, yqi f caµµay;xy¡kgµahl;- 2012

mwµTWjjy¡fs;:

, t;tµdhjjhs; A, B Mfµa **, uz ¡L** gFjµfi sf;nfhz ¡LssJ.

❖ **gFjµA** , y; 40 gyÑjuµT tµdhf;fs;> nkhjjg; Gssµfs; 40.

❖ **gFjµB** , y; 20 FWtµi l tµdhf;fs;> nkhjjg; Gssµfs; 60.

Neuk;:2 kz gÍjjµahyk;

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gFjµ A - gyÑjuµT tµdhf;fs;

(1) caµµAl d; rkgej ggl¡l rµy rµwggµayGfs; fÑo juggl¡Lssd. xU jdµ mqfµaµy; mtjhdµfµf **KbahjJ** gµd;tUk; , ayGfS s;vJ?

   1. cWj;Jz urrµ   2. $ugG   3. , dgngUffk;

   4. ghukguµak;   5. , i rthf;fk;

(2) nfhOgGfS k;vz nz afS k;eµµy;fi uahj mNjNti s vz nz afi sg;gadgLjjµ cwgjjµ nraaggLk;rtuf;fhuqfs;eµµy;fi ufµdwd. , t;tµayG khwwjjµwFg;gµujhd fhuz k;gµd;tUtdtwWs;vJ?

   1. rtuf;fhujjµy;css , yµggµL;%yf;$Wfsµd;Fi wthd %yf;$wW epµi w.

   2. l jNuhf;fhgd;rqfµyµfsµd;FWfµa eµsk;

   3. , yµggµL;%yf;$Wfsµd;mjµfuµjj Ki dTj;jdi k.

   4. rtuf;fhujjµy;Rahjµd fµsµrNuhy;, Ujjy;

   5. , yµggµL;%yf;$Wfsµd;KOjhf eµukgµa fhgd;- fhgd;gµi z gGfs;

(3) kµf mjµfkhd tµyqFf;fyqfsµy;fynkdrt;tµd;, yµggµL;%yf;$WfsµYk; Guj %yf;$WfsµYk;fhNghi tjNuwW rqfµyµfs;, i z ffggl¡Lssd. , ffhNghi tjNuwW fsµd;gµujhd njhoµy;gµd;tUtdtWs;vJ?

   1. Rthrf;fµoggi l ahfg;gadgLjy;

   2. mLj;Jss fyqfsµd;nkdrt;Tfi sg;gµi z jjy;

   3. fyqfsµd;cl nyjµµµahffµµ mi l ahsjji jg (antigenic identity) NgZ jy;

   4. fynkdrt;tµwFg;nghwµKi w tYi t toqfy;

   5. fynkdrt;tµwFf;FWfhf %yf;$Wfsµd;nfhz ¡Lnryyyµy;cjTjy;

(4)   nfhyʻfjʻ rµffyµd; nghJ thd; njhoµy; **myyhjʻJ** gµd;tUtdtwWs; vJ?

1.   mfKjʻYUr; rµWti yaµdhy; Mfʻfgglʻl Gujʻqfiʻs VwWfnfhss;sy;

2.   , i yNrhNrhk;fiʻs Mfʻfy;

3.   Guj %yfʻ$Wfsµd; , urhad uµµaµyhd jµµG.

4.   , i uNghNrhk;fiʻs Mfʻfy;

5.   Glʻfqfiʻsfʻnfhz ;Lnryyy;

(5)   jhfʻfk; xdwµd; Vtw; rfjµ njhlughfj; **jʻtwhdJ** gµd;tUtdtwWs; vJ?

1.   jhfʻfk; xdʻi wr; ruµahf eµi wNtwWtjw;fhff; fµggi lfF nehjµajjµdhy; toqʻfggLk; rfjµNa Vtw; rfjµahFk;

2.   jhfʻfjjµd;Ngwhf tµLtµfʻfggLtNj Vtw; rfjµahFk;

3.   vejnthU jhfʻfKk; ei lngWtjw;F Vtw; rfjµ toqʻfggLjy; mtrµakhFk;

4.   jhfʻfnkhdwµy; Vtw; rfjµaµd; msT> nehjµajjµdhy; khwwki l Ak;

5.   rµy jhfʻfqfsµy; Vtw; rfjµ ntggjjµdhy; toqʻfgglʻyhk;

(6)   tlʻ;tLfʻfhd nghRNghµµNywwk; njhlughfj; **jʻtwhdJ** gµd;tUtdtwWs; vJ?

1.   mJ vyyhg ;grʻi raTUtqʻfsµYk; ei lngWk;

2.   mJ raNdhgfwluµahffsµy; ei lngwkhlʻ;lhJ.

3.   xsµµj njhFgglʻy; mJ xsµʻj njhFjµI cld; rkgejgglʻLssJ.

4.   tlʻ;tLfʻF mww nghRNghµµNywwjjµwʻF Kd; mJ Njhdwµajhf ekgggLfµwJ.

5.   mJ C_4 jhtuqʻfsµd; flʻ;Lklʻy; fyqʻfsµd; grʻi raTUtqʻfsµy; **ATP** njhFfʻFk; xNu Ki wahFk;

(7)   xLfʻfwgµµtµd;Kddtjiʻj 1 , y; ei lngWk; eµfoʻTfs; njhlughd; gµd;tUk; $w\WfSʻs; **jʻtwhdJ** vJ?

1.   rha%lʻbagµd; eµw%ujjqʻfs; EZ fʻFfʻfhlʻbaµd; fµbj; njsµ;thfj; njʻdgly;

2.   Gujjjµdhy; ti ugGww **(bound)** ehdʻF **DNA** %yfʻ$Wfiʻsf; nfhz ;Lsʻs Xuµ , UtYʻcUthfʻfggly;

3.   mi kgnghjjʻj eµw%ujjqʻfSʻfF , i lNa FWfʻFg; guµkhwwk; ei lngWjy;

4.   eµw%ujjqʻfs; fUtµd; i kajiʻj Nehfʻfµ miʻreJ xU jsjjµy; xOqfhjy;

5.   Gdi kajjµfsµdhy; tµyqʻFfʻfyqʻfsµd; fUtµd;vjµµgʻgffqʻfsµy; , U Ki dTfs; cUthjy;

(8)   gµd;tUk; egu; - tµµtuz;k; gwwµµa Nruʻfiʻfaµy; **jʻtwhdJ** vJ?

1. **Whittaker**	-	GNuhlʻb] uh/**Protista**, uhrµµajiʻjg;ghFghlʻbwF mwµKfQ; nraj ghFghlʻbayhsu;
2. **Linnaeus**	-	Mlʻµµeµi u xOqʻfµdgb ghFghlʻiʻl mwµKfQ; nraj egu; Mthu;
3. **Haeckel**	-	fz k; vdʻDk; jfʻNrhd; **(taxon)** lʻg; ghFghlʻbayµy; mwµKfQ; nraj egu; Mthu;
4. **Woose**	-	nkhNduh vdʻDk;, uhrµµajiʻjg;ghFghlʻbayµy; mwµKfQ; nraj egu; Mthu;
5. **Theoprastus**	-	jhtuqʻfiʻs kuqʻfs> G±z ;Lj; jhtuqʻfs> Gjuʻfs; vdg; ghFgLjjµµa Kjy; egu; Mthu;

(9) m] Nfhi kfNfhwwhtµd;, ayG **myyhjJ** gµd;tUtdtwWs;vJ?

