gSA f”k{kk dh izfØ;k ds vuqHkoks dk fpUru ckSf)d Lrj ij fd;k tkrk gSA ftlesa uohu lR;ksa rFkk ewY;ks dks izfrikfnr fd;k tkrk gSA

**4½ O;ogkfjd mn~ns”; (Application Objectives)** ckSf)d vuqlU/kkuks ds }kjk izkIr fu’d’kkZs dk O;ogkfjd iz;ksx gksuk pkfg, ijUrq dqN “kks/k dk;ksZ esa dsoy muds lS}kfUrd i{kksa ij tksj fn;k tkrk gS ijUrq “kks/k dk izkFkfed mn~ns”; O;ogkfjdrk ij cy nsuk gksuk pkfg,A

vU; oSKkfudks }kjk “kks/k es mn~ns”;ks dks fuEufyf[kr :iks esa O;Dr fd;k gS &

1½ lR; dh [kkst djukA fNis gq, lR; dk irk yxkukA

2½ uohu rF;ks ;k uohu Kku dh izkfIr djukA

3½ ?kVukvks ds ckjs esa ubZ tkudkjh izkIr djukA

4½ leL;kvks dk funku ;k lek/kku djukA

5½ oSKkfud dk;Zfof/k esa mi;ksx }kjk iz”uks ds mÙkj izkIr djukA

6½ pjks ds chp dk;Z dkj.k lEcU/k Kkr djukA

7½ O;ofLFkr izR;uks }kjk fl)kUrks dk fuekZ.k djukA

**“kks/k es vk;ke vFkok “kks/k ds izdkj**

**(Dimensions of Research or Types of Research)**

vk/kqfud ;qx esa Kku ls rkRiZ; og lwpuk;sa ;k vo/kkj.kk gS tks oSKkfud fof/k;ks vkSj izfØ;kvks }kjk izkIr dh x;h gS] tksfd T;knk lVhd] lgh] ijh{k.k ;ksX; vkSj rF;ks ij vk/kkfjr gksrh gSA blfy;s orZeku ;qx esa vuqla/kku dk ;ksxnku ,oa egRo cgqr T;knk gSA vuqla/kku }kjk gh u;s fl)kUrks dk tUe Hkh gksrk gS vkSj iwoZ esa jfpr fl)kUrks dk ijh{k.k Hkh gksrk gSA

**vuqla/kku ds izdkj**

**(Types of Research)**

vuqla/kku esa leL;k dh izd`fr vkSj “kks/k fo’k; ds Lo:i dks ns[krs gq;s fo)kuks us vuqla/kku esa dbZ izdkjks dk fodkl fd;k gSA ;gkW ij ge vuqla/kku ds eq[; izdkjks dh ppkZ djsaxs tks fuEu gS %&

1. **ewyHkwr ;k fo”kqfo”kq) vuqlU/kku@”kks/k (Basic/ Pure/ Fundamental Research)**

bl izdkj ds vuqla/kkuksa dks lS)kfUrd rFkk KkukRed vuqlU/kku Hkh dgk tkrk gS D;ksafd bl izdkj ds vuqla/kkuks dk eq[; iz;kstu orZeku Kku ds dysoj esa c`f) djuk gksrk gSA ekSfyd vuqlU/kku }kjk iz|Vukvks ds lEcU/k esa “kq) HkkSfrd fl)kUrks vkSj lkekU;hdj.k dk izfriknu fd;k tkrk gSA ,sls vuqlU/kkuks esa fu’d’kkZs ds vk/kkj ij u;s fl)kUr dk l`tu fd;k tkrk gSA bl izdkj ds fl)kUrks esa dsoy Kku izkfIr dks izkFkfedrk nh tkrh gS vkSj O;ogkfjd i{k dks xkS.k j[kk tkrk gSA ewy “kks/k esa “kks/kdrkZ dks bl ckr dh fpUrk ugh gksrh gS fd mlds }kjk izkIr fu’d’kksZ esa fdlh {ks= dh O;ogkfjd leL;k lek/kku esa enn feysxh ;k ughA tSls tc dksbZ “kks/kdrkZ dqN pqus gq, O;fDr;ks dks izR;{k.k ds Lo:i ij “kks/k djds bl fu’d’kZ ij igqWprk gS fd izR;{k.k dh izfØ;k O;fDr dh vko”;drk ewY;ksa rFkk eukso`fÙk;ksa }kjk izHkkfor gksrh gS rks ;g ewy “kks/k dk mnkgj.k gksxkA

