

* XIGHQH/IRU&DWDORJLQJ &DWRJUDSKIF 5 HMRXUFHV
8 VQJ 5' \$

' HHP EHU

3UHSDUHG E\ WKH
0DS DQG *HRVSDWLDO ,QIRUPDWLRQ
&DWDORJLQJ DQG &ODVVLILFDWLRO
7DVN)RUFH RQ %HVW 3UDFWLF

7IP . LVHU

3DJH\$QGZ

\$QHQH%HWXU

6XVDQ0 RRUH

7DP P\ : RQJ

\$UW

\$ OR UHFRUG WH SURMFVRQ WAMP HQWQ(QJOK IQWH E DZDA VVSHQJ RXVWHZ RUG
3SURMFVRQ

____ IILHG

,I VWHUH DUH VR RUP RUH VFDON UHGFVWJ VR RUP RUH P DLQ P DSV UHFRUG HDFK IQD VHSUDUM
IILHG ,I XWQJ 36 FDNV GLIHJ IQWH IILHG XVH D VQJØI IILHG Z LW ,QGFDVRYDØH RI] HUR
DQG QR VXEILHG3E'

5 HFRUG JHRJUDSKIE FRRUGQDM YDØHV IQ VXEILHG V G H I DQG J 5 HFRUG WH P XWQJ WH GHFLP DO
GHUHH IRUP DW,I XWQJ WH. ØNDQ %RXQGQJ %R[VRROR GHUHH FRRUGQDM IRUD SOFH DGG WH
6 RXUFH VXEILHG DGG WH WUP 3ERXQG VR UHGFVWJ VRXUFH ,I VDNQJ WH FRRUGQDM GLHFØ
IURP WH P DS DGG WH GRM3* HRJUDSKIE FRRUGQDM VDNHQ IURP WH P DS' RUMP LDU

([DP SO ERXQGQJ ER[IURP . ØNDQ FRYHUQ D ØUJH 8 6 WDM
DG DH DI DJ D ERXQG

([DP SO ERXQGQJ ER[IURP . ØNDQ FRYHUQ D VP DØFRP P HUFDOGLWVW
DG DH DI DJ D ERXQG

,Q WH UDUH FDMH Z KHUH D VFDØI YDUHV IURP LW FHQMVVR LW RXVWHZ RUG DQG IQZ KFK WH VR
VFDØV DUH JLYHQ XVH IILWVQGFDVRU3 ' DQG SOFH HDFK VFDØI YDØH IQD VHSUDUM E VXEILHG WLV
VXEILHG LV UHSHDMEØ

____ IILHG

2 &/ &T/ SUHWHGRUGHURI VXEILHG LV D E H F

____ IILHG

5 HFRUG DØQJ XDJHV SUHQVVRQ WH WMP IQ RUGHURI WH LUSUHRP IQDGFH IQ WH W[W, I QR VQJØI
ØQJ XDJH LV SUHRP IQDQMUFRU

∴ IHC

5' \$ DZV FRSRUDM ERGLV VR EH XVHG DV SUP DU DFFHW SRLQW LQWRVH FDMHV Z KHUH D
FUHDVURI D FDUVRJ UDSKIF Z RUN KDV UHVSQMELOW EH RQG SXEODMVRQ RUGLWJEXVRQ 5' \$
I \$ GG VWH DSSURSUDM UHDMRQMKIS G-MJ QDVRU LQ VXEIHC 3H' Z KHQ HDMD GMMUP LQHG
VHP RWFRP P RQ RQH IRUFDUVRJ UDSKIF UHVRXUFH V Z LQEH 3 FDUVRJ UDSKHU VRXJK 3DXVRU P LJKW
EH XVHG IRUDQ DMDV GSHQGLQ RQKRZ P XFK W VWHUH LV RULL VWH SHU/RQ RUERG LV H SDFW
G-MJ QDMG DV VXFK VWH QVRI G-MJ QDVRU/IRU ; ; IHC V LV DV \$ SSHQGL , , I \ RX DUH D
%%&2 SDUWFSQD V UHDMRQMKIS G-MJ QDVRU LV UHTXLUHG IRUSUP DU DFFHW SRLQW

