छत्तीसगढ़ माध्यमिक शिक्षा मण्डल, रायपुर

tho foKku

d{kk XII

lEiy i'u&i=

¼fo|kfpr bdkb½

NÙkhlx< ek/;fed f'k{kk e.My] jk;ipj

i'u & i= dh ;kstuk

Scheme of Question Paper

fo"k;%& tho foKku

i.kkd % 75

le; % 3 ?kaVs

ijh{kk % gk;j ld.Mjh

¼v½ 'k{kf.kd mnn'; d vuqlkj eku

(A) Weightage as per Educational objective:

lO ØO	mnn';		vad	ifr'kr
1-	Kku (Knowledge)		37	49-3%
2-	vocks/k (Understanding)		25	33-3%
3-	vuqi;ksx ,oa dk'ky (Application & Skill)		13	17-4%
		;ksx	75	100%

¼c½ bdkbokj vadksa dk eku

lO ØO	bdkbZ dk uke	bdkbZ ij vkaVfor vad	i'u&i= d ik:i vuqlkj vkaVfor vad
1-	ik/kuk e cgqdk'kdh;rk	15	15
2-	tUrqvksa e cgqdk'kdh;rk	20	20
3-	ifjorZu] of)] fodkl	10	10
4-	thou dh fujUrjrk	20	20
5-	tho foKku d vuqi;ksx	10	10
6-			
7-			
8-			
9-			
10-			
11-			
12-			

¼l½ dfBukbZ Lrj (Difficulty Level)

lO ØO	mnn';		vd	ifr'kr
1-	ljy (Easy)		29	38-6%
2-	vkSlr (Average)		33	44-0%
3-	dfBu (Difficult)		13	17-4%
		;kx	75	100%

¼n½ i'ui= fn'kk fun'k ,oa fodYi ;kstuk %&

(Instruction's & Scheme of Option for Question Paper)

- oLrfu"B i'u e ¼05½ cgfodYih; i'u rFkk ¼05½ fjDr LFkku dh ifr@mfpr tkMh cuk, dk i'u fn;k tkoxk vkj ;g iR;d lV e i'u Øekd 1 gkxk A
- iR;d lV e 1] 2 ,oa 3 vdk d i'uk e fHkUurk jgxh A leLr 04 vd ;k bll vf/kd vdk d y?kmÙkjh; rFkk nh?kmÙkjh; i'uk e fodYi fn;k tkuk g A fodYi i'u mlh bdkbZ l rFkk leku mnn';k d jgx A 04 vd ;k bll vf/kd vdk d i'u iR;d lV e ,d leku jgx A
- vf/kdre mÙkj lhek vfry?kmÙkjh; ½2 vd@30 'kCn½ ¼3 vd@50 'kCn½
  y?kmÙkjh; ¼4 vd@75 'kCn½ ¼5 vd@150 'kCn½
  nh?kmÙkjh; ¼6 vd ;k vf/kd@250 'kCn½

i'u & i= dk CyfiUV

Blue Print of Question Paper

fo"k;&& tho foKku

i.kkd & 75

le; & 3 ?kV

ijh{kk & gk;j ld.Mjh

bdkb l-Ø-	bdkb	bdkb ij vkcfVr vd	vdokj i'u							dy i'u
			1 vd	2 vd	3 vd	4 vd	5 vd	6 vd	6 vd ;k bl l vf/kd	
1	ik/kk e cgdk'kdh; rk	15	1	1	2	&	&	1		¼1½ $ 4
2	tUrvk e cgdk'kdh; rk	20	3	2	&	2	1	&		¼3½ $ 5
3	i tuu] of)] fodkl	10	2	&	1	&	1	&		¼2½ $ 2
4	thou dh fujUrjrk	20	2	&	1	1	1	1		¼2½ $ 4
5	tho foKku d vui;kx	10	2	2	&	1	&	&		¼2½ $ 3
6										
7										
8										
9										
10										
11										
12										
	;kx	75	1¼10½	5	4	4	3	2	&	¼1½$18 ¾ 19

Set - A

gk;j ld.Mjh Ldy lfVfQdV ijh{kk

Higher Secondary School Certificate Examination

lEiy&i'u i=

SAMPLE PAPER

fo"k; & (Subject) - tho foKku **le; 3 ?k.Vk** (Time- 3 Hrs)

d{kk & (Class) - 12oh **i.kkd 75** (M.M.)

(Instruction) & ¼fun'k½

1- lHkh i'u gy djuk vfuok;z g A

Attempt all the Question

2- i'u Øekd 01 e 10 vd fu/kkfjr g A nk mi[k.M g A [k.M ^^v** e 05 cgfodYih; i'u rFkk [k.M ^^c** e 05 fjDr LFkkuk dh ifr vFkok mfpr lc/k tkfM, A iR;d i'u d fy, 1 vd vkcfVr g A

Q. No. 01 Carries 10 Marks. There are two sub-section, Section A is Multiple choice carries 05 marks and section B is fill in the blanks or match the column carries 05 marks.