**2½ O;ogkfjd@iz;qDr “kks/k ¼Applied Research½**

og vuqla/kku tks fd fdlh leL;k fo”ks’k ds lek/kku ds fy, fd;s tkrs gS og O;ogkfjd vuqlU/kku dgykrk gSA bl izdkj ds vuqlU/kku esa ekSfyd cqfu;knh fl)kUrks vkSj fu;eks dk iz;ksx djrs gq;s O;ogkfjd leL;k dk lek/kku djus dk iz;kl fd;k tkrk gSA O;ogkfjd vuqla/kku ls tks Kku izkIr gksrk gS og leL;k lek/kku ds fy;s mi;ksx fd;k tkrk gSA nwljs “kCnks esa “kks/kdÙkkZ iz;qDr “kks/k esa lS)kfUrd lRizO;;ksa dh tkWp okLrfod leL;k lek/kku esa djrk gSA og bl ckr ij fo”ks’k cy Mkyrk gS fd mlds }kjk izkIr fu’d’kZ lEcfU/kr {ks= dh okLrfod leL;k dk lek/kku fdl gn rd dj ikrk gSA bl izdkj ds vuqlU/kkuksa ds mnkgj.k :i esa ge fuEu izdkj dh vuqlU/kku leL;kvksa dks ys ldrs gSA

* volkn ¼Depression½ dh voLFkk esa mHkjus esa fdl rjg dh euksfpfdRlk dkjxj gSA
* eknd nzO;ksa rFkk e|iku dh yrksa dks NqMkus gsrq fdl izdkj ds foKkiu vf/kd izHkko”kkyh fl) gks ldrs gS \

**fØ;kRed vuqla/kku ¼Action Research½**

fØ;kRed vuqla/kku O;ogkfjd vuqlU/kkuksa dk ,d :i gSA fØ;kRed vuqla/kku LFkkuh; yksxks ls tqM+h O;ogkfjd leL;kvksa ds lek/kku ds fy, visf{kr lekftd ifjorZuks dks ykus okys lk/kuks dh [kkst dh tkrh gSSA fØ;k vuqla/kku dk lEcU/k yksxks dh lekftd n”kk dks lq/kkjus rFkk lekftd leL;kvksa esa fujkdj.k ls gSA bl izdkj ds vuqla/kku esa O;ogkfjd “kks/k iSnk djus ds fy, fØ;kRed :i fn;k tkrk gSA bl izdkj ds “kks/k dk ijh{k.k djrs gS vkSj blesa izkIr fl)kUrks vkSj j.kuhfr;ksa dk ijh{k.k djrs gS vkSj blds izkIr vuqHkoksa dks dk;ZØe ;kstuk] j.kuhfr] vkfn ds :i lekftd n”kkvks dks lq/kkjus ds fy;s ykxw fd;s tkrs gSA lektdk;Z vuqla/kku esa fØ;k vuqla/kku dk lcls T;knk iz;ksx fd;k tkrk gS D;ksafd ;gh ,d ,slh vuqla/kku fof/k gS ftlesa leL;k ds Lo:i ds v/;;u ds lkFk&lkFk lek/kku lEizR;;ks ls lk/kuksa dh Hkh tkWp dh tkrh gSA

**4½ ifjek.kkRed ;k la[;kRed vuqla/kku ¼Quantitative Researches½** ifjek.kkRed vuqla/kku og vuqla/kku gS ftlesa lkaf[;dh; fo”ys’k.k vkSj ifjek.kkRed ekiu dk iz;ksx gksrk gSA bl vuqla/kku dk lEcU/k izR;{koknh Kku ehekalk ls gS ftlesa vuqla/kku esa vkuqHkkfod lk{;ksa vkSj muds fo”ys’k.k ds fy;s fo”kq) foKku tSls xf.kr] lkaf[;dh; vkfn dk iz;ksx fd;k tkrk gSA

ifjek.kkRed vuqla/kkuks esa vuqla/kku izfØ;k “kq: ls ysdj var rd lajfpr vkSj iwoZ fu;ksftr jgrh gSA ;gk vuqla/kku iz”uksa ds fy;s ifjdYiukvksa ds :i esa mÙkj igys gh vuqekfur dj fy;s tkrs gS vkSj bu vuqekuks dh lR;rk dks ij[kus dk dk;Z gh iznÙk ladyu vkSj fo”ys’k.k }kjk fd;k tkrk gSA bl izdkj ds vuqla/kkuks ij fVII.kh djrs gq, **xqM+fou** us fy[kk gSA

^^O;ogkfjd foKkuks esa fd;s tkus okys cgqr ls vuqla/kku vf/kdrj ifjek.kkRed ;k la[;kRed vuqla/kku gh gksrs gSA bl izdkj ds vuaq/kku esa iznÙkks dk ladyu vkSj izLrqrhdj.k] la[;kvks ds :i es gksrk gSA

(Most research in behavioural sciences is quantitative in nature.In this type of research the data are collected and presented in the form of number Grodwin, 2008 )

