IB DIPLOMA PROGRAMME
PROGRAMME DU DIPLÔME DU BI
PROGRAMA DEL DIPLOMA DEL BI

N05/4/BIOLO/HP3/ENG/TZ0/XX+

BIOLOGY
HIGHER LEVEL
PAPER 3

Friday 11 November 2005 (morning)

1 hour 15 minutes

Candidate session number

0	0							

INSTRUCTIONS TO CANDIDATES

- Write your session number in the boxes above.
- Do not open this examination paper until instructed to do so.
- Answer all of the questions from two of the Options in the spaces provided. You may continue your answers on answer sheets. Write your session number on each answer sheet, and attach them to this examination paper and your cover sheet using the tag provided.
- At the end of the examination, indicate the letters of the Options answered in the candidate box on your cover sheet and indicate the number of answer sheets used in the appropriate box on your cover sheet.

2SWLRQ ' ² (YROXWLRQ

' 5HVHDUFKHUV RIWHQ XVH VKRUW SLHFHV RI '1$ FDOOHG S
SRSXODWLRQV DQG EHWZHHQ VSHFLHV 7KH IXQFWLRQ F
WKH\ KDYH WKH DELOLW\ WR FRS\ WKHPVHOYHV DW UDQG
LQFUHDVLQJ WKH '1$ IUDJPHQW VL]H $OX VHTXHQFHV KI
WKURXJKRXW WKHLU HYROXWLRQ 2QH SDUWLFXODU JUF
JHQRPH UHODWLYHO\ HDVLO\ DQG WKHUHIRUH FRQWULEXWHV WR LQVH
UDWHV

7KH JHO HOHFWURSKRUHVLV VDPSOHV EHORZ ZHUH XVHG
LQGLYLGXDO <H VHTXHQFHV LQ SULPDWHV 7KH ODUJHU
LQVHUW DQG WKH VPDOOHU IUDJPHQWV DUH WKH VDPH UH
PRQNH\ DQG WKH RZO PRQNH\ GLYHUJHQFH DW WKH PLOLR

.H\
ES EDVH SDLUV

ES PDUNHU
+XPDQ
%RQRER
&KLPSDQ]HH
*RULOOD
2UDQJXWDQ
6LDPDQJ
*UHHQ 0RQNH\
2OG 0RQNH\

$ Ye5AH110

ESFRQWDLQV <H $+ L
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% Ye5AH31

ESFRQWDLQV <H $+ LQ
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& Ye5AH140

ESFRQWDLQV <H $+ L
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' Ye5AH29

ESFRQWDLQV <H $+ LQ
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([illegible]

ESFRQWDLQV <H $+ L
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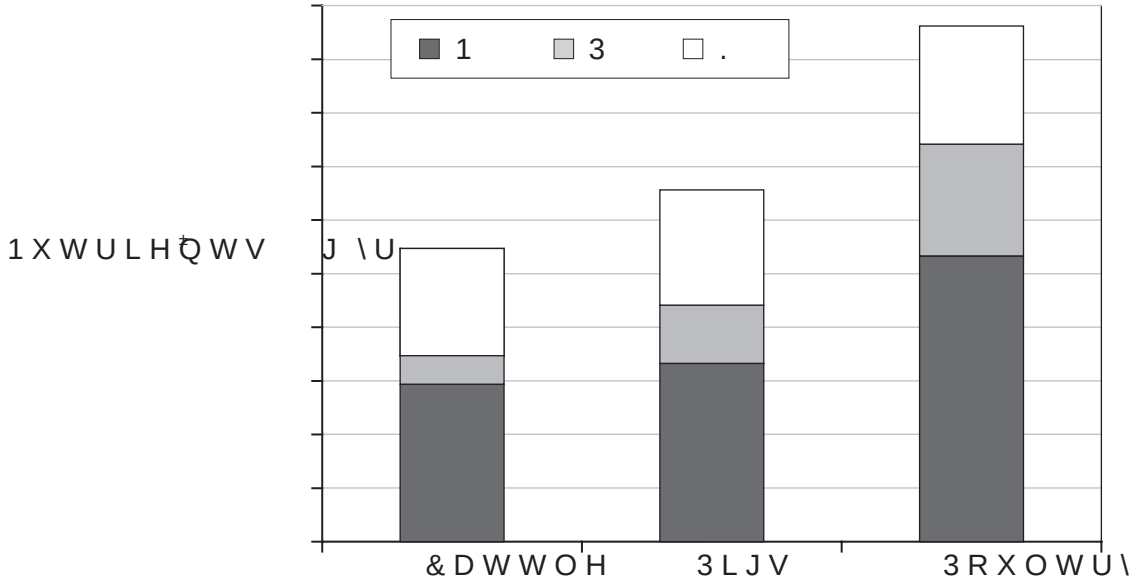
(D 'LVFXVV WKH UROH RI WKH DXWRQRPLF QHUYRXV V\VW
FRQVFLRXV SDUW RI WKH EUDLQ > @