3- i'u Øekd 02 l i'u Øekd 06 rd vfr y?kqRrjh; i'u g A iR;d i'u ij 02 vd vkcfVr g A mRrj dh vf/kdre 'kCn lhek 30 'kCn A

Q. No. 2 to 06 are very short answer type question & it carries 02 marks each. Word limit is maximum 30.

4- i'u Øekd 07 l i'u Øekd 10 rd y?kqRrjh; i'u g A iR;d i'u ij 03 vd vkcfVr g A mRrj dh vf/kdre 'kCn lhek 50 'kCn A

Q. No. 07 to 10 are short answer type question & it carries 03 marks each. Word limit is maximum 50.

5- i'u Øekd 11 l i'u Øekd 14 rd y?kqRrjh; i'u g A iR;d i'u e vkrfjd fodYi g vkj iR;d i'u ij 04 vd vkcfVr g A mRrj dh vf/kdre 'kCn lhek 75 'kCn A

Q. No. 11 to 14 are short answer type question & it carries 04 marks each. Each question has internal choice. Word limit is maximum 75.

6- i'u Øekd 15 l i'u Øekd 17 rd nh?kmRrjh; i'u g A iR;d i'u e vkrfjd fodYi g vkj iR;d i'u ij 05 vd vkcfVr g A mRrj dh vf/kdre 'kCn lhek 100 'kCn A

Q. No. 15 to 17 are long answer type question & it carries 05 marks each. Each question has internal choice. Word limit is maximum 100.

7- i'u Øekd 17 l i'u Øekd 19 rd nh?kmRrjh; i'u g A iR;d i'u e vkrfjd fodYi g vkj iR;d i'u ij 06 vd vkcfVr g A mRrj dh vf/kdre 'kCn lhek 150 'kCn A

Q. No. 17 to 19 are long answer type question & it carries 06 marks each. Each question has internal choice. Word limit is maximum 150.

Ik'Uk 1¼v½ Lkgh f0kdYIk PkfUk,k &

1- fUkEUk Ek Lk ,kg XkfFk Ukgh g&

v- vXUkk'k,k Ck- Ikh,k"k Lk- ,MhUkYk n- 0kDd A

2- Ikjk Xk UkfYkdk d vdj.k RkFkk bLkdh 0kf) d fYk, ,kg RkR0k vk0k',kd gkRkk g&

v- LkØkTk Ck- Ckkjkuk Lk- dfYLk,kEk n- IkkVf'k,kEkA

3- DNA mIkfLFkRk gkRkk g&

v- d0kYk dUæd ,0k gfjRk Yk0kd EkA Ck- d0kYk dUæd Ek

Lk- d0kYk Ekkbvkdkf.M,kk Ek n- mIk,kDRk LkHkh Ek A

4- Hk.k dk"k Ek UkkfHkdk dh Lk[,kk gkRkh gA

v- 2 Ck- 4 Lk- 6 n- 8

5- NÙkhLkXk< jkT,kk dk gCkYk jkT,k bLkfYk, ?kkf"kRk fd,kk x;k g&

v- 0kUkk"kf/k Ck- 0kUk Lk0k/kUk Lk- vk,k0kfnd n- 0kUk Lkj{k.kA

Que 1 (A) Select the best choice-

(i) It is not the gland from the following-

(a) Pancreas (b) Pitutiary (c) Adrenal (d) Kidney

(ii) This element is essential for the germination and growth of pollain tube-

(a) sucrose (b) Boron (c) Calcium (d) Potassium

(iii) DNA is present in -

(a) only in nucleus and chlorophyll (b) only in nucleus

(c) only in mitochondria (d) All in above

(iv) The number of nucleus in embryosac is

(a) 2 (b) 4 (c) 6 (d) 8

(v) Chattisgarh state is called herbal state because of

(a) Forest medicine (b) Forest culture

(c) Aruvedic (d) Forest conservation

¼Ck½ fjDRk LFkkUk dh IkfRk dhfTk,&

1- vkOkÙkCkhfTk¸kk Ek Hk.kIkk"k &&&&&&&&gkRkk gA

2- ¸khLV dkf'kdkvk }kjk fd.OkUk&&&&&&&&&&UkkEkd ,UTkkbEk dh Lkgk¸kRkk Lk fd¸kk TkkRkk gA

3- EkkUkOk EkfLRk"d dk LkCkLk CkMk HkkXk &&&&&gkRkk gA

4- dN Lk{EkTkhOk vIkUkh TkfOkd fØ¸kkvk }kjk HkfEk dh mOkjk'kfDRk Ck<k nRk g bUg&&&&&&dgRk gA

5- TkCk jDRk Ek fIkRRk Ok.kd dh LkkæRkk Ck< TkkRkh g Rkk bLk fLFkfRk dk &&&&&&&&&&&jkXk dgRk gA

(B) Fill in the blanks -

(i) Endosperm in angiosperm is .....