**5½ xq.kkRed vuqla/kku ¼Qualitative Researches½**

bl izdkj ds vuqla/kkuks esa ladfyr iznÙkks dh izd`fr xq.kkRed gksrh gSA ;kfu bu vuqla/kkuks ls O;fDr oLrq ?kVuk ;k izfØ;k dh fo”ks’krkvksa dks muds xq.kkRed :i esa ¼xq.k vkSj fo”ks’krkvks ds “kkfCnd o.kZu½ tkuk tkrk gS ifj.kkRed :i esa ughA

bl izdkj ds vuqla/kkuks ds ifj.kkeks tSlk fd **xqM+fou ¼**Goodwin, 1998 **½** us Hkh Li’V fd;k gS lkaf[;dh; lkajk”kks ¼Statistical Summaries½ esa :i esa izLrqr ugh fd;s tkrs cfYd fo”ys’k.kkRed fooj.kks }kjk lkeus yk;s tkrs gSA bl rjg oLrq O;fDr lewg] laLFkk] ?kVuk ;k izfØ;k dh lokZxh.k O;ogkjxr fo”ks’krkvks dk muds lEiw.kZ LoHkkfod :i esa Hkyh HkkWfr izs{k.k rFkk lokZxh.k ewY;kWdu djus ls izkIr tkudkjh dks o.kZukRed “kSyh esa “kkfCnd :i esa izLrqr djuk gh xq.kkRed vuqla/kku dgykrk gSA ,sls xq.kkRed vuqla/kku dk;Z ds fy, fu% lansg la[;kRed ;k ifjek.kkRed vuqla/kku ls gVdj vyx vuqla/kku fof/k;ks dh vko”;drk gksrh gS vkSj iznÙk ladyu] fo”ys’k.k rFkk ifj.kkeks ds fu’d’khZdj.k vkSj fjiksfVZx tSls dk;Z Hkh ;gkW vyx es lEikfnr fd;s tkrs gSA

**6½ fooj.kkRed “kks/k@vuqla/kku ¼Descriptive research½**

fooj.kkRed “kks/k oSls “kks/k dks dgk tkrk gS ftlesa orZeku gkykrks dks jsdkMZ fd;k tkrk gS] fo”ys’k.k fd;k tkrk gS rFkk mldh O;k[;k dh tkrh gSA ,sls “kks/k esa ^^D;k gS\*\* ¼What is½ dk o.kZu djrk gSA fooj.kkRed vuqla/kkuks esa ftl rjg ds vuqla/kkukRed iz”uks ds mÙkj izkIr djus ds fy, izR;u fd;k tkrk gS] muesa ls dqN dks ;gkW uhps ge mnkgj.kLo:i izLrqr dj jgs gSA

* fo|ky; tkus dh vk;q ls de vk;q ds ckyd izfrfnu fdrus ?kaVs टेलीविजन es dk;ZØe ns[kus esa O;rhr djrs gS \
* fdrus izfr”kr ofj’B ukxfjd jkstkuk baVjusV dke es ykrs gS \

**7½ ,sfrgkfld vuqla/kku ¼Historical Research½**

,sfrgkfld “kks/k ls rkRiZ; oSls “kks/k ls gksrk gS ftlesa chrh ?kVukvks dk fjdkMZ fd;k tkrk gS] mudk fo”ys’k.k fd;k tkrk gS rFkk mudh O;k[;k dh tkrh gS rkfd lkekU;hdj.k fd;k tk ldsA ,sls lkekU;hdj.k ls xr ,oa orZeku dh fØ;kvks dks rks le>us esa enn feyrh jgh gS lkFk gh lkFk buls izR;kf”kr Hkfo’; dks Hkh le>us esa enn feyrh gSA vr% ;g dgk tk ldrk gS fd ,sfrgkfld “kks/k ¼Historical research½ ewyr% D;k Fkk \ ¼What was ½ dk o.kZu djrk gSA ,sfrgkfld vuqla/kkuks ds mnkjg.k Lo:i esa ge fuEu dk mYys[k dj ldrs gS %&

* Lokeh foosdkuUn dk “kSf{k.k n”kZu
* izkphu oSfnd dky esa L=h f”k{kk dh fLFkfr
* bZLV bf.M;k dEiuh es “kklu ds le; fgUnqLrku dk gkyA

**8½ lg& lEcU/kkRed vuqla/kku ¼Correlational Research½**

lg lEcU/kkRed “kks/k oSls “kks/k dks dgk tkrk gS ftlesa “kks/kdÙkkZ pjks esa tksM+&rksM+ lh/ks u djds p;u ¼Selaction½ izfØ;k }kjk djrk gS rFkk fQj og ,d LokHkkfod ifjfLFkfr ¼Natural situation½ esa v/;;u djrk gS fd ;gkW rd ,d pj ¼Variable½ esa fd;k x;k tksM+&rksM+ ¼Manipulation½ nwljs pj esa tksM+&rksM ls lEcfU/kr gSaA

nwljs “kCnks esa bl izdkj ds vuqlU/kku dk mn~ns”; ;g irk yxkuk gksrk gS fd fn;s gq;s nks ;k nks ls vf/kd pj fdl lhek rd fdl :i esa ,d nwljs ls lEcfU/kr gSA bl dk;Z ds fy,s ;gkW igys bu pjksa ds ekiu dk izR;u fd;k tkrk gSA pj vius orZeku :i esa tSls dh fo|eku gksrs gS] mu LokHkkfod ifjfLFkfr;ks esa mudk ekiu fd;k tkrk gSA izk;ksfxd vuqla/kkuks dh rjg ;gkW pjks esa dksbZ Qsjcny dk fu=;a.k dk dk;Z ugh fd;k tkrk A pjks ds ekius ds ckn lkaf[;dh fof/k ls buds e/; esa fufgr lglEcU/k dh x.kuk dh tkrh gS vkSj fQj bldk fo”ys’k.k dj ;g tkuus dk izR;u fd;k tkrk gS fd pj fdl lhek rd vkSj fdl :i esa ,d nwljs ls lEcfU/kr gSA