   1. J}spae;jhqfpfspy;, ypqfkpy; tµjjpfs; NjhwWtpffggLk;

   2. fdpAlyk;xdwpy;, ypqf tµjjpfis kpfg;gy, dqfs; NjhwWtpf;Fk;

   3. kpfg;gy, dqfs; gyypdg;gµptpyµAz; i ki af;fhl;Lk;

   4. MlrµAi la gjpa mtji j, U fUf$l;LfFµaJ.

   5. G+Qrz tpi ofs; gµpRtu; ci lai t.

(10) [µkNdh] NgukfS ffhd gµd;tUk;, ayGfspy; **cz j kayyhjJ** vJ?

   1. mi t, i l ntggepi yAss ehLfspYk; madkz ly ehLfspYk; gukgpAssd.

   2. vyyh, dqfspd; kuqfS k; XupypqfKssi t.

   3. khtµjjµapi yfs; gy #y; tµjJfi sf; nfhz Lssd.

   4. xU ngz; Gz upj; jhtuji j khjjµuNk khtµjjpffyd; cssIfFk;

   5. ngz; Gz upj; jhtuk; gy ngz; fyrrddpfi sf; nfhz lJ.

(11) , jak; mww> %ba RwNwhlµlj; njhFjpi af; nfhz LssJ gµd;tUk; tpyqFfspy; vJ?

   1. fl y; Kssp   2. *Fasciola*   3. *Chiton*

   4. Maµqfhyp   5. kz GO

(12) kpf edF tpUjjµai lej nrtµ mqfqfi sf; nfhz lJ gµd;tUk; tpyqFfS s; vJ?

   1. fhfk;   2. Kji y   3. ntsthy;

   4. vyp   5. ghkG

(13) gµd;tUk; tpyqFf; $llqfS s; vJ $ugG tuyhwwµpy; Kjd; Kjypy; Jz Lgli yf; fhlbaJ?

   1. frµapi oa klgd;   2. $dp, why;fs;   3. i lNdhrufs;

   4. Njs;fs;   5. mli lfs;

(14) gµd;tUk;mlµti z apy;mqFujjµdJk;, i yeLtpi oaf;fyqfspdJk; fhopd;mKff mOjjjµpdJk; $($\psi_p$) fi ua mOjjjµpdJk; ($\psi_s$) ngWkhdqfs; fµNyhg] fhyfspy; (kPa) juggl;Lssd. mqFuffhopyµUeJ, i oeLtpi oaf;fyqfS fF eµpd; mi ri tg; gµuµpeµpµJtggLjµJk; Nruµi f vJ?

mqFuffho;   **, i y eLtpi oak;**

	Ψ_p	Ψ_s	Ψ_p	Ψ_s
1.	80	-1200	100	-1100
2.	150	-1250	200	-1200
3.	-20	-1120	150	-1200
4.	70	-1120	75	-1200
5.	-65	-1050	75	-1100

(15) H1 ck; H2 ck; , uz ;L jhtu tsur¶g; gjhujjq¡fs; MFk; , i oa tsugG Clfk; xdw¡wF , ggjhujjq¡fi sr; NrujjNghJ g¡d;tUk; mtjhd¡gGfs; ngwggl;¡l d.

- H1, H2 Mf¡¡a , uz i lAk; NrujjNghJ mi t %Lgi l (fyR) cUthf¡fji jj; J}z ¡bd.

- H1 l khjj¡uk; NrujjNghJ Mukgj; jhtujj¡¡y; (explant) , lk;khw¡g; gµwej Ntu¡fs; cUthf¡d.

- H2 l khjj¡uk; NrujjNghJ %Lgi l cUthf¡fk; ei lngwt¡¡yi y.
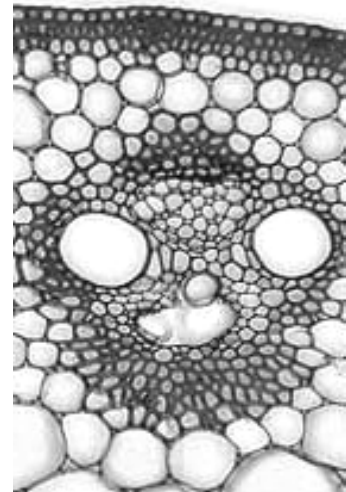
, jjftyµd; mbggi la¡y H1, H2 vd¡gd

	H1	**H2**
1.	xlr¡¡d;	[¡guy¡d;
2.	xlr¡¡d;	i rwNwhi fd¡¡d;
3.	i rwNwhi fd¡¡d;	xlr¡¡d;
4.	[¡guy¡d;	xlr¡¡d;
5.	i rwNwhi fd¡¡d;	[¡guy¡d;

(16) rhjhuz ehs; xdWl d; xgg¡LkNghJ ntggkhd #uµa xs¡Ass ehs¡y; xs¡rRthrk;

1. neyy¡y; mjµfuµf;Fk> Nrhsjj¡¡y; Fi wti lAk;
2. Nrhsjj¡¡y; mjµfuµf;Fk> neyy¡y; Fi wti lAk;
3. neyy¡y; mjµfuµf;Fk> Nrhsjj¡¡y; r¡wµj s T ghj¡gG VwgLk;
4. Nrhsjj¡¡y; mjµfuµf;Fk> neyy¡y; r¡wµj s T ghj¡gG VwgLk;
5. , uz ;L , dqfs¡Yk; mjµfuµf;Fk;

(17) , t;t¡dh g¡d;tUk; gjqfi sAk;, q¡F vLj;Jf;fhl¡l ggl;¡Lss xs¡Ez ; ti ui gAk; (photomicrograph) mbggi lahff; nfhz ¡lJ.

a - nts¡¡ahj¡¡µ **b – cs;shj¡µ** **c – xUq¡fi kej**

d – Mi uf¡Fuµa **e – j¡µwej** **f - %ba**

, t;, i oaji j t¡¡tu¡ggjwF k¡¡fg; nghUjjkhd Ki wahf , Uf¡ff;$baJ>

1. a, c, e.
2. b, c, e.
3. b, c, f.
4. a, d, f.
5. b, d, e.

(18) cu¡ajj¡¡D}lhff; nfhz ;Lnryyggl r; **rhjj¡¡µakw¡wJ** g¡d;tUk; gjhujjq¡fSs; vJ?

1. i rwNwhi fd¡¡d;   2. t¡¡w¡wk¡d;fs;   3. mk¡¡Ndh mk¡¡y¡qfs;
4. fi s ehr¡¡d¡¡fs;   5. fd¡¡a mad;fs;

(19) mQrµNah] Nguk;fsµd; (**Angiosperms**), dgngUffk;njhlughd gµd;tUk; $wWfS s; **jtwhdJ** vJ?

    1. ehd;F Ez ;tµjjµf;fyqfi sf;nfhz ;l Ez ;tµjjµapi yfNs Nfruqµfs;MFk;

    2. tµjjµf; fydµyµUeJ tµLtµffggLkNghJ kfuejkz µ , uz ;L fyqfi sf; nfhz ;LssJ.

    3. ngz ; Gz uµj;jhtuk;mNef Gz uµfi sf;nfhz bUffyhk;

    4. Mz ; Gz uµfs; , uz ;L fUffsµdhy;gµujµeµjµj;JtggLjjggLk;

    5. rµy jhtuqµfs;fUffl;lµyµdwµ tsKss tµj;Jfi s cz ;lhfFk;

(20) gµd;tUtdtwWs;vj Dl d;tµyqFfsµd; td;$l;L , i oaqfs; **rkgejgglt µyi y**?