(ii) Fermentation is done by ..... enzymes in yeast cells.

(iii) The biggest part of the brain is .....

(iv) some of the micro-organism increass the ..... of the soil.

(v) When the concentratin of bile pigment increases in the blood then this position is called ..... diseases.

Ik'Uk 2- RkYkLkh Ek fdLk Ikdkj dk Ik"IkØEk Ikk¸kk TkkRkk g\

Which type of inflorescenes in found in Tulsi?

Ik'Uk 3- fUkEUk Ikk/kk d dkUk Lk HkkXk [kk| :Ik Ek mIk¸kkXk gkRk g\

¼v½ eVj ¼c½ vky

Which part of the following plant is used as edible part?

(a) Pea (b) Potato

Ik'Uk 4- ghUkRkk TkU¸k IkfRkjk/kdRkk fdLk dgRk g\

What is called immuno-deficiency?

Ik'Uk 5- S.A. UkkM ,Ok A.V. UkkM Ek dkb nk vRkj fYkf[k, A

Write any two differences between S.A. node and A.V. node.

Ik'Uk 6- /kEkfUk¸kk Ek dIkkV Ukgh gkRk g Ikj Rk f'kjkvk Ek dIkkV ik; tkr g] D;k\

Valves are found in veins but they are absent in arteries, why?

Ik'Uk 7- fn¸k Xk¸k dk¸k fdLk gkEkkUk }kjk IkfRkIkkfnRk fd¸k TkkRk g

v- XkHkk'k¸k dh Ikf'k¸kk dk f'k'k TkUEk d LkEk¸k fLkdMUkk

Ck- Fkkbjkb M Lk Fkk¸kjkbfDLkUk L«kkOk.k dk Ikfj Rk djUkk A

Lk- Ek«k Lk TkYk dh gkfUk dk dEk djUkk A

By which harmone, following functions are performed;

(a) Contraction of muscles of uterus at the time of delivery.

(b) Induction of thyroid for thyroxine secretion.

(c) Loss of water from urine.

Ik'Uk 8- vkfDLkUk d dkb RkhUk IkEk[k mIk¸kkXk fYkf[k¸k \

Write any three main functions of Auxine?

Ik'Uk 9 j/kk d [kYkUk ,Ok Ckn gkUk dh fØ¸kk dk K^+ LFkkUkkRkj.k Okkn d }kjk LkEkÖkkb¸k\

Explain the process of opening & closing of stomata on the basis of K^+ transfer.

Ik'Uk 10 OkkVLkUk ,Ok Øhd d vUkLkkj DNA dk LkEkkUkIkkfRkd fPk«k CkUkk dj fUkEUk dk UkkEkkfdRk dhfTk, &

1- 'kdjk v.k

2- QkLQkfjd vEYk

3- UkkbVkTkhUkLk {kkj A

Labelled the following with the proportion of D.N.A. as per Crick & Watson -

(i) Sugar molecule

(ii) Phosphoric Acid

(iii) Nitrogenous base.

Ik'Uk 11- ROkPkk d dkb Pkkj dk¸k fYkf[k,A

Write any four main functions of skin (integumentary system)

¼vFkOkk½

ddkYk Rk«k d dkb Pkkj lkEk[k dk,k fYkf[k, \

Write any four main functions of Skeletal system.

lk'Uk 12- TkhUk f0kfUkEk,k d dkb Pkkj EkgROk fYkf[k, \

Write any four importance of crossing over.

¼vFkOkk½

EkkUkOk Ek fYkXk fUk/kkj.k fdLk lkdkj gkRkk g\

How sex determination takes place in man.

lk'Uk 13- LkCTkh lknkUk djUk OkkYk dkb Pkkj iknik d LkkEkkU,k ,Ok OkKkfUkd UkkEk fYkf[k,\

Wirte the common and botanical name of any four vegetable yielding plants.

¼vFkOkk½

'kgn] j'kEk] EkDRkk] Ykk[k lknkUk djUk OkkYk TkRkvk d LkkEkkU,k ,Ok OkKkfUkd UkkEk fYkf[k, \

Write the common and scientific name of animals, which give Honey, silk, pearl and lac.

lk'Uk 14- EkkUkOk 0kDd d YkCkOkRk dkV dk UkkEkkfdRk fPk«k CkUkkb,k

Draw labelled diagram of L.S. of Human Kidney.