**9½ iz;ksxkRed “kks/k ¼Experimental Research½**

bl izdkj dk vuqla/kku iz;ksxks ij vk/kkfjr gksrk gSA iz;ksxkRed “kks/k oSls “kks/kks dks dgk tkrk gS ftlesa dqN pjks dks fu;af=r fd;k tkrk gS dqN pjks dks ifjpkfyr ¼Manipulation½ fd;k tkrk gS ,oa nwljs pj ij mles iM+us okys izHkkoks dk v/;;u fd;k tkrk gSA vr% ,sls “kks/kks esa ewyr% bl ckr dk v/;;u fd;k tkrk gS fd pjksa dks fu;f=ar djus ,oa mudk ifjpkyu dk izHkko D;k gksxkA bl izdkj izk;ksfxd vuqla/kku izfof/k dk eq[; iz;kstu nks pjks ds chp dk;Zdkj.k lEcU/k dh igpku vkSj iqf’Vdj ls gSA

bl fof/k }kjk izkIr ifj.kke vf/kd fo”oluh; gksrs gS rFkk pwWfd blesa Lora= pj vkSj vkfJr pj es chp dkj.k rFkk ifj.kke lEcU/k LFkkfir gksrk gS rks blds ifj.kke rFkk fu’d’kZ esa Li’Vrk ¼Clearity½ rFkk oLrqfu’Brk ¼Objectivity½ vf/kd gksrh gSA

**10½ v/kZ izk;ksfxd vuqla/kku ¼Quasi- Experimental Research½**

tc vuqla/kku v/;;u esa nks pjks ds chp dk;Zdkj.k lECkU/k LFkkfir djuk pkgrk gS ijUrq okLrfod rFkk lgh iz;ksx djus gsrq iz;ksx ls lEcfU/kr lHkh vko”;d “krkZs dk ikyu djuk mlds fy, laHko u gks A ,slh ifjfLFkfr esa og ,sls vuqla/kku izkIr ;k vfHkdYi ¼Design½ dk iz;ksx dj ldrk gS tks izk;ksfxd vfHkdYi tSlk gksA bls gh v/kZ iz;ksfxd vfHkdYi dh laKk nh tkrh gSA

bu vuqla/kkuks esa okLrfod iz;ksx lEcU/kh fdlh ,d “krZ tSls Lora= pj esa Qsjcny djuk ¼Manipulation½ ;k pjks rFkk iz;ksx ifjfLFkfr;ks ij fu;=a.k j[kuk Hkh vuqikyu ugh gks ikrhA

**11½ ,Dl&iksLV QSDVks “kks/k ¼Ex- post facto Research½**

,Dl iksLV QSDVks “kks/k ¼Ex- post facto Research½ viz;ksxkRed “kks/k ¼Non-experimenlal research½ dk ,d izdkj gSA ,Dl iksLV “kks/k ls rkRi;Z oSls “kks/k ls gksrk gS ftlesa vuqla/kkudrkZ ¼Investigator½ fdlh izHkko ¼effect½ ds vk/kkj ij mlds lEHkkfor dkj.kks ¼Causes½ dk irk yxkus dh dksf”k”k djrk gSA bl rjg ds “kks/k esa ?kVuk ?kV pqdus ds ckn “kks/kdrkZ “kks/k dksa izkjEHk djrk gSA izHkko vkfJr pj gksrk gS rFkk igys chr pqdh ?kVuk, ftUgsa ^dkj.k\* dgk tkrk gS Lora= pj gksrs gSaA bl rjg ds ,Dl iksLV QSDVks “kks/k esa Lora= pj dh vfHkO;fDr vkfJr pj ds lkeus vkus ds cgqr igys gh gks pqdh gksrh gSA ;gh dkj.k gS fd bl rjg ds “kks/k esa “kks/kdÙkkZ pkgdj Hkh Lora= pj ds fdlh izdkj dk dksbZ tksM+&rksM+ ugh dj ldrk

**,Dl iksLV QSDVks “kks/k ,d ,slk vkuqHkkfod “kks/k gksrk gS ftlesa “kks/kdrkZ pjks ds chp es lEcU/k esa ckjs esa ,sls LorU= pjks esa vk/kkj ij vuqeku yxrk gS ftldh vfHkO;fDr igys gks pqdh gksrh gSA bl rjg ds “kks/k esa vuqla/kkudÙkkZ dks Lora= pjks dh vfHkO;fDr ij dksbZ fu;a=.k ugh jgrk gS D;ksafd os izHkko fn[kkus es cgqr igys ?kfVr gks pqds gksrs gSA**