    1. eµlµf; fhgG   2. mfQRuf;Fk;njhoµwghL   3. Nrkµg G

    4. ntz ;Foµaqfsµd;cwgjjµ   5. xUrµljjµleµi y

(21) kdµj dµd;fbjÑjhyµy; **fhz gglhji t** gµd;tUtdtwWs;vi t?

    a – kaµrrµkgµ   **b – Rahjµbl eukG Kbtµlqµfs;**

    c – tµaui tr; Ruggµfs;   **d – kµRduµd; Jz µfi ffs;**

    e - , yh]µµd; ehuµfs;

    1. **a, c** Mfµad khjjµuk;

    2. **a, c, d** Mfµad khjjµuk;

    3. **a, c, e** Mfµad khjjµuk;

    4. **b, e** Mfµad khjjµuk;

    5. **a, b, c, e** Mfµad khjjµuk;

(22) kdµj f; fz ;njhlughd gµd;tUk;Nruµi ffsµy;ruµahdJ vJ?

    1. Nfhyµfs; – Nghl;nl hgrµd; – , uTg; ghui t

    2. $kGfs; – nuhnl hgrµd; – eµwg; ghui t

    3. FWkghui t – fz ;tµoµaµd; eµrµ – FtµT tµyi yfSl dhd fz z hb

    4. J}ugghui t – FWfµa fz ;tµoµ – FoµT tµyi yfSl dhd fz z hb

    5. tµoµjjµi u – mty; – Nfhyµfs; , yyhjµUjjy;

(23) fl l i kgGfs;ahtwµµYk;XNkhdµfi s cwgjjµnraaf$baJ gµd;tUk; $l l qµfS s; vJ?

    1. $kGUg; nghUsµ> guµtfffbµ> gµwgfff;fgr; Ruggµ

    2. rµWeµufk;> [fµ] uh i katµi oar;rµffy; ri jaµd;ri jaf;Fi yfs;

    3. , i l r; rµWFl y> Kd;rµWFl y> , i ugi g.

    4. Kjµu%yTU> #y;tµjjfk> kQrl rl yk>

    5. Kwgfff;fgr; Ruggµ tµi jfs> eµs;ti sa i katµi oak;

(24) rhjhuz cldykµff taJ tej kdµj dµy> rµWeµufjjµµy;klz ;Lk;cwµQrgglµl eµµd; µsT Vwjjho tbfl;lgglµl µstµd;rj tµµj khf>

    1. 99 %   2. 80 %   3. 50 %

    4. 20 %   5. 1 %

(25) kd{µ}j d{µ}y; Rthr thAffi sf; nfhz ;L nry;tJl d; njhl ughd g{µ}d;tUk; $wWfS s; ru{µ}ahdJ vJ?

1. FUj{µ} nfhz ;LnryYk; xl{µ}rrd{µ}y; Vwjjho mi uthr{µ} nr{µ}FUj{µ}f; fyqfs{µ}y; css <NkhFNshg{µ}Dld ;, i z Ak;

2. jd{µ} xU nr{µ}FUj{µ}f; fyk; crr mst{µ}y; 4 xl{µ}rrd ;%yf; $Wfi sf; fhtyhk;

3. xl{µ}rrd> fhgd{µ}huhl i rl L Mf{µ}a , uz Lk; FUj{µ}a{µ}y; rk mst{µ}y; fi uAk;

4. k{µ}fg; g{µ}uj hdkhd fhgd{µ}huhl i rl L nfhz ;Lnryyy; nghw{µ}Ki w , U fhgNdwW mad{µ}fs{µ}d ;cUthffj;Jld; rkgej ggLk;

5. FUj{µ}a{µ}y; css fhgd{µ}huhl i rl bd; ngUkgFj{µ} nr{µ}Fo{µ}aqfs{µ}dhy; fhtggLf{µ}wJ.

(26) g{µ}d;tUk; fygg{µ}y{µ}UeJ Ml{µ}rAi l a vyyh ehd;F , ayGfSlDk; Njhdwi yg; ngWk; e{µ}foj fT ahJ? **ABCD** gukgi u myFfs; Rahj{µ}lkhf jd{µ}ggLj j ggLf{µ}dwd vdf; fUJf.

AaBbCCDd x aabbccddd

1. 0.75	2. 0.625	3. 0.5
4. 0.25	5. 0.125	

(27) jhtu , dk; xdw{µ}y; ntsi s e{µ}wg; Gffi sj; Njhw{µ}Wt{µ}f{µ}Fk; , U J}ato{µ}g; Ngj qfs; , dqfyffggl Nghj Njhdwyfs; Cjh e{µ}wg; Gffi sj; Njhw{µ}Wt{µ}jjd. , jNjhdwy; jhtuqfs; g{µ}d;Kf , dqfyffggl Nghj Njhdwy{µ}py; Cjh e{µ}wg; Gffi sf; nfhz l jhtuqfSk; ntsi s e{µ}wg; Gffi sf; nfhz l jhtuqfSk; rkdhd vz z {µ}fi fa{µ}y; Njhdw{µ}d. Cjh e{µ}wg; G{µ} ntsi s e{µ}wg; G{µ}TfF Ml{µ}rAi l aJ vdf; fUJf. , jji yKi wAu{µ}i k njhlughfg; g{µ}d;Utdtw{µ}Ws; ru{µ}ahd $wW vJ?

1. , J xU g{µ}d;dd{µ}{µ}i l thd Nkyhl r{µ} gww{µ}a rejuggkhFk;

2. , J xu; Ml{µ}rahd Nkyhl r{µ} gww{µ}a rejuggkhFk;

3. Cjh e{µ}wk; g{µ}d;dd{µ}{µ}i l thd , ayghf , Uffyhk;

4. , J klqF vj{µ}UUTz i k %yk; t{µ}sffggl yhk;

5. G{µ} e{µ}wj i jj; j{µ}lkhd{µ}ggj{µ}y; , uz ;L , i z ej gukgi u myFfs; rkgej ggl yhk;

(28) Gujj ; njhFgG njhlughd g{µ}d;tUk; $wWfS s; **j t whdJ** vJ?

1. r{µ}y **RNA** %yf; $Wfs{µ};, i uNghNrhk{µ}fs{µ}{µ}dhy; nkho{µ}ngauffggLtj{µ}{µ}y{µ} y.

2. **RNA** nghy{µ}{µ}kNu] ; nehj{µ}ajjj{µ}d; g{µ}uj hd njho{µ}y; **mRNA** i aj; Njhw{µ}Wt{µ}ggj hFk;

3. mj{µ}y; 20 ntt{µ}Nt{µ}W **tRNA** ti ffs; cssd.

4. g{µ}wgGu{µ}i kf; Fw{µ}Ki wa{µ}y; vyyh **64** NfhNlhd{µ}fS k; mk{µ}Ndh mk{µ}yqfshFk;

5. Gujj ; njhFgg{µ}y; gadgLj j gglhj Njhj J , i uNghNrhk{µ};, d ;, U cg myFS k; jd{µ}j j d{µ}ahf , UfFk;

(29) vOej khdkhf t{µ}Ujj{µ}ai l Ak; jhtuf; Fbj njhi fa{µ}y **91%** Md jhtuqfs; r{µ}tgGg; Gffi sAk; mNjNti s **9 %** Mdi t ntsi sg; Gffi sAk; ci l ad. r{µ}tgGg; G{µ} ntsi sg; G{µ}TfF Ml{µ}rAi l aJ. G{µ}j{µ}d ;e{µ}wj{µ}Jld; njhlughfr; r{µ}tgGg; Gffi sAi l a jhtuqfs{µ}y; vdd t{µ}f{µ}j khdi t J}ato{µ} t{µ}Ujj{µ} nra;tdthFk?

1. vyyhk;	2. 0.91	3. 0.54
4. 0.42	5. 0.21	

(30) mfuNuh] ; n[y; k¡d¡dadk; njhl ughfg; g¡d;t Uk; $wWfS s; **j twhdJ** vJ?