¼vFkOkk½

EkkUkOk ân,k d YkCkOkRk dkV dk UkkEkkfdRk fPk«k CkUkkb,k\

Draw labelled diagram of L.S. of Human Heart.

lk'Uk 15- dUædh,k vEYk dk dkUk Lkk lkdkj lkk,k% vUkOkkf'kd iknkFk dgYkkRkk g\ bLk vEYk dh LkjPkUkk LIk"V dhfTk,A

Which form of nucleic acid is called genetic material? Explain the structure of this material.

¼vFkZkk½

vUkZkkf'kd dkM D;kk g\ bLkdh dkb Pkkj lkEk[k f0k'k"kRkk,a fYkf[k,A

What is called genetic code? Write its any four characteristics.

lk'Uk 16- fUkEUk vRk%L«kkZkh XkfFk;kk dgk lkk;kh TkkRkh g ,Zk bUkd }kjk L«kkkf0kRk gkEkkULk dk UkkEk fYkf[k, RkFkk bUkd vYi L=ko.k Lk EkkUkZk 'kjhj lkj D;kk lkHkkZk lkMRkk g\

1- Fkk;kjkbM XkfFk

2- ,fMUkYk XkfFk A

Where the following endocrine glands are found? Write name of harmone secreted by these glands, and the effects of hyposecretion of these glands.

(i) Thyroid gland

(ii) Adrenal gland

¼vFkZkk½

Fkk;kjkbM XkfFk ,Zk ,fMUkYk XkfFk EkkUkZk 'kjhj Ek dgk lkk;kh TkkRkh g bUkd }kjk L«kkf0kRk gkEkkULk dk UkkEk fYk[kRk g, bUkd vfRkL«kkZk.k Lk 'kjhj lkj D;kk lkHkkZk lkMRkk g\

Where the thyorid and adrenal glands arefound in human body and what is their secretion. Write its name and the effects of their hypersecretion.

lk'Uk 17- Zk;kRkk fdLk dgRk g\ Zk;kRkk d dkj.k 'kjhj Ek gkUk ZkkYk dkb Pkkj Ckkâ;k dkf'kdh;k lkfjZkRkUk fYkf[k,A

What is called ageing? Write any four extraceular changes caused by aging.

¼vFkZkk½

Zk;kRkk dk ^^dkYkhTkUk Zkkn** D;kk g\ Zk;kRkk d dkb Pkkj lkEk[k Yk{k.k fYkf[k,A

What in collegen theory of ageing? Write any four characteristic of age-ing?

Ik'Uk 18- ,d Ok.kkU/k Ik:"k RkFkk Okkgd L«kh }kjk mRIkUUk LkRkkUkk dh Ok.kkU/kRkk dh Ok'kkXkfRkdh dLkh gkXkhA j[kkfPk«k }kjk LkEkÖkkb¸kA

What will be heriditary of the family where a colour blind man got married with a carrier woman. Explain with ray diagram.

¼vFkOkk½

,d ghEkkQhfYkd Ik:"k RkFkk LkkEkkU¸k L«kh }kjk mRIkUUk LkRkkUkk dh Ok'kkXkfRkdh dLkh gkXkhA j[kkfPk«k }kjk LkEkÖkkb¸k\

When a haemophilic man marry a general woman then what will their family heriditary. Explain with ray diagram.

Ik'Uk 19- UkkEkkfdRk fPk«k CkUkkdj Ik¸kkXk }kjk fLk) dhfTk, fd idk'k Lk'Yk"k.k Ek vkDLkhTkUk XkLk fUkdYkRkh gA

Prove with the help of experiment and labelled diagram that oxygen gas is evolved during photosynthesis.

¼vFkOkk½

UkkEkkfdRk fPk«k CkUkkdj Ik¸kkXk }kjk fLk) dhfTk, fd Ikdk'k Lk'Yk"k.k dh fØ¸kk Ek dkCkUk Mkbvk DLkkbM dh vkOk'¸kdRkk IkMRkh g\

Prove with the help of experiment and labelled diagram that carbon dioxide is essential for photosynthesis.