**12½ fodklkRed vuqla/kku ¼Developmental Research½**

O;ogkfjd foKkuks esa fd;s tkus okys fodklkRed vuqla/kku vius uke के अनुरूप gh ,sls vuqla/kkuksa dh vksj ladsr djrs gS ftuesa ,sls O;ogkjtU; ifjorZuks dk v/;;u fd;k tkrk gS tks vk;q esa c`f) ds lkFk&lkFk ckyd esa Lor% gh gksrs jgrs gSA ,sls vuqla/kkuks ds ,d mnkgj.k ds :i esa ge fuEu vuqla/kku leL;k dk mYys[k dj ldrs gSA Hkk’kk;h ;ksX;rk esa mez ds lkFk&lkFk dSls ifjorZu vkrs gS \

bl izdkj ds vuqla/kkuks dk mÙkj nsus gsrq izkr% nks izdkj ds vfHkdYi ¼Design½ dk iz;ksx fd;k tkrk gSA

**d½ izfr[kaMkRed vfHkdYi ¼Cross-sectional design½** & fodklkRed v/;;u esa izfr[kaMkRed vfHkdYi dk mi;ksx djus gsrq vuqalk/kudÙkkZ }kjk ,d lkFk gh fofHkUu vk;q oxZ esa dbZ lewg v/;;u gsrq fy;s tkrs gSA gj lewg esa ,d fuf”pr vk;q lhek dk izfrfuf/kRo djus okys ckyd gksrs gS tSls 3 o’kZ] 4 o’kZ] 5 o’kZ ds ckydks ds lewgA bu lewgksa esa “kkfey ckydks dh Hkk’kk;h ;ksX;rk dks izHkkfor djus okys dkjdks tSls& cqf) yfC/k] lekftd vkfFkZd fLFkfr] “kSf{kd miyfC/k vkfn ds lanHkZ esa ,d tSlk gksus dh dksf”k”k Hkh dj yh tkrh gSA blesa i”pkr~ vuaqla/kkudrkZ }kjk izR;sd lewg esa ckydks dh Hkk’kh; ;ksX;rk dk ijh{k.k fdlh ekuohd`r miyfC/k ijh{k.k ls djds vkSlr miyfC/k vadks dh x.kuk dj yh tkrh gSA

**[k½ yEcor~ vfHkdYi ¼Longitudinal design½** & fodklkRed v/;;u ds bl vfHkdYi esa vuqalk/kudÙkkZ }kjk ckydks esa dsoy ek= ,d lewg dks gh v/;;u dk dsUnz cuk;k tkrk gSA ekuk ,d v/;;u esa 03 o’kZ dh vk;q dk izfrfuf/kRo djus okys ckydks es ,d lewg dks fy;k x;k gS rks v/;;udrkZ igys rks ;g dksf”k”k djsxk fd cqf)yfC/k lekftd&vkfFkZd Lrj “kSf{kd miyfC/k] ekrk& firk dh f”k{kk vkSj fo|ky; dh xq.koÙkk dh n`f’V ls bl lewg esa “kkfey lHkh ckyd ,d tSls gks vkSj fQj bu lcdh Hkk’kk;h ;ksX;rk dk ijh{kd dj lewg ds vkSlr miyfC/k vad Kkr fd;k tkrk gSA blds ckn ,d fuf”pr varjky ¼6 ekg ;k 1 o’kZ½ ds ckn fQj bl lewg ds ckydks dh Hkk’kh; ;ksX;rk dk ijh{k.k dj vkSlr miyfC/k vad Kkr dj fy;s tk;sxs vkSj var esa vkSlr miyfC/k vadks dh rqyuk djds ;g tkuus dk izR;u fd;k tkrk gS fd vk;q c`f) dk ckydks dh Hkk’kh; ;ksX;rk ij D;k izHkko iM+rk gSA

**vuqla/kku ;k “kks/k dk egRo**

**¼Importance of Research½**

“kks/k ds egRo dks fuEukafdr fcUnqvkas }kjk Li’V fd;k tk ldrk gS %&

1½ “kks/k ekuo Kku dks fn”kk iznku djrk gS rFkk Kku Hk.Mkj dks fodflr ,oa ifjHkkftZr djrk gSA

2½ “kks/k ftKklk ewy izo`fÙk dh lUrqf’V djrk gSA

3½ “kks/k ls O;ogkfjd leL;kvksa dk lek/kku gksrk gSA

4½ “kks/k iwokZxzgks ds funku vkSj fuokj.k esa lgk;d gSA

5½ “kks/k vusd uohu dk;Zfof/k;ks o mRiknks dks fodflr djrk gSA

6½ “kks/k Kku ds fofo/k i{kks esa xgurk rFkk lw{erk ykrk gSA

7½ “kks/k ls O;fDr dk ckSf)d fodkl gksrk gSA

8½ ;g ,d izdkj dk vkSipkfjd izf”k{k.k gSA

9½ vuqla/kku uk fl)kUr dk lkekU;hdj.k djus ds fy, gks ldrk gSA

10½ vuqla/kku ubZ “kSyh vkSj jpukRedrk ds fodkl ds fy, gks ldrk gSA

**“kks/k ds uSfrd vkpkj**

**¼Ethical Issues in Resarch½**

ekuo dks lekftd izk.kh gksus ds ukrs dqN e;kZnk dk ikyu djuk iM+rk gSA lekt dh bu e;kZnk dk ikyu djuk iM+rk gSA lekt dh bu e;kZnkvksa esa lR;] vafglk ijksidkj] fouezrk rFkk lPpfj= vkfn vusd xq.k lfEefyr gksrs gS vkSj ;g uSfrdrk dgykrs gSA