    1. k¡d¡dadj j¡d; (**electrophoresis**) NghJ **DNA**, Neu; k¡d;thi a Nehf¡f¡p mi rAk;

    2. g¡uNahf¡p¡F;Fk; Nthyww¡py; **DNA**, d; mi rT tlJ k; j q¡f¡pa¡pUf¡Fk;

    3. k¡d¡dadj j¡d; g¡d; **DNA** gl¡bfi sf; fl GydhFk; xs¡pa¡d; f¡bg; ghuf¡f KbAk;

    4. **DNA** %yf;$Wfs¡pd; %yf;$wW ep¡i wi aj;Jz ¡ptjwF , eElgj i jg; gadgLjj KbAk;

    5. k¡d¡dadj j¡d; g¡d; **DNA** gl¡bfi s tbjhSf;Fs; , lkhww¡k; nra a KbAk;

(31) g¡psh] k¡p¡l;Lfi sg; gadgLjj¡p *E.coli*, d;gukgi u myFfi s Ki sti fg; ngUf¡fk; (**clone**) nra ¡AkNghJ> mNefkhf Ki sti fg; ngUf¡fk; nra a Ntz ¡ba gukgi u myFl d;Ez Z a¡µnfhyy¡p¡a vj¡µuf¡Fk; gukgi u myFfS k; Ki sti fg; ngUf¡fQ; nra a ggLf¡pd¡wd. , ggukgi u myFfs¡pd; gad; njhl ughfr; ru¡ahd $wW g¡d;t Utdtw¡Ws; vJ?

    1. vyyhg; gfw¡µ¡pah g¡psh] k¡p¡l;LfS k; Ez Z a¡µnfhyy¡p vj¡µugGf¡Fu¡pa gukgi u myFfi sf; nfhz ¡Lssd.

    2. Ez Z a¡µf; nfhyy¡p vj¡µugGf¡Fu¡pa gukgi u myFfs; , dw¡p *E.coli* gfw¡µ¡pahf; fyqfs; tsu KbahJ.

    3. *E.coli* fyqfs¡pd; cUkhww¡r; (**transformation**) nrad¡Ki wa¡py; Ez Z a¡µnfhyy¡pfs¡pd; gadgLjj ggLk;

    4. g¡psh] k¡p¡l;Lfs¡pd; g¡dGwkbj¡py¡py; Ez Z a¡µnfhyy¡p vj¡µugGf¡Fu¡pa gukgi uayFfs; Nji tahFk;

    5. Ki sti fg; ngUf¡fk; nra a ggLl¡l gfw¡µ¡pahf; fyqfi s Vi datww¡p¡py¡pUe;J ntww¡p¡µfukhfj; jd¡µggLj;Jtjw¡F Ez Z a¡µnfhyy¡p vj¡µugGf¡Fu¡pa gukgi u myFfs; cjTk;

(32) *E.coli* njhl ughfg; g¡d;t Uk; $wWfS s; **j twhdJ** vJ?

    1. kd¡pjj u¡fS f;fhd t¡µwk¡µ¡pd; **K l** *E.coli* toqfF¡µpwJ.

    2. el¡µpd; Rfhj hujj¡µw¡fhd r¡µwej fhl¡bahf *E.coli* vz z ¡pfi f css J.

    3. *E.coli* xUNghJk; Nehi a VwgLj;Jt j¡p¡py¡ y.

    4. kd¡µj Dl d; *E.coli* nghJt hff;nfhLj J thqFk; njhluGi li ki a nts¡µfhl¡Lk;

    5. *E.coli* mf t¡µj j¡µfi sj; Njhw¡Wt¡pggj¡µpi y.

(33) g¡d;t Uk; $wWfS s; **j twhdJ** vJ?

    1. **DNA** , i le¡µpi ya¡µD}lhf (**Intermediate**) **HIV** i tu] ; g¡dGwkbAk;

    2. **Archaebacteria** fyrRtu; Vi da gww¡µ¡pahf¡fi s t¡µl r; Rwwhl y; ghj¡µgGfS f;F k¡µfTk;jhf¡Fgg¡bf¡f¡f;$ba i t.

    3. mf¡µj; njhl r¡µpd¡fs; toi kahfg; Gwj; njhl r¡µpd¡fi s t¡µl¡ k¡µf mj¡µpfhd Mwwy; tha¡µj i t.

    4. kd¡µj cl ¡µy¡µpy; css rhjhuz Ez Z a¡µpdj j¡µ¡py; (**microbiota**), *Candida albicans* xU gq¡fR MFk;

    5. t¡µpyq¡F t¡µruNeha; (**rabies**) njhw¡Wj¡Yf¡fhd gu¡µpfhukhfr; nra wi fahfg; ngww ca¡µuggww ep¡µgg¡l dj i j jg; gadgLjj KbAk;

(34) gµd;tUk; mqµfµ – gadghLfS s; **j t whdJ** vJ?

1. *Gluconobacter* – tµdhfµµµ cwgj j µ
2. *Thiobacillus* – cNyhfj ; j hJf fsµyµUeJ nrk i gg; gµµj nj Lj j y;
3. *Methanococcus* – caµ;thA cwgj j µ
4. *Aspergillus* – ghyhi l ffl b (cheese) cwgj j µ
5. *Salmonella* – Ez Z aµnfhyyµfs; cwgj j µ

(35) gµd;tUk; caµµdf; $lµqfS s; FWfµa cz Tr; rqµfµyµfi sf; nfhz bUffj j ffJ vJ?

1. ghi y t dk;
2. r t ddh
3. $kGf; fhLfs; (i j fh)
4. J ej µh
5. gul ;i l f;fhL (chaparrals)

(36) , dk; xd;W muµj hdj hf t Ut j w;F kµff; Fi wej nghWgghf mi kt J gµd;tUt dt wWs; vJ?

1. Fi wt hd Fbj ;nj hi fg; gUkd;
2. gukgYf;F cau; Mwwy;
3. caust µy; rµwj j yi l ej cz Tg; goffqfs;
4. xLf;fkhd gukgy; tµR.
5. Fi wej Nghl µbf;fhd Mwwy;

(37) kµfr; rµwej Nruµfi fi af; fhl ;Lk; Nrhb gµd;tUt dt wWs; vJ?

1. eµht µ – eµkz ;l yk;
2. Ez z qfµj ; Jz µfi ffs; - , i l kz ;l yk;
3. XNrhd; gi l – nt ggkz ;l yk;
4. Ez Z aµfs; – khwdkz ;l yk;
5. gwi t fs; – gi l kz ;l yk;

(38) Nghri z klµqfs; ehdµfµi df; nfhz ;l #ownwhFjµ xdwµd; Njwµa Kj yhd cwgj j µjµjµwd; 9000 kJ m^{-2} year^{-1} MfTk; Kj yhd cwgj j µahsufshy; Rthrj j µwfhfg; gadgLj j ggl;l msT 860 kJ m^{-2} year^{-1} MfTk; , Uejhy> , r#ownwhFjµaµd; nkhj j Kj yhd cwgj j µjµjµwd>

1. 9000-860 kJ m^{-2} year^{-1}
2. 9000 + 860 kJ m^{-2} year^{-1}
3. 9000 – 4(860) 860 kJ m^{-2} year^{-1}
4. 9000 + 4(860) 860 kJ m^{-2} year^{-1}
5. 9000 -3(860)· 860 kJ m^{-2} year^{-1}

(39) kd¡j d¡d; t d;\$L nj hl ughd g¡d;t Uk; \$wWfS s; ru¡ahdJ vJ?

    1. J}f;f t d;\$L 58 t¡uwWz ¡q;fi sf; (phalanges) nfhz ¡LssJ.

    2. 11 Nrhb t¡¡yh vdGfs; c s;s d.

    3. J}f;f t d;\$l¡bd; nkhjj vdGfs¡d; vz z ¡pfi f 124 MFk;

    4. mr;R t d;\$L 40 Nrhb vdGfi sf; nfhz ¡LssJ.