lEiy mRRkj lV&,

mRRkj 1-¼v½

1- ¼n½ 0kDd

2- ¼Ck½ Ckkjk Uk

3- ¼n½ mlk¸kDRk LkHkh

4- ¼n½ 8

5- ¼v½ 0kUkk"k/kh

¼Ck½

1- Hk.kik"kh

2- TkkbEkTk

3- ljhoe

4- Tkf0kd m0kjd

5- lkhfYk¸kk A

mÙkj 2- RkYkLkh Ek dVpØ (verticillaster) lkdkj dk lk"lk ØEk gkRkk gA

mRRkj 3 EkVj CkhTk ¼QYk ½ 1 vd

vkYk&RkUkk ¼dUn½ 1 vd

mRkj 4 fdLkh Hkh Tkh0kk d 'kjhj Ek lkk¸k TkkUk 0kkYk lkfRkjk/kh {kEkRkk Ek vkUk 0kkYkh B & T cell dEkh dk ghUkRkk tU; lkfRkjk/kdRkk dgRk gA LkEkd{k mÙkj fy[ku ij 2 vd

mRRkj 5

S.A. UkkM	S.A. UkkM
1- ân¸k dh /kMdUk mRlkUUk djRkk gA	1- vk0kXkk dk CkUMYk vkQ fgTk Ek HkTkRkk gA
2- nkfgUk vfYkUn Ek fLFkRk gkRkk gA	2- nkfgUk ,fM¸kEk fNæ ¼fuy;½ d lkkLk fLFkRk jgRkk gA

¸kk vU¸k LkEkd{k mÙkj A lkR¸kd Lkgh vURkj lkj ,d vd

mRRkj 6- /kEkfUk¸kk Ek #f/kj vf/kd 0kXk Lk CkgRkk g bLkfYkf, #f/kj f0kijhRk fn'kk Ek CkgUk

dh LkHkk0kUkk Ukgh gkRkh fdRk f'kjkvk Ek :f/kj /khEkh XkfRk Lk cgRkk g bLkfYk, #f/kj f0kIkjhRk fn'kk Ek Uk Ckg bLkfYk, f'kjkvk Ek dIkkV Ikk,k TkkRk gA

/kEkfUk,kk 1$1 vd f'kjkvk d fYk, ¾ 2 vd

mRRkj 7 ¼v½ gkEkkUk&fjYkDLkhUk 1 vd

¼Ck½ Fkk,kjkbM LVhEkYkfVXk gkEkkUk (TSH) 1 vd

¼Lk½ 0kLkkIkfLkUk 1 vd

mRRkj 8- vkDLkhUk gkEkkUk d dk,k & RkhUk dk,k fYk[kUk Ikj 3 vd

mRRkj 9- LkØh,k K^+ LFkkUkkRkj.k 0k.kUk Ikj 3 vd

Ek[,k fCkn & LVkEkVk dk K^+ dk fYk,kk TkkUkk LVkEkVk dk CkUn gkUkk ,0k K^+ dk XkkM dkf'kdk Lk Ckkgj TkkUkk RkFkk H^+ dk EkkUk Lkgk,kd dkf'kdkvk Ek vkUk d dkj.k LVkEkVk dk [kYkUk dh fØ,kk A

mRRkj 10- IkR,kd Lkgh fp= ij 1½ vd] UkkEkkdUk Ikj 1½ vd 3 vd

mÙkj 11- R0kPkk d Pkkj dkb Pkkj dk,k fYk[kUk Ikj 1×4 vd 4 vd

vFk0kk

ddkYk Rk«k d dkb Pkkj dk,k fYk[kUk Ikj IkR,kd Ek 1×4 vd 4 vd

mRRkj 12- Tkh0k f0kfUkEk,k d dkb Pkkj EkgR0k fYk[kUk Ikj IkR,kd Ek 1×4 vd 4 vd

vFk0kk

IkfØ,kk dk 0k.kUk djUk Ikj 4×1 = 4 vd

mRRkj 13- dkb Pkkj Ikknlkk d LkkEkkU,k UkkEk Ikj IkR,kd Ek ½ vd×4

RkFkk 0kUkLIkfRkd UkkEk Ikj ½+½ = 1×3 vd

vFk0kk

'kgn] j'kEk] EkDRkk] Ykk[k nUk 0kkYk TkRk dk UkkEk 0kKkfUkd UkkEk

'khIk LkkEkkU,k UkkEk fYk[kUk Ikj ½ vd ,0k 0kKkfUkd UkkEk fYk[kUk Ikj ½+½ = 1×4 ¾ 4 vd

mRRkj 14 EkkUk0k 0kDd YkCk0kRk dkV dk fPk«k CkUkkUk Ikj 2 vd

dEk Lk dEk Pkkj UkkEkkdUk djUk Ikj 2 vd dYk 4 vd

vFk0kk

EkkUk0k ân¸k d L0kPN fPk«k CkUkkUk Ikj 2 vd

,0k dEk Lk dEk Pkkj UkkEkkdUk Ikj 2 vd 4 vd

mRRkj 15- DNA dk Ikjk UkkEk fYk[kUk Ikj & 1 vd

DNA dh LkjPkUkk fYk[kUk Ikj & 4 vd dYk 5 vd A

vFk0kk

vUk0kkf'kd dkM dh Ikfjlkk"kk fYk[kUk Ikj &1 vd

Pkkj IkR¸kd dkb f0k'k"kRkkvk Ikj 1&1 vd ¾ 4 dYk 5 vd

mRRkj 16 gkjEkkUk d LFkkUk CkRkkUk Ikj] gkjEkkUk dk UkkEk fYk[kUk ,0k Ikdkj fYk[kUk Ikj IkR¸kd XkfFk Ikj 1½+1½ + 2¾5 vd