\$ GGVRQD VWH/ & 3&& 36 IRU \$ SSHQGL , LQWKFV FDMQJ HV VR UH HVVR VWH 3&& 7UDIQQ
0 DQXDORUS \$ SSOIQ 5 HDMRQMKIS ' HMJ QDVRU LQ % IQRJ UDSKIF 5 HFRUG/ IRUFXUHQW XLGHQHV RQ
XVQJ UHDMRQMKIS G-MJ QDVRU/ 3HU* XLGHQH RI WDVV DQXDOWUP V IURP RWHUHU LAMUHG
YRFDXQDUHV VXFK DV 0 \$ 5 & UHDMRUMUP V P DA EH XVHG 3HU* XLGHQH RI WDVV DQXDODQ
5' \$ HOP HQVDP H P DA EH XVHG DV D UHDMRQMKIS G-MJ QDVRU HJ FUHDVU 5' \$ RU
SXEOKHU 5' \$ IL LVZ LOP RWDSSURSUDMD H SUHV VWH UHDMRQMKIS

([DP SGN

D6P LV * HUDG H FDUVRJ UDSKHU

D5 DQG 0 F1 DQ DQG & RP SDQ H FDUVRJ UDSKHU H SXEOKHU

 DQG XQIRUP VWH IHC V IRUDMDHV

, I VWH VWH FKDQJ HV EH V Z HHQ UHVMRQ/ HGMVRQ/ RI DQ DMDV UHFRUG VWH IHWVQRZ Q VWH DV VWH
XQIRUP VWH) IHC DQG IHC VVRXCG QHYUDSSHDVRJ HWHUHQ VWH VDP H UHFRUG

 DQG XQIRUP VWH IHC V DV XQTXH DXVRUJ HG DFFHW SRLQW IRUVKHHP DSV

/ & 3&& 36 IRU D SRF VDVV HQVRU 5' \$ LQWKFV FDMQJ HV VR P DNH
DGMVRQ/ VR DXVRUJ HG DFFHW SRLQW \$ \$ 3 V LQ HVVHUIHC RU Z KHUHYHQFFHMDV VR
EUHFN FRQDFW DP RQ GLIHUHQZ RUN WDVV RXCG RWHUZ LVH KDYH VWH VDP H DXVRUJ HG DFFHW
SRLQW 3HU 5' \$ VWH \$ \$ 3 IRUD Z RUN FRQVLW HVVHURI VWH FUHDVU \$ \$ 3 VWH SUH HUHGV VWH
RI VWH Z RUN RUVH SUH HUHGV VWH DQGH LQ FDMHV Z KHUH D FUHDVU \$ \$ 3 LV QRVSUHQW

0 DS FDMQJ HV/ JHQHUDO KDYH GRVDSSOHG/ & 3&& 36 IRU VR UHFRUG/ IRULQGLYGDQ
VKHHP DSV 0 DS FDMQJ HV/ DUH IHH VR FRQMQX VLV SUDVWH

6 RP H P DS FDMQJ HV/ RUVH HUP SGA HV/ P DA FKRRVH VR DSSO / & 3&& 36 IRU VR
VKHHP DSV \$ P RQ RWHUEHQH LV HQXUQ WDVV GLIHUHQZ RUN KDYH FRUHVSRQGLQ 0 GLIHUHQW
\$ \$ 3 V Z LQDGLQ SUHYHQW GVFUVRQ/ RI XQTXH Z RUN IURP SW

([DP SGN RI EUDFNHMG DGGWRQV VR WOV WOVDFND JHRJUDSKIF DUHD

D: DUG DQG SUHFLQFVP DS E & KIFDJR , @RLV@
D6 SUQJ IIFG YLVRUP DS E ZLW FDOQQDURI HYHQW >6 SUQJ IIFG 2 KIR@

, I QR WOV LV SUHMQWGHMLVH D WOV >Q EUDFNHW @NDWQFQGH VWH QDP H RURWHLQGGEDWRQ RI WWH
JHRJUDSKIF DUHD FRYHUHG DQG WWH VXEMFVSRUUD HG IL WWHUHLV RQH 5' \$

([DP SGN RI GHMLHG WOV WOVDFQGH ERW VRSIF DQG SOFH

D > DS VKRZ IQJ SURSRVHG GUHG IQJ SURMFWIQ WWH) R[5 LYHUDW UHQ %DA : LVFRMLQ@
D > & DGDWDCP DS VKRZ IQJ D WWHUHLV UG IQ DQ XQLGHQMLHG GFDMRQ IQ WWH 8 QLVG 6 WWHV@