    5. kz ¡ l Xl;L vdGfs; 8 c s;s d.

(40) gul;i l f;fhL (rgguy;]) nj hl ughfg; g¡d;t Uk; \$wWfS s; ru¡ahdJ vJ?

    1. mi t kj j¡¡aNfhl;Lg; g¡uNj rq;fs¡py; c s;s d.

    2. mi t el¡z ¡l ki of; fhyq;fi sAk; FWf¡¡a tuz ¡l fhyq;fi sAk; nfhz ¡Lssd.

    3. gfy; Neu nt gge¡¡i y 45°C l j; jhz ¡l yhk;

    4. t Ul hej ki ot¡brrr¡ 40 cm, Yk; Fi w thFk;

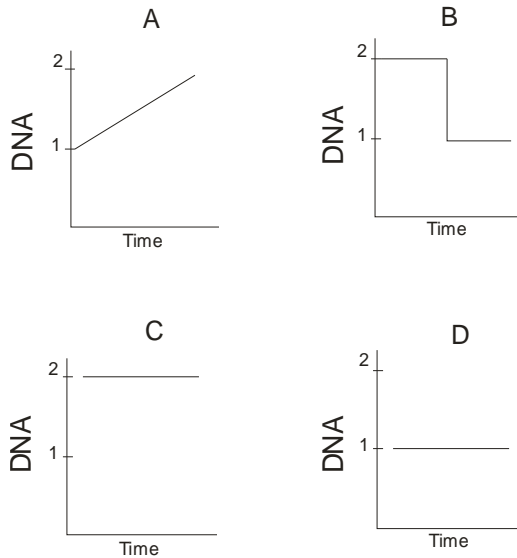   5. jh tuq;fs; Fs¡¡ufhyj j¡¡d¡NghJ mtww¡d;, i yfi s cj¡u¡j; J tp;Lk;

**

mw¡TWjjy¡fs;:

| RI¡nl z ;: |

❖ , t;t¡dhjjhs¡y; t¡i l vOJtjw¡fhf toq¡fggl¡Ls;s , lq¡fs¡y; t¡i l vOJf.
❖ juggl¡Ls;s Mq¡f¡y vOj;Jfs>, yf¡fq¡fs>mi l ahsq¡fi s khjj¡µk;gadgLj;Jf.
❖ jk¡o;vOj;Jfs¡y; **vOj Ntz ;hk;**

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gFj¡B–FWt¡i l t¡dhf;fs;

(1) fy tl;ljj¡d; ehd;F ntt¡NtW fl;l;q¡fs¡y; (stages) fyk;xdw¡y; **DNA** , d;msT vt;thW khw¡wki l f¡w¡J vdgi j f; fhl;Lk; **A, B, C, D** vd;Dk; tu¡ggl¡q¡fs; f¡No fhl;lgg¡Ls;sd. gµd;tUk; $wWfs; xt;nthd¡Wk; ru¡a¡hdi tah> g¡i oahdi tah vdgi j "✓" myyJ "✗" Ig; gadgLjj¡¡f; Fw¡ggl¡Lf.

1. fy tl;ljj¡d; **G1** mtji ji a tu¡ggl k; **A** Fw¡f;f¡wJ.	
2. tu¡ggl k; **B** , i oAUggµ¡i tf; Fw¡f;f¡wJ.	
3. **C** , y; fhl;l¡ggLk; fl;l k; nghJthf Ntu¡Ed¡fs¡y; mtjhd¡f;f¡ggLk;	
4. **D** , dhy; fhl;l¡ggLk; fl;ljj¡y; fyjj¡d; mDNrgr; nrawghLfs; ei l ngWtjr¡y¡i y.	
5. fl;l k; **C** , y; r¡µy fyq¡fs; khwhky; , Uf¡Fk;	

(2) gµd;tUk; $wWfs; xt;nthd¡Wk; ru¡ahh¡a¡d; "✓" vdTk; g¡i oahhq¡d; "✗" vdTk; Fw¡µ¡¡l;Lf;fhl;Lf.

1. f¡nugg¡µd; tl;ljj¡D}lhff; fhNghi tjNuwWfs> nfhOg;Gfs>vz ¡nz af;s>Guj q¡fs; Mf¡µatwµ¡y; Rthr xl;rµ¡Nawwk; ei l ngWk;	
2. fhNghi tjNuwWfs>Guj q¡fs; Mf¡µatwµ¡Yk; ghuf¡ff; nfhOgGfS k; vz ¡nz afS k; t¡i djjµ¡wd;kµ¡ff rfjµ¡ Nrk¡gGg; gjhujj¡q¡fshFk;	
3. nfhOgGfi sAk; vz ¡nz afi sAk; Nghy> fhNghi tjNuwWsµ¡d; xl;rµ¡Nawwjj¡y; mrwi wy;Ji z nehj¡pak;**A** Xu;, i l g; nghUshFk;	
4. , i okz ¡fS f;F nts¡Na fhNghi tjNuwWj; jfujj¡y¡p;y; (break down) i gUNtw xU Kffµ¡a <wW t¡i snghUshFk;	
5. , i okz ¡fS f;F nts¡Na fhNghi tjNuwWfs¡d; f¡bggi l kl;l g; nghRNghupNywwk; ei l ngWk;	

(3) r¡y nehj¡aq¡fs; **A – F** vdf; Fw¡ffggl;Lf; f\No juggl;Ls;sd. **1 – 6** , d; t¡tuz q¡fS fFg; nghUej f;$ba nehj¡aj¡i jj; nju¡T nraf. nghUjj khd $lbDs; "✓" mi l ahsjj¡dhy; Fw¡a¡Lf.

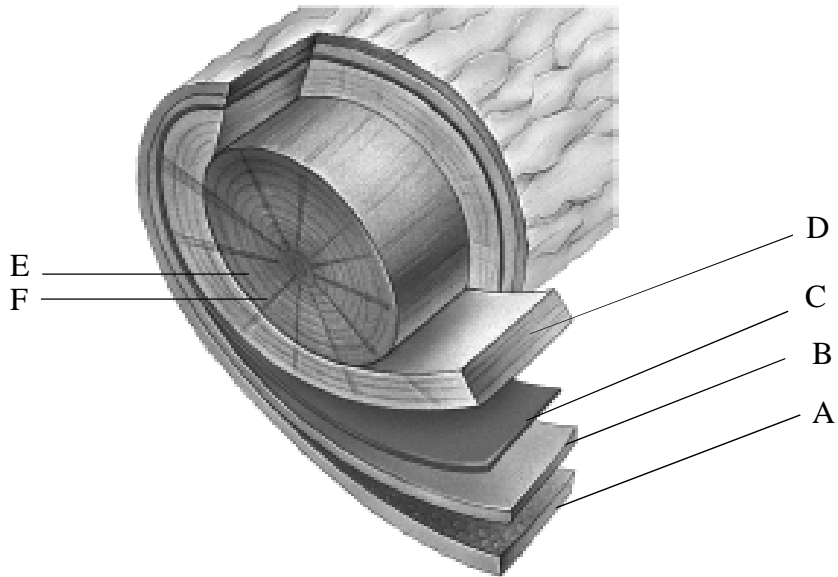| nehj¡ak;	1	2	3	4	5	6
	O_2 cwgjj¡	CO_2 cwgjj¡	NkhywNwh] ; cwgjj¡	f y fNuh] ; cwgjj¡	f¡s¡rNuhy; cwgjj¡	CO_2 gadghLfs;
A - mi kNy] ;						
B - y fNu] ;						
C - fwwNy] ;						
D - i g&Ntw; B fhnghf;] r¡Ny] ;						
E - , y¡gNgR						
F - PEP fhnghf;] r¡Ny] ;						

(4) GNuhl¡b] uhTl d; rkgej¡ggl¡l r¡y , ayGfs; **1 - 9** vdf; Fw¡ffggl¡Lf; f\No juggl;Ls;sd. xt¡nthU fz¡jj¡Yk;css , ayGfi sj¡; nju¡T nra;J> nghUjj khd $lby; "✓" vdf; Fw¡a¡Lf.