* uSfrdrk “kCn dh mRifÙk laLd`r Hkk’kk ^uh\* ls gqbZ ftldk rkRi;Z gS ekxZn”kZu djukA
* uSfrdrk “kCn dh mRifÙk ySfVu Hkk’kk ds ¼Moralis½ “kCn ls gqbZ gS ftldk vFkZ gS rkSj&rjhdk ;k pky&pyuA

**“kks/k esa uSfrdrk ds eqn~ns**

**(Issuee of Ethics in Research)**

“kks/k esa uSfrdrk dk lEcU/k “kks/kdÙkkZ ds uSfrd dÙkZO; ls gS fd “kks/k djrs le; D;k mfpr gS vkSj D;k vuqfprA “kks/kdÙkkZ dks dqN uSfrd ekudks dk ikyu djuk vfuok;Z gS tSls fdlh dks dksbZ uqdlku ugh gqvk gks] fo”oluh;rk rFkk xksiuh;rk vkfnA

“kks/k ds lEcU/k esa fuEUkkfdr eqn~ns uSfrdrk ds vUrxZr “kkfey gksrs gSA

**1½ lwfpr Lohd`fr (Informed acceptance)**

“kks/kdÙkkZ dk loZizFke ;g uSfrd dÙkZO; gS fd og lwpuknkrkvksa dks “kks/k ls lEcfU/kr iwjh tkudkjh miyC/k djk,A mls lwpuknkrk dks lwfpr djuk gksrk gS fd bl “kks/k D;k mn~ns”; gS] mÙkjnkrkvks dks D;k ykHk gks ldrk gS rFkk lwpuk nsus esa mUgsa fdl izdkj ds [krjks dk lkeuk djuk iM+ ldrk gSA ;fn lwpuknkrk ds eu esa “kks/k ds ckjs esa fdlh izdkj dk lUnsg gksxk rks og fuf”pr :i ls lwpuk nsus es vkukdkuh djsxk vFkok Hkzfer djus oklh lwpuk nsxkA

2½ **fo”oluh;rk ¼Confidentily½**

“kks/kdÙkkZ dk uSfrd dÙkZO; gS fd fdlh Hkh lwpuknkrk }kjk nh xbZ O;fDrxr lwpuk dks mlds uke ls lkoZtfud u djsA “kks/kdrkZ dks bl ckjs esa lpsr jguk pkfg,A ;gkW ij “kks/kdÙkkZ dks pkfg, dh ;g lwpuknkrk dks iwjh rjg ls fo”oDr dj nsuk pkfg, dh mlds }kjk nh xbZ lwpuk dk bLrseky dsoy “kks/k dk;Z ds fy, fd;k tk;sxkA

**3½ xksiuh;rk ¼Privacy½**

;g eqn~nk fo”oluh;rk ls tqM+k gqvk gSA lwpuknkrkvksa }kjk nh xbZ lwpukvksa dks xksiuh; j[kuk “kks/kdÙkkZ dk uSfrd dÙkZO; gSA bUgs lkoZtfud djus esa lwpukrkvksa dks uqdlku gks ldrk gSA

**4½ “kkjhfjd ;k ekufld d’V ¼Physical or mental distress½**

“kks/kdrkZ dks lwpuknkrkvksa dks “kkjhfjd ;k ekufld d’V nsus ls cpuk pkfg,A ;g mldk uSfrd dÙkZO; gS fd mlds }kjk iwNs tkus okys iz”uks ls lwpuknkrkvks dks fdlh izdkj dk ekufld d’V u gksA blfy, ;g dgk tkrk gS fd lk{kkRdkj ds le; “kks/kdÙkkZ dks iz”u iwNrs le; dkQh lko/kkuh j[kuk pkfg,A mldk ;g fujUrj iz;kl gksuk pkfg, fd lwpunkrk esa fdlh izdkj dh ghu Hkkouk fodflr u gksA

**5½ izk;ksftr “kks/k ¼Sponsored research½**

;fn “kks/k izk;ksftr gS rks bldk iz;kstd “kks/k esa fu’d’kkZs dks vius fgrks dh iwfrZ gsrq rksM&eksM+dj izLrqr djrk gSA blhfy, “kks/kdrkZ dks izk;kstd ls bl lEcU/k esa vuqcU/k djuk pkfg, rFkk ;fn lEHko gks rks lwpuknkrkvks dks “kks/k esa izk;kstd dk irk ugh pyuk pkfg, pqukoks ds le; ifj.kke vkus ds igys tks losZ{k.k Vsyhfotu ij vusd pSuyksa }kjk n”kkZ;s tkrs gS] mu ij cgq/kk izk;ksftr gksus dk vkjksi yxk;k tkrk gSA ftl ny dks os vkxs fn[kkrs gS muds fojks/kh ny ;g dgus esa ladksp ugh djrs gS fd ;g dk;Z fdlh fo”ks’k jktuhfrd ny us iSls nsdj djok;k gSA