vFk0kk

gkEkkUk d LFkkUk CkRkkUk Ikj] ,0k gkEkkUk d UkkEk fYk[kUk Ikj vfRkL«kk0k l 'kjh Ikj iHkko & 7 Ikdkj fYk[kUk Ikj IkR¸kd XkfFk Ikj 1½+1½ + 2¾5 vd

mRRkj 17- 0k¸kRkk dh Ikfjlkk"kk fYk[kUk Ikj 1 vd ,0k dkb Pkkj mIk¸kDRk Ikfj0kRkUk fYk[kUk Ikj 4 vd dYk& 5 vd A

vFk0kk

dkYkhTkUk0kkn fYk[kUk Ikj 1 vd

0k¸kRkk d dkb Pkkj Yk{k.k fYk[kUk Ikj 4 vd dYk &5 vd

mRRkj 18 j[kkfPk«k CkUkkUk Ikj 3 vd

0k.kUk Ikj 3 vd dYk& 6 vdA

vFk0kk

mRRkj 19 j[kkfPk«k CkUkkUk Ikj 03 vd

0k.kUk djUk Ikj 03 vd dYk 06 vd

vFk0kk

UkkEkkfdRk fPk«k &02 vd

0k.kUk djUk Ikj &04 vd dYk 06 vdA

Set - B

gk;j ld.Mjh Ldy lfVfQdV ijh{kk

Higher Secondary School Certificate Examination

lEiy&i'u i=

SAMPLE PAPER

fo"k; %& (Subject) - tho foKku **le; 3 ?k.Vk (Time- 3 Hrs)**

d{kk %& (Class) - 12oh **i.kZd 75 (M.M.)**

(Instruction) & ¼fun'kZ½

1- lHkh i'u gy djuk vfuok;z g A

Attempt all the Question

2- i'u Øekd 01 e 10 vad fu/kkfjr g A nks mi[k.M g A [k.M ^^v** e 05 cgfodYih; i'u rFkk [k.M ^^c** e 05 fjDr LFkkuk dh ifr vFkok mfpr lc/k tkfM, A iR;d i'u d fy, 1 vad vkcfVr g A

Q. No. 01 Carries 10 Marks. There are two sub-section, Section A is Multiple choice carries 05 marks and section B is fill in the blanks or match the column carries 05 marks.

3- i'u Øekd 02 l i'u Øekd 06 rd vfr y?kqRrjh; i'u g A iR;d i'u ij 02 vad vkcfVr g A mRrj dh vf/kdre 'kCn lhek 30 'kCn A

Q. No. 2 to 06 are very short answer type question & it carries 02 marks each. Word limit is maximum 30.

4- i'u Øekd 07 l i'u Øekd 10 rd y?kqRrjh; i'u g A iR;d i'u ij 03 vad vkcfVr g A mRrj dh vf/kdre 'kCn lhek 50 'kCn A

Q. No. 07 to 10 are short answer type question & it carries 03 marks each. Word limit is maximum 50.

5- i'u Øekd 11 l i'u Øekd 14 rd y?kqRrjh; i'u g A iR;d i'u e vkrfjd fodYi g vkj iR;d i'u ij 04 vad vkcfVr g A mRrj dh vf/kdre 'kCn lhek 75 'kCn A

Q. No. 11 to 14 are short answer type question & it carries 04 marks each. Each question has internal choice. Word limit is maximum 75.

6- i'u Øekd 15 l i'u Øekd 17 rd nh?kmRrjh; i'u g A iR;d i'u e vkrfjd fodYi g vkj iR;d i'u ij 05 vd vkcfVr g A mRrj dh vf/kdre 'kCn lhek 100 'kCn A

Q. No. 15 to 17 are long answer type question & it carries 05 marks each. Each question has internal choice. Word limit is maximum 100.

7- i'u Øekd 17 l i'u Øekd 19 rd nh?kmRrjh; i'u g A iR;d i'u e vkrfjd fodYi g vkj iR;d i'u ij 06 vd vkcfVr g A mRrj dh vf/kdre 'kCn lhek 150 'kCn A

Q. No. 17 to 19 are long answer type question & it carries 06 marks each. Each question has internal choice. Word limit is maximum 150.