, ayG	, i uNrhNghl¡h	NgNahi gwywh	FNshNuhi gwywh
1. khg¡nghUshf cz T Nrk¡pG			
2. fyq¡fs¡py; kd¡wNwhy; cz ¡L.			
3. fyr; Rtu¡fs; , y¡i y.			
4. my;[¡d¡pf; mk¡pyk; cz ¡L.			
5. rTf;F K i sfs; myyJ g¡r¡u¡fs;, y¡i y.			
6. rTf;F K i sAss fyq¡fs; cz ¡hff;ggl¡ yhk;			
7. cz Tr; Nrk¡pG , y¡i y.			
8. FNshugpy; **c** (gri rak) cz ¡L			
9. FNshug¡py; **b** cz ¡L.			

(5) g¡d;tUk;ml¡t i z aµy;mqf¡fs¡¡i lNa fhz ggLk;n¡y , lgngaurr¡¡f;fl¡¡i kgGfS k;
n¡y jlrhffS k; **(taxa)** juggl¡Lssd. Fw¡jj jlNrhdµy **(taxon)** Kjµej mqf¡fs¡dhy;
gadgLjjggLk; , lgngaurr¡¡f; fl¡¡i kgGfs; , twWs; vJ vdgi jf; fhl¡¡g;
nghUjjkhd $l¡by; "✔ "vdf; Fw¡µ¡Lf.

, lgngaurr¡¡f;fl¡¡i kgG	nkhy]¡fh	FNshNuhi gw¡wh	, i uNrhNghl h	rµy¡NahNghuh
rTfFKi s				
g¡r¡µ;				
Nghyµgghj k;				
ji rfs;				
gughj Ki sfs;				

(6) kuk; xdw¡d; Ji z j; jz bd; , f;FWf;F ntl;L Kfj¡j mbggi lahff; nfhz ;L
t¡dhff;S f;F t¡µ¡l vOJf. ngauµ¡gglµ¡l fl¡¡i kgGf;fs; xt¡nthdw¡µ¡Yk; , UfFk;
, ayGfS f;F "✔" vdf; Fw¡µ¡Lf.

	A	**B**	**C**	**D**	**E**	**F**
1. mNefkhd fyq¡fs;, wej¡i t						
2. el¡; flj;Jk; fyq¡fs;						
3. Rguµ¡Ndwwggl¡l fyq¡fs;						
4. , yµ¡ff¡dµ¡Ndwwggl¡l fyq¡fs;						
5. , i oAUggµµ¡t¡µ¡d; %yk; fyq¡fs; g¡µ¡Ak;						

(7) C$_3$ jhtuqfspdJk; C$_4$ jhtuqfspdJk;, ayGfi sg; gpd;tUk; mljti z apy; equgGf.
C$_3$ jhtuqfSld; xggqLkNghJ C$_4$ jhtuqfs; gpd;tUk;, ayGfs; rhughf cauej (↑)
jhoej (↓) xjj (=) tjqfi s ci ladth vdf; FwqjJf; fhljLf.

gpd;tUk; nglbfspy; (↑),(↓),(=) vdf; FwqapLf.

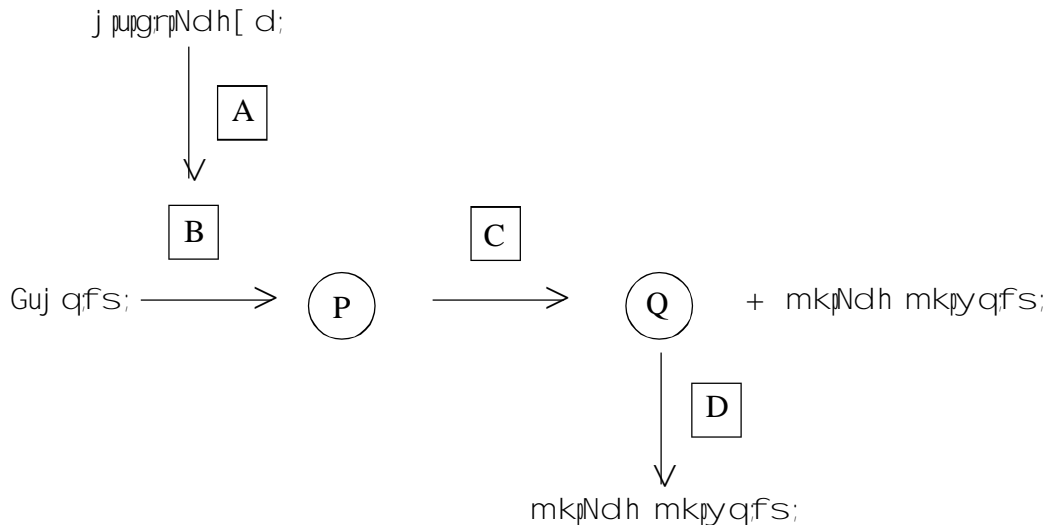|	
1. xsprRthr tjk;	
2. xspjnjhFggqwfhd crr msthd xspr; nrwqT	
3. cwgjjqjjqwd;	
4. CO$_2$ thqfqfspd; vz z qfi f	
5. , i yaqd;, i yeLtqi oaf; fyqfspd; xlrqrd; nrwqT	

(8) fNo juggqLss glbayqpyqUeJ gpd;tUk; flji kgGfs; xtnthdwqpdJk; ruqahd njhoqpyfs;, uz bi dj;njuqpT nraJ> mljti z apy; nghUjjkhd, uz LvOjqJfi s vOJf.

njhoqpyfs;

a – foqjjy;   b – ghJfhjjy;   c – ntggqpi yi ar; rlhffqy;
d – elj; clGf K bahjqpUjjy;   e – NrkqpgG   f – mfQRufFk; njhoqpyfs;

flji kgGfs;	njhoqpyfs;	
	1	**2**
1. tjqaui tr; Ruggqpfs;		
2. near; Ruggqpfs;		
3. Njhyqpd; Nkwqpwhy;		

(9) kdqj dqy; Gujqfspd; rkqghl;Lr; nradKi w> gpd;tUk; gharry; NfhljLggljjqy; fhljggljLssJ. nglbfs; nehjqpaqfi sf; FwqggqpLf; fhljLtJld; tljqqfs;, i lepi yr; Nrui tfi sf; FwqggqpLf; fhljLfqdwd.

jqpgqgqpNdh[d;

        A

Guj qfs; ─────→ P ─────→ Q + mkqpNdh mkqpyqfs;

B   C

        D

mkqpNdh mkqpyqfs;

nghUjjkhd Nrui ti a / nehjaji jj; njuT nraJ> nghUjjkhd $lby; "✓" vdf; FwaLf.

Nrui t / nehjak;	A	B	C	D	P	Q
mi kNdh ngguNl] ;						
, UngguNl] ;						
, U nggi ul;L						
vejNuhi fNd] ;						
rwa nghygnggi ul;Lfs;						
jugrd;						

, enehjaqfs; nfhz ;Lss rkghl;Lr; rhWfi sj; njuT nraJ> cua $lby; "✓" vdf; FwaLf.