**6½ oSKkfud dnkpkj ,oa /kks[kk ¼Scientific misconduct & fraud½**

“kks/kdÙkkZ dk ;g uSfrd dÙkZO; gS fd og ladfyr lekxzh dks fdlh izdkj ls rksM ejksMdj izLrqr u djs u rks mls bu ekeys esa fdlh izdkj dh ykijokgh नहीं djuh pkfg, vkSj u gh i{krkiw.kZ lkexzh izLrqr djuh pkfg,A blls cpus gsrq v/;;u esa fu’d’kksZ dh tkWp gsrq “kks/k dh iqujko`fÙk ,oa lg;ksfx;ksa dh jk; fy;k tkuk vfuok;Z gSA oSKkfud dnkpkj rFkk /kks[kk ,d ,slh vuSfrdrk gS ftles “kks/kdÙkkZ dks lnSo cpuk pkfg,A ;fn ,slk ugh gksrk gS rks vU; yksxks }kjk fd, x, “kks/kks ds vk/kkj ij dnkpkj ,oa /kks[ks ls lEcfU/kr okLrfoDrk lkeus vk ldrh gSA

**7½ oSKkfud leFkZu (Scientific Support)**

“kks/kdÙkkZ dks “kks/k djrs le; ,oa izfrosnu rS;kj djrs le; ewY; fujis{k gksuk pkfg,A eSDl oscj tSls lekt”kkfL=;ksa us vius i)fr”kkL= esa ewY; fujis{krk dk izeq[k LFkku fn;k gSA mUgksus Kku ds fuekZ.k ij cy fn;k u fd mls O;ogkj esa ykxw djus ij blds foijhr dk;Z ekDlZ dk dguk gS fd “kks/kdrkZ dks nfyrksa ,oa xjhcks ds fotsrk ds :i esa viuk dk;Z djuk pkfg,A “kks/k ls bu oafpr oxksZ dks fdlh izdkj dk uqdlku ugh gksuk pkfg,A blh lUnZHk esa ,fYou xksYMuj ls jpukRed “kks/k dh ckr dgh gSA oLrqr% vk/kqfud ;qx esa oSKkfud leFkZu ¼Scientific advocaey½ dk gksuk fdlh Hkh “kks/k ds fy, vfuok;Z ekuk tkrk gSA

**8½ vfrlaosnu “khy oxksZ dk cpko (**Procteting Vulnerable clients)

“kks/kdÙkkZ dks vfrlaosnu”khy oxkZs dk /;ku j[kuk pkfg,A “kks/k ls lEcfU/kr fdlh Hkh dk;Z esa mu ij dksbZ ncko ;k tksj&tcjtLrh ugh dh tkuh pkfg,A vfrlaosnu”khy oxksZ ¼Procteting Vulnerable clients ½ esa bldk cgqr cM+k cqjk izHkko iM+ ldrk gSA ftrus Hkh v/;;u e|iku ds iz;ksx ij gq, gS] mues “kks/kdrkZ dk ;g iz;kl jgk gS fd v/;;u esa lfEefyr lwpuknkrkvks ds fgrks dks fdlh izdkj dk uqdlku u igqWpsA

**9½ “kks/k ds mn~ns”;ks gsrq mipkj dks LFkfxr j[kuk ¼With holding treatment for research purposes½**

“kks/k ds fu’d’kksZ dks fdlh Hkh mipkj gsrq iz;ksx esa ykus ls igys bl ckjs esa vk”oLr gksuk vfuok;Z gS fd fu’d’kZ fo”oluh; gSA ;fn fu’d’kksZ ds ckjs esa FkksM+k cgqr Hkh lUnsg gS rks mUgs mipkj gsrq LFkfxr j[kk tkuk pkfg,A fpfdRlk lEcU/kh foKku esa gksus okys “kks/k esa FkksM+k lk Hkh lUnsg gksus ij “kks/k ds mn~ns”;ks gsrq mipkj dks LFkfxr j[kuk ,d ije uSfrd dÙkZO; ekuk tkrk gSA fpfdRlk foKku esa dksbZ Hkh vfo”oluh; dk;Z jksfx;ks ds thou ds fy, [krjk iSnk dj ldrk gSA

**“kks/k esa uSfrd eqn~nks dh n`f’V ls j[kh tkus okys lko/kkfu;kW**

lekftd “kks/k esa uSfrdrk dks cuk, j[kuk vR;Ur vko”;d gSA bl n`f’V ls izR;sd “kks/k esa fuEufyf[kr lko/kkfu;kW j[kuh tkuh vko”;d ekuh tkrh gSA

1½ **bZekunkjh ¼Honesty½ %&** oSKkfud “kks/k esa bZekunkjh cuk, j[kus dk iz;kl djuk pkfg,A lkexzh ifj.kkeks] i)fr;ks dk;Z iz.kkfy;ks ,oa izdk”ku fLFkfr dk bZekunkjh ls mYys[k fd;k tkuk pkfg,A