Ik'Uk 1¼v½ Lkgh f0kdYIk PkfUk,k &

1- C_3 Ikk/kk Ek Ikdk'k Lk'Yk"k.k dk IkFkEk LFkk,kh mRIkknh g

¼v½ 3&QkLQkfXYkLkfjd vEYk ¼Ck½ Mkb gkbMkDLkh ,IhVkUk QkLQV

¼Lk½ ÝDVkTk1]6 MkbQkLQV ¼n½ jkbCkYkkTk 1]5 &MkbQkLQV A

2- ,kfn EkkUk0k 'kjhj Ek ,kÑRk dk gVk fn,kk Tkk,k RkCk ,kg 0kT,k Iknkk #f/kj Ek Ck< Tkk,kXkk&

¼v½ vEkkfUk,kk ¼Ck½ Øh,fVUk ¼Lk½ ,kfj,kk ¼n½ ,kfjd vEYk A

3- Ek/kEkD[kh IkkYkUk dgYkkRkk g&

¼v½ Lkjh&dYPkj ¼Ck½ ,Ikh&dYPkj ¼Lk½ fIkLkh&dYPkj ¼n½ ,D0kk&dYPkjA

4- 0kg TkhUk vIkUkh vfHk0,kfDRk dk Iknf'kRk Ukgh djRk g bUg dgRk g&

¼v½ LkkbYkUV Tkhu ¼Ck½ TkfEIkXk TkhUk ¼Lk½ jXkYkVj TkhUk ¼n½ IkEkkVj TkhUk

5- ,kg IkkfYk,kk fCkEkkjh dk dkjd gkRkk g&

¼v½ Tkh0kk.k ¼Ck½ 0kh"kk.k ¼Lk½ IkkVkTkkvk ¼n½ Tkh0kk.k Hkkth

Que 1 (A) Select the best choice -

(i) The first stable product of plotosynthesis of C_3 plants is -

(a) 3-phosphogliciric acid (b) Di-hydroxy acetonephosphate

(c) Fructose 1.6 Disulphate (d) Ribulose 1.5 - diphosphate

(ii) If liver is removed from the human body, than this waste material will increases in the blood

(a) Ammonia (b) Kreatin (c) Urea (d) Uric acid

(iii) Rearing of honey bee is called;

(a) Seri culture (b) Api culture (c) Pisci culture (d) Aqua culture

(iv) The genes which do not express then are called;

(a) silent gene (b) jumping gene

(c) regulator gene (d) promoter gene

(v) It is the caustive agent of polio -

(a) Bacetria (b) Virsus (c) protozoa (d) Bacteriophage

¼Ck½ fjDRk LFkkUkk dh lkfRk dhfTk, &

1- DNA Lk mRNA dk CkUkUkk &&&& dgYkkRkk gA

2- RkYkLkh d lk"lk &&&&&&& lk"lkØEk dk mnkgj.k gA

3- vUkOkkf'kdh d TkUkd OkKkfUkd dk UkkEk &&&& g

4- fM¶FkhfjsaLkk UkkEkd jkXk &&&&&&&& d dkj.k gkRkk gA

5- Okg /kEkUkh tk v'k) jDRk dk LkOkgUk djrh g mLk &&&&& dgRk gA

(B) Fill in the blanks -

(i) Formation of mRNA from DNA is called .....

(ii) Flower of tulsi, is the example of ..... inflorescnces.

(iii) Name of discoverer of genetics is .....

(iv) The causative agent of Diptheria is .....

(v) The artery which carries the impure blood is called .....

lk'Uk 2- LkjLkk Ek fdl lkdkj dk lk"lkØEk lkk,sa TkkRkk gA

Which type of inflorescence in found in Mustard?

lk'Uk 3- fUkEUk lkk/kk d dkUk Lk HkkXk fdLk :lk Ek mlk,sa kkXkh gkRk g &

¼v½ /kkUk ¼Ck½ jCkj

Which part of the following plants are useful -

(a) paddy (b) rubber

lk'Uk 4- /kEkfUk,sa kk dh Xkgk Lkdjh gkRkh g] fdRk f'kjkvk dh Xkgk PkkMh gkRkh g D,sa kk\

Cavity of artery is narrow but cavity of veins is broad. Why?

lk'Uk 5- STD D,sa kk g\ bLkLk gkUk OkkYk dkb nk jkXkk dk UkkEk fYkf[k,A

What is S.T.D.? Write the name of any two disease caused by S.T.D.

lk'Uk 6- [kYkk ,Ok Ckn lkfjLkPkj.k Rk«k Ek dkb nk vRkj fYkf[k,A

Write any two differences between open and closed circulatery system.

lk'Uk 7- fn,k Xk,k dk,k fdLk gkEkkUk Lk lkfRklkkfnRk fd,k TkkRk g&

¼v½ f'k'k TkUEk d LkEk,k lkfY0kd LUkk,k dk Ukjk Ek djUkk A

¼Ck½ f'k'k TkUEk d Rkj Rk Ckkn LRkUkXkfFk,kk Lk nX/k fUkdYkUkk

¼Lk½ Ukj ,0k Ekknk Ek ,kXEkd TkUkUk dk lkfjRk djUkkA

Which harmones perform the following questions -

(a) Softness of pelvic nerve at the time of delivery

(b) Secretion of milk from mammary gland just after delivery.