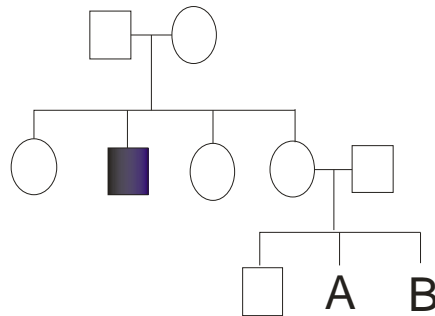| rkghl;Lr; rhW	A	B	C	D
cj ur; rhW				
ri j apr; rhW				
Flw; rhW				

(10) l eJ twwkpdfS k; twwkpdfs; Nj i tggLk; kdj dpd; %dW nrawghLfS k; gpd;tUk; ml;ti z apy; juggl;Lssd. xU Fwjj njhowghlbwF xU twwkpd; Nj i tggLk; NghJ mt;twwkpd; css $lby; "✓" vdf; FwaLf.

nrawghL	twwkpd; A	twwkpd; B_2	twwkpd; B_1	twwkpd; B_6	gNahwwpd;
1. MNuhf;fakhff; fz fi sg; NgZ j y;					
2. fhNghi tj NuwW mDNrgk;					
3. nfhOgG mDNrgk;					

(11) kdj , dgngUffj; njhFjAld; njhlughd gd;tUk; $wWfs; ruahdi tah>
jtwhdi tah vdgi j Ki wNa "✓" myyJ "✗" vd;Dk; Fwi a> mjwF vjNu
, Ltjd; %yk; fhl;Lf.

1. njRjnjRjjNuhd; NrlNlhyad; fyqfsdhy; RuffggLk; mi t rwwi lntsf;fyqfs;vdTk;mi offggLk;	
2. tejhf;fjjdNghJ **1** MtJ xLf;fwgupT> teJg;gwgGffyqfspy; ei lngWk; **2** MtJ xLf;fwgupTJi z teJf;fyqfspy;ei lngWk;	
3. crp%ujjk;jUjjai kffggl (modified) nghnuhfrNrhk;MFk;	
4. Kddw;Fk; Ruggad; kllj j py; rWelu;toad; , U gffqfspYk; NeuFlYf;F Kwgffj j py; $ggud; Ruggfs; mi keJssd.	
5. #yfj j py; Kjurrai lej #yfg; GilgGfs; Nkwgli lapy; mi keJssJld; Kjurrai lahj GilgGfs;i katpi oajjYk; mi keJssd.	
6. taJ tej ngz z d; Nahdklyd; clgi l mNef NkwNwhy; Ruggfi sf;nfhz ;LssJ.	

(12) FUjAi wahNehAss kdji df;nfhz l FLkgjjd;tkrji jf;fhl;Lk; tugglk;
fNo juggl;LssJ. gd;tUk; $wWfs; xtnthd;Wk; ruahdi tah> jtwhdi tah
vdgi j "✓" myyJ "✗" vdw Fwal;Lf;fhl;Lf.

A vdr; Rlbf; fhl;gglbUf;Fk; egu; Mz had; FUjAi wahNeha;fF mtud; epfojfT **0.5** MFk;	
B vdr; Rlbf; fhl;gglbUf;Fk; egu; ngz z had; mtu; fhtahf , UggjwFupa epfojfT **0.25** MFk;	
B vdr; Rlbf; fhl;gglbUf;Fk; egu; ngz z had; MNuhffpakhd kdji dj; jUkz k; Kbjj gd;du; FUjAi wahNeha; css kfd; mtUfFf;fpi lffyhk;	
A mdw B FUjAi wah Neha;fFupa vjUUi tf;fhtyhk;	
, t;tkrjjpy; fhz ggLk; FUjAi wahNeha; css Mz ; jdJ jei japl;kUeJ FUjAi wahNeha;fhd vjUUi tg;ngwwUf;fyhk;	

(13) gukgi uayf¡d;xU gFj¡a¡d;e¡Afff¡s¡Nahi ul;Lj;njhlu;f¡No vLj;Jf;fhl¡ggLf¡wJ. , uz;L gl¡bi ffs¡y;xd¡W khjj¡µNk fhl¡ggl¡Ls¡si jf;ftd¡f;Ff. **DNA** , wFf; fb; **mRNA** c k;, ggukgi u myf¡y;njhFffggl¡l GujKk;juggl¡Ls¡sd. mj;Jld; gukgi u myf¡d;t¡fhu¡ tbtjj¡d;e¡Afff¡s¡Nahi ul;Lj;njhl Uk;juggl¡Ls¡sJ.

DNA …........................   5'….. ATG GCT GGC AAT CAA CTA TAT TAT…3'

mRNA …......................   5'….. AUG GCA GGC AAU CAA CUA UAU UAU..3'

Guj k; …........................   Met-Ala-Gly-Asn-Gln-Leu-Tyr-Cys….

t¡fhu¡g;gukgi uayF ….   5'….. ATG GCT GGA ATC AAC TAT ATT AT…3'

g¡d;tUk;$w¡Wfs;xtnthd¡Wk;ru¡ahdi tah>jtwhdi tah vdgi j "✓" myyJ "✗" vd¡w Fw¡a¡l;Lf;fhl;Lf.

1. fhl¡ggl¡Ls¡s **DNA** gl¡bi f **RNA** nghy¡µ¡kNu] ;nehj¡aj¡j¡d¡hy;mrrhf (**template**) gad¡gLj¡jggl¡l xd¡whFk;	
2. e¡µgG **DNA** gl¡bi fAq¡$l **mRNA** %yf¡$w¡ wj;Njhw¡Wt¡f¡fyhk;	
3. t¡fhukhdJ Gss¡ t¡fhukhf t¡tu¡f¡ggLf¡wJ.	
4. t¡fhu¡g;gukgi uayF Gujj¡j cwgj¡j¡nra¡tj¡¡yi y.	
5. nttNttW Kjyhd fl¡l¡i kgi gf;nfhz¡l Gujj¡j t¡fhu¡g;gukgi u myF cwgj¡j¡nra¡Ak;	

(14) caµ¡ayd;r¡y Kfff¡a rhji dfSk;mtw¡Wld;rkgej¡ggl¡l t¡QQhd¡f¡s¡d;ngauf¡Sk; f¡No cssd. xtnthU t¡QQhd¡a¡d;ngai uAk; Fw¡j¡J e¡wFk; vOj;Jfi sg; gad¡gLjj¡¡ mtu¡fS fFu¡a rhji dAld;nghUj;Jf.

(A) Watson   (B) Johansen (C) Southern   (D) Wallace   (E) Morgan

1 - **DNA** xw¡w¡w¡naLjji y (**blotting technique**) t¡Ujj¡¡ _____ nraji k.

2 - e¡w%ujj¡qfs¡d;g¡wgGu¡i kg;glj¡i j (**genetic map**) jahu¡jji k. _____

3 - , aw¡i fj;Nju¡Tf;nfhsi fi a t¡Ujj¡¡ nraji k. _____

4 - **DNA** , d;fl¡l¡i kgi gf;fz¡Lg¡bjji k. _____

5 - nkd¡l;y¡d¡hy; fz¡Lg¡bffggl¡l ghukgu¡a myF fSf;Fg; gukgi u myFfs; vd;Dk; ngai u toqf¡ai k. _____

(15) Ez z qfpfspd; %yk; cz T gOji lji y> gy mff; fhuz pfS k; Gwf; fhuz pfS k; ghjpffpdwd. Ez z qfpfspd; tsurrpapYk; nrawghlbYk; nry;thfFss vejf; fhuz pAk; cz T gOji ljypYk; nry;thfFr; nrYj;Jk; rhjhuz epi yi kfspd; fb> gpd;tUk; cz T ti ffspy; tsuf$ba Ez z qfp ti fapi df; fhli "✓"vd;Dk; mi l ahsjjpdhy; FwpapLf.

	gp] fllLfs;	khlbi wrrp	cggpll cz T	rplp Nruej cz T	vYkprrQ; rhW
gfwllpah					
G+Qrz k; /kJt k;					
i tu] ;					