**2½ oLrqfu’Brk ¼Objectivity½** **%&** “kks/k esa lekxzh ds fo”ys’k.k O;k[;k ¼fuoZpu½ ewY;kdau] oS;kfDrd fu.kZ;ks lEcU/kh i{kikr ls cpuk pkfg,A

**3½ v[k.Mrk ¼Integrity½%&** “kks/k ls lEcfU/kr fd, x, vius oknks ,oa vuqcU/kks dk ikyu djuk pkfg,A bZekunkjh ds lkFk “kks/k dk;Z djuk pkfg, rFkk fopkjks ,oa dk;ksZ dh fLFkjrk gsrq lnSo iz;kljr jguk pkfg,A blls “kks/k dh v[k.Mrk lqfuf”pr gksrh gSA

**4½ lrZdrk ¼Carefulness½ %&** “kks/k esa dh tkus okyh ykijokg =qfV;ksa ,oa vlko/kkfu;ks ls cpuk pkfg,A vius ,oa vius lg;ksfx;ksa ds dk;kZs dk leh{kkRed ijh{k.k djuk pkfg,] lEiw.kZ “kks/k izfØ;k dk Bhd izdkj ls fjdkMZ j[kuk pkfg, blesa “kks/k esa lrZdrk cuh jgrh gSA

**5½ [kqykiu ¼Openness½ %&** lekxzh] ifj.kkeks] fopkjks rFkk ;U=ks ¼izfof/k;ks½ lalk/kuks dks vU; yksxks ds lkFk lk>k djds “kks/k esa [kqykiu cuk, j[kuk pkfg,A lkFk gh “kks/kdÙkkZ dks viuh vkykspuk ,oa uohu fopkjks gsrq rS;kj jguk pkfg,A

**6½ ckSf)d lEink dk lEeku :-** “kks/kdÙkkZ dks ykblsUl ¼isVs.V½ ,oa lokZf/kdkj ¼dkihjkbV½ dk vknj djuk pkfg,A fcuk vueqfr ds vizdkf”kr lekxzh i)fr;ksa vFkok ifj.kkeks dk iz;ksx ugh djuk pkfg,A

**7½ xksiuh;rk ¼Confidentiality½ %&** “kks/kdÙkkZ dks izdkf”kr djkus vFkok xzk.V izkfIr gsrq Hksts x, “kks/ki=ks] O;fDrxr fjdkMZ O;kikj ,oa lSU; jkt rFkk lwpuknkrkvksa ds fjdkWMks dh xksiuh;rk dks cuk, j[kuk pkfg,A

**8½ mÙkjnk;h izdk”k ¼Responsible Publication½ %&** “kks/k dk izdk”ku dsoy vius Lo;a ds dSfj;j dks vkxs c<+kus ds lkFk&lkFk Kku ds izpkj&izlkj gsrq Hkh fd;k tkuk pkfg,A “kks/k dks O;FkZ rFkk fdlh :i esa ckj&ckj ,d gh ckr dgus gsrq izdkf”kr djus ls cpuk pkfg,A

**9½ vuqHkoh ijke”kZnkrk ¼Responsible Mentoring½ %&** “kks/k dh ckjhfj;ks dks le>krs le; vuqHkoh ijke”kZnkrk ds :i esa dk;Z djuk pkfg,A

**10½ lekftd mÙkjnkf;Ro ¼Social responsibility½** “kks/k }kjk lekftd vPNkbZ dk izpkj izlkj rFkk lekftd cqjkbZ;ks dks lekIr djus dk iz;kl djuk pkfg,A “kks/kdÙkkZ esa vius fo’k; rFkk lekt ekudks ds izfr lekftd mÙkjnkf;Ro gksuk vko”;d gSA

**egRoiw.kZ iz”u**

**¼Important Qustions½**

1½ “kks/k ls vki D;k le>rs gS \ “kks/k dh fo”ks’krkvks ij izdk”k Mkfy,sA

(What do you mean by research ? Throw light upon the characterisitics of Research)

2½ oSKkfud fof/k ls vki D;k le>rs gS \ oSKkfud fof/k dh fo”ks’krkvks dh foospuk dhft,A

( What do you mean by Scientific Method ? Discuss the characteristics of scientific method.)

3½ “kks/kks ds mn~ns”;ks ij izdk”k Mkfy;sA

( Throw light on the purposes of Research)

4½ “kks/kks ds fofHkUu vk;keks dh foospuk djsA

(Discuss the different dimensions of Research)

5½ “kks/kks esa fofHkUu izdkjks dh foospuk djsA

(Discues the different types of Research)

6½ fØ;kRed rFkk iz;qDr “kks/kks esa vUrj Li’V djsaA

(Explain the differences between Applied and Action research)

7½ vuqlU/kkuks ds egRo dh foospuk dhft,A

(Explain the importances of Researches)

8½ “kks/k ds uSfrd vkpkj dh foospuk dhft,A

(Disuess the Ethical issues in Research)