IIFG F

7UDQVFUEH DQ KRQRULIF WOV IQ WWHVRCDDI IODWRQV LGHQW IQJ SOFHV HW DVRFIDMGZLW
SHUVRQDQDOP HV

* HGHUDD UHFRUG DQDOP HV JLYHQ IQ RQH RUP RUH WOVMP HQW RI UHVSRCMELOV %UDFNHWGDV
WVNHQIURP RXMLGH WWH UHVRXUFH

IIFG

5 HFRUG YDUDQ WOV DV QHGHG IQFOGQJ FRUHFVHG WOV 9 DUDQ WOV FDQFRP HIURP

" 6 FDØI QRWGHMUP IQHG 0 \$* ,57 VXSSRUW WH XVH RI 36 FDØI QRWGHMUP IQHG' IQ FDMHV
Z KHUH VFDØI FDQQRVEH H| SUHWHG DV D UHSUHQOMYH IUDFWRQ WSEFDO EHFDXVH LWV
LØU IEOI RULV H| SUHWHG IQ XQDP LØUXQLW RI P HDVXUH QRWFRYHUHG E| FRQYHUMRQ WDEON
IQ WQGGDUG UH HUHQFH VRXUFHV \$ GRM VKRXG EH SURYLGHG HOHZ KHUH IQ WH UFRUG
GHMFUEIQJ KRZ WH VFDØI LV GLVSD\ HG RURWHZ LVH H| SOLQIQJ Z K\ LVFDQQRVEH
H| SUHWHG DV D UHSUHQOMYH IUDFWRQ

IIHQ E

: K\ØSØRFRQWHUFRUG D SURVFRQ WDMP HQWQ (QJØK VSHØQ RXWHZ RUG 3 SURVFRQ' HYHQ
LL LWV DEEUHMDMG RQ WH P DS 5' \$ \$ VQRWGH DØHU VXSSO WH P DMKIQJ FRGH IQ WH
3 UFRVFRQHQG ØØD "%ØD p

IIHQV

7 UQVFRUEH XVQJ VHSUDDM IIHQV IRUHØMWH Z LWK GLIHUHQWXCVRQV VXFK DV SURGXFHU

' LAMEXRUIHCG

7UDQVFUEH RQD IL QR SXEQKHURUP DQXIDFVUHUWDAMP HQW DUH JLYHQ RULL IMGJHGVR EH XVHIXO
IRUURXUFH GLVFRYHU LGHQMFDMRQ DQG VHQDFMRQ

 0 DQXIDFVUHUHCG

7UDQVFUEH RQD IL QR SXEQKHUWDAMP HQWV JLYHQ RULL IMGJHGVR EH XVHIXORUURXUFH
GLVFRYHU LGHQMFDMRQ DQG VHQDFMRQ & DUURJUDSKIE P DQXIDFVUHUHQMHV LQFOXGH HQJUDYHU/
QKRJUDSKHU/ SUQMU/ DQG VLP LDUHQMHV Z KRVH URGI Z DV VR FUHDW VKH SK\ VEDOP DQLHMDMRQ

 ILHQV F

\$ Q DA V SURYGH D GDM LQ VKH SXEQKHUIHCG Z KHQ SUHMHQW%JDFNHVVKH GDM IL VDNHQIURP DQ
HGMRQ WDAMP HQVFRS\ UJ KVVWDAMP HQVRUHQHZ KHUH ,I D SXEQDFMRQ GDM V LV DUH XQGRZ Q
XVH WDAMP HQW VXFK DV³>EHVHHQ DQG @RU³>QRVDMU @RU³> " @ 5' \$

([DP SO

ZKHQFDUJLQ UDH RUXQVXDO IRUP DWG PDSV ,I XMQ WHILG XVH WUP VIURP WH5' \$
YDQH YRFDEXDUHV

____ IIFG

, I W H S U H Q F H R I P R U H W D Q R C H P D S L V V S H F I L L H
P D S V ' I R U H J D P S G I J H Q H U D O Q W W H P E A W O I P
IIFG