(16) , t;tpdh> tupggl jjpy; njspthff; fhlllggl Lss MNuhffppakhd fhz p epuTi f (Sanitary land fill) l mbggi l ahff; nfhz lJ.
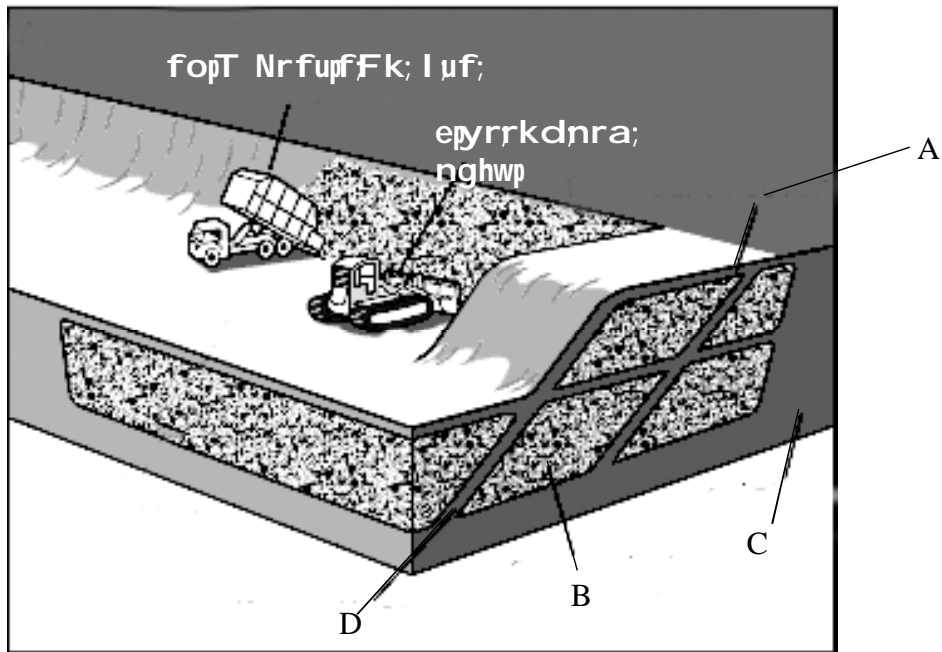
gpd;tUk; nrawghLfs; , l kngWk; Kffpa , l qfi sj; (Key places) njupTnra;J> cupa $l by; "✓"vdf; FwpapLf.

	A	B	C	D
1. fopTfspd; fhwwpdwpa gpupi f				
2. Juehwwji jj; jLfFk; nghUs;fs;				
3. tpyq;Ffspd; fturrpaj; jLfFk; nghUs;fs;				
4. khrhffpfs; ellKi w mupjj YfF csshff$ba gpuNjrk;				

(17) (i)   i ejurd;gj¡f¡Fk;gwwµ¡ah> i ejj¡Nuwwhf¡Fk;gwwµ¡ah> i ejurd¡wf¡Fk;gwwµ¡ah
         vdgd %yk; i ejurd; tl¡ljj¡y **N** MdJ kz z ¡y; nttµNtW , urhad
         tbtq¡fshf khwwggLf¡dwJ.

         , g; gwwµ¡ar; nrad¡Ki wfs;Ki wNa , t¡thW t¡tu¡f¡ggLf¡dwd.

         a. jhojjy> xlrµNawwy> xlrµNawwy;
         b. jhojjy> xlrµNawwy> jhojjy;
         c. jhojjy> jhojjy> xlrµNawwy;
         d. xlrµNawwy> xlrµNawwy> jhojjy;

         ru¡ahd Jyq¡fi yf; Fw¡jJf; fhl;Lk; nghUjjkhd nglµ¡ba¡Ds; " ✔ "vdf;
         Fw¡ba¡Lf.

a.	b.	c.	d.

   (ii) kz ;tsj i j **NkkgLjjhj** gwwµ¡ah g¡d;tUtd twµWs; vJ?
         nghUjjkhd nglµ¡ba¡Ds; " ✔ "vdf; Fw¡ba¡Lf.

i ejurd; gj¡f¡Fk; gwwµ¡ah	
i ejj¡Nuwwhf¡Fk; gwwµ¡ah	
i ejurd¡wf¡Fk; gwwµ¡ah	

(18) , q¡F IUCN nreju Tg; ghFghl;L Ki wi k juggl;LssJ.
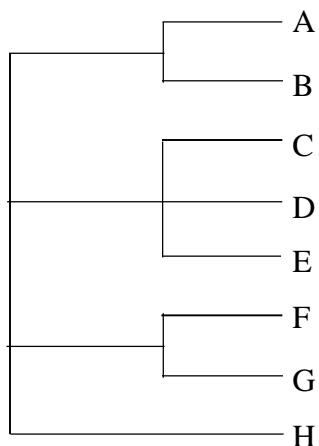
g½d;tUk; ml¡l t i z ¡ ag; G½ujjµ½ nra¡f.

mrŘWjj y;kl¡l KwŇru¡fﬁi fAk;mq¡fﬁAk;	nghUjjÑkhd mrŘWjj y;t£Fjﬁ½i a "✓" vd¡Dk; Fwµ½%yk; fhl¡Lf.			
	moµ½Jtµ½j	mrŘWjjŶYfﬁF csﬁshfﬁa	Fi wthd Mgj;J	NtW
C - *Dermochelys coreacea*				
D - *Caretta caretta*				
B- *Alphonsea hortensis*				
A- Woolly mammoth				
G - *Crocodylus palustris*				
H - *Oecophylla smaragdina*				
F - *Melanochelus trijuga*				
E - *Elephas maximus*				

(19) xd¼µ½a thoµ½Fµ½a <l¡l q¡fs; , uz ;L mq¡fﬁS fﬁFk; gaDssjhfNth> Xuq¡fﬁF gaDssjhfNth> mJ Xuq¡fﬁFj; j¡½q;F gaggjhfNth , Uf¡fyhk;. g½d;tUk; xd¼µ½a thoµ½Fµ½a njhluGi l i k xtŇthu; mq¡fﬁaµ½Yk; edi k gaggJ **(+)**, j¡½q;F gaggJ **(-)** myyJ ghjµ½ggJ **(0)** , yi yah vdf; Fwµ½ggµ½Lf. xtŇthu; mq¡fﬁaµ½d; Kd¡Dss $l¡bYk; **+, −, 0** vdf; Fwµ½ggµ½Lf.

mq;fﬁ 1		mq;fﬁ 2	
Rhizobium		Nrhah mti uj;jhtu Ntu;	
Dendrobium Xuf¡fµ½l;L		*Dipterocarpus* jhtuk;	
g½j¡½ r my;fh		m] Ňfhi kfŇfhwwhg; gqfRf¡fs;	
Clostridium tetani		kdµ½jd;	
Hydra		ez ;L	
Loranthus		khkuk;	

(20) , yqi fapd;j i uf;Fupa #ownwhFjpfspd;rpy mkrqfi sf;fhl;Ltjw;Fg;gpd;tUk; ml;l ti z apd;nghUjjkhd $Lfspy; "✓"vdf; Fwpapl;Lg; G‡ujjp nraf.

	mad kz ‡y ki of; fhLfs;	ki yrhuej fhL	vd‡Wk; gRi kahd c yu; fygGf; fhL	KIGjuf; fhLfs;	rtddhffs
vd‡Wk; gRi kahd jhtuqfs;					
twz ‡yj;jhtuqfs;					
jhtunthl‡bfs;nghJthdi t					
kuqfs; toi kahf mOjjkhd gli lfi sf;nfhz‡li t					
njhl uhd t‡jhdk;					
mbffb j‡cz ‡hjy;					

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