E 2XWOLQH WKH UROH RI QDWXUDO SDLQNLOOHUV>L@ WK

2SWLRQ) ² $SSOLHG 3ODQW DQG $QLPDO 6FLHQFH

) ,QWHQVLYH DQLPDO UHDULQJ WHFKQLTXHV KDYH GUDPDW
DQLPDOV +RZHYHU SROOXWLRQ IURP SLJ FDWWOH DQG
FKDOOHQJH 0DQXUH LV WKH PDMRU ZDVWH SUREOHP GX
RGRXUDQG VRLO DQG ZDWHU SROOXWLRQ 3DUW RI WKH
JHQHUDWHG 2QH PHWKRG LV WR XVH WKH PDQXUH DV IH

7KH JUDSK EHORZ VKRZV WKH DPRXQW RI QLWURJHQ 1
FRQWDLQHG LQ WKH PDQXUH RI GLIIHUHQW IDUP DQLPDOV



>6RXUFH < / +HQXN:RQGG-¶V 3LQJOWU\ 6FLHQFH -RXUQDO

D 'HWHUPLQH WKH DPRXQW RI SRWDVVLXP IRXQG L>Q@F DW

E &DOFXODWH WKH DPRXQW RI SRWDVVLXP IRXQG LQ S
QXWULHQWV > @

F &RPSDUH WKH DPRXQWV RI QXWULHQWV LQ WKH >G@IIHU

± ± 1 %,2/2 +3 (1* 7= ;;

4XHVWLRQ) FRQWLQXHG

G 3RXOWU\ PDQXUH KDV D S+ RI 6XJJHVW ZK\ WKLV

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) D 2XWOLQHHPPHUFLDO XVHV RI SODQW JURZWK UHJXODV

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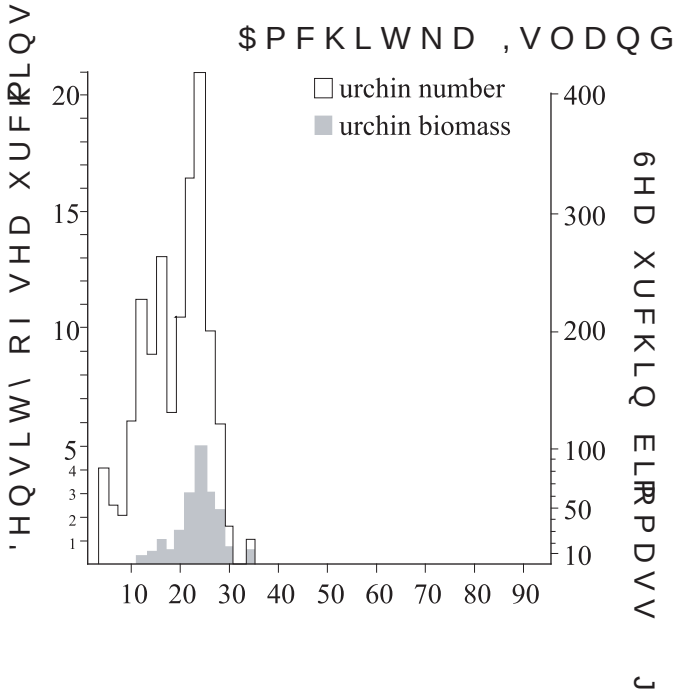
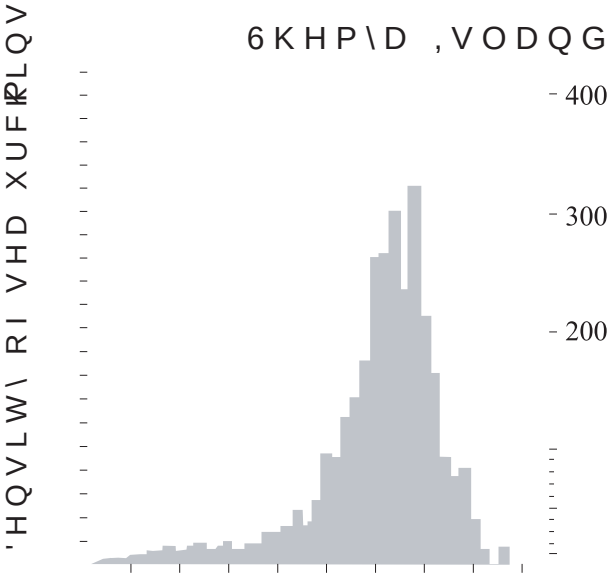
2SWLRQ * ² (FRORJ\ DQG &RQVHUYDWLRQ

* 'HVWUXFWLYH XUFKLQ GLVHDVH DQG WKH UHVWRUDWLRQ RI NHOS VHDZHHG DQG VHD ZLGH JHRJUDSKLFDO UDQJH VKLIWV RQ RYHUJURZQ UHHIV 3RSXODWLRQ GHQVLW\ DQG VWUXFWXUH PDQLSXODWLRQ DQG DFFLGHQWDO RLO VSLOO KDV UHV YHJHWDWLRQ 7KH SUHVHQFH DQG DEVHQFH RI NHOS EH PDULQH FRPPXQLW\

$ VXUYH\ ZDV FDUULHG RXW RI WZR RI WKH ZHVWHUQ $O (QK\GUD OXWULV FKLQ VLJH GHQVLW\ DQG ELRPDVV ZHUH ZHUH UHFRUGHG 'DWD ZDV FROOHFWHG IURP $PFKLWND , 6KHP\D ,VODQG ZLWKRXW VHD RWWHUV