____ IIFG

7 K L V Q R W I I F G L V X V H X O R U S U R Y L G Q J D G G W R Q D O G
S D U W F X O L O L Q F D M H V Z K H U H W H F R Y H U D J H L V Q R W P
E A D M Q J G I Q D P H F R Y H U V V P D O S R U W R Q V R I P X O G

____ IIFG

/ L W D O D Q J X D J H V S U H M Q W R Q W H U H R X U F H I L Q R W
P L V O D G Q J) R U H J D P S G I L W H W O I L V L Q (Q J O M K D
5 X M D Q % H V S H F I L L E D V W R Z K D W H O P H Q W H J P
O D Q J X D J H R U D Q J X D J H V / D Q J X D J H V Q R W G K H U H P
IIFG

__||

, Q F O G H D W O D W R C H J H R J U D S K I E V X E M F V D F F H W I I
P D S V D Q G P D S V R I I P D J I Q D U S O F H V , Q F O G H W R S
J H R J U D S K I E D O D V D S S U R S U D M % H D Z D U H W D W R F
I R O Z I Q J D J H R J U D S K I E V X E M F V D F F H W S R I Q W H J
Y O D S V

\$ O R I Q F O G H D W O D W R C H F D U R J U D S K I E J H Q U H I R U P
& R Q U H W * H Q U H) R U P 7 H U P V L V S U R Y L G H G D V \$ S S
V R P H M P H V D G G H G & R Q X O V



0 DSV GMDFKGIURP DDMHV RURMHUHVXUHV : KHHSRMEI XH0 \$5 & IHOV
IRUWKFWUHGGMFUSVRQRI WHVH UDMRQKISV LQ•Q 0E V

RU

6RXUFH / IEUDU RI &RQJUHVV* HQJH) RUP 7KHVDXUXV

\$ HUDOSKRVRU UDSKV	* DJ HMMHV	3 KRVRU UDP P HME P DSV
\$ HUDOYLHZ V	* HRGDMEDMHV	3 KRVRP DSV
\$ HURQDXMFDFKDUW	* HRJ UDSKIF IQIRUP DMRQ	3 K MFDFOP DSV
\$ UP IDU VSKHUHV	V WMP V	3 IFRUDOP DSV
\$ VURQDXMFDFKDUW	* HRBU LFDFURW VHFVRQV	3 GMDJ FKDUW
\$ VURQRP LFDFOP RGHV	* HRBU LFDFOP DSV	3 RURDQ FKDUW
\$ VMHV	* HRVSDMDCGD	4 XGDUDJ GP DSV
%DVA P HME P DSV	* GEHV	5 DMMJGD
%GFN GDJ UDP V	* RUHV O DSV	5 HQH P RGHV
%RMDI FKDUW	* UDYLV DGRP DO P DSV	5 HP RM VHQMJI IP DJHV
& DGDMDOP DSV	,GGH P DSV	5 HP RM VHQMJI P DSV
& DURJ UDSKIF P DMUDV	/ IQXLWF DMHV	5 RDG P DSV
& DURJ UDSKIF P DMUDV IRU	/ RUDQ FKDUW	6 VMDFDFOP DSV
SHRSDI Z LK YLXDOGLDELMHV	/ XQDU GEHV	6 VFN FKDUW
& HMDDFKDUW	0 DQXVFUSVP DSV	6 WIS P DSV
& HMDDJ GEHV	0 DSSDH P XGGL	7 KHP DMF P DSV
& KIDJHQV DMHV	0 DSV	7 RSRJ UDSKIF P DSV
& KIDJHQV P DSV	0 HQDOP DSV	7 RSRBU LFDFOP DSV
& RP SDUDMH P DSV	0 HMRURBU LFDFKDUW	7 RXUMVP DSV
& RP SRVLM DMHV	0 IDU P DSV	8 SVLGH GRZ Q P DSV
' IJLDFOP DSV	0 IGH P DSV	9 HFRUGD
' IJLDFCHMDMRQ P RGHV	0 IQDMUH P DSV	9 IHZ V
(DUO P DSV	1 DXMFDFKDUW	: DOP DSV
(SKHP HUGHV	2 XMDH P DSV	: RUG DMHV
(VKQRJ UDSKIF P DSV		: RUG P DSV
) DFVP LDM		: RUP V H H YLHZ V
) UH IQXUDGFH P DSV		=RQJ P DSV
) GZ P DSV		