(c) To induce the male and female gamete.

lk'Uk 8- LkkbVkdkbUkhUk d dkb RkhUk lkEk[k mlk,kkXk fYkf[k,A

Write any three functions of cytokinin.

lk'Uk 9- CYkdEkUk d LkhEkk dkjdk d fLk)kRk dk LkEkÖkkb,kA

Explain the limiting factors principle of blackman.

lk'Uk 10- ,d LkkEkkU,k lk:"k RkFkk 0kkgd L«kh }kjk mRlkUUk LkRkkUkk Ek 0k.kkU/kRkk dh 0k'kkXkfRkdh,k vkj[k CkUkkdj lkfRk'kRkRkk dk lknf'kRk dhfTk,A

Demonstrate the percentile of hereditary with ray diagram of a common man and carrier woman of colour blindness.

lk'Uk 11- R0kPkk d dkb Pkkj dk,k fYkf[k,A

Write any four main functions of skin (integumentary system)

¼vFk0kk½

ddkYk Rk«k d dkb Pkkj lkEk[k dk,k fYkf[k, \

Write any four main functions of Skeletal system.

lk'Uk 12- TkhUk f0kfUkEk,k d dkb Pkkj EkgR0k fYkf[k, \

Write any four importance of crossing over.

¼vFk0kk½

EkkUk0k Ek fYkXk fUk/kkj.k fdLk lkdkj gkRkk g\

How sex determination takes place in man.

Ik'Uk 13- LkCTkh Iknkuk djUk 0kkYk dkb Pkkj iknik d LkkEkkU¸k ,0k 0kKkfUkd UkkEk fYkf[k,\

Wirte the common and botanical name of any four vegetable yielding plants.

¼vFk0kk½

'kgn] j'kEk] EkDRkk] Ykk[k Iknkuk djUk 0kkYk TkRkvk d LkkEkkU¸k ,0k 0kKkfUkd UkkEk fYkf[k, \

Write the common and scientific name of animals, which give Honey, silk, pearl and lac.

Ik'Uk 14- EkkUk0k 0kDd d YkCk0kRk dkV dk UkkEkkfdRk fPk«k CkUkkb¸k

Draw labelled diagram of L.S. of Human Kidney.

¼vFk0kk½

EkkUk0k ân¸k d YkCk0kRk dkV dk UkkEkkfdRk fPk«k CkUkkb¸k\

Draw labelled diagram of L.S. of Human Heart.

Ik'Uk 15- dUædh¸k vEYk dk dkUk Lkk Ikdkj Ikk¸kh vUk0kkf'kd IknkFk dgYkkRkk g\ bLk vEYk dh Lkjpkukk LIk"V dhfTk,A

Which form of nucleic acid is called genetic material? Explain the structure of this material.

¼vFk0kk½

vUk0kkf'kd dkM D¸kk g\ bLkdh dkb Pkkj IkEk[k f0k'k"kRkk, fYkf[k,A

What is called genetic code? Write its any four characteristics.

Ik'Uk 16- fUkEUk vRkiL«kk0kh XkfFk¸kk dgk Ikk¸kh TkkRkh g ,0k bUkd }kjk L«kkkf0kRk gkEkkULk dk UkkEk fYkf[k, RkFkk bUkd vYi L=ko.k Lk EkkUk0k 'kjhj Ikj D¸kk IkHkk0k IkMRkk g\

1- Fkk¸kjkbM XkfFk

2- ,fMUkYk XkfFk A

Where the following endocrine glands are found? Write name of harmone secreted by these glands, and the effects of hyposecretion of these

glands.

(i) Thyroid gland

(ii) Adrenal gland

¼vFkOkk½

Fkk¸kjkbM XkfFk ,Ok ,fMUkYk XkfFk EkkUkOk 'kjhj Ek dgk Ikk¸kh TkkRkh g bUkd }kjk L«kkfOkRk gkEkkULk dk UkkEk fYk[kRk g, bUkd vfRkL«kkOk.k Lk 'kjhj Ikj D¸kk IkHkkOk IkMRkk g\

Where the thyorid and adrenal glands arefound in human body and what is their secretion. Write its name and the effects of their hypersecretion.

Ik'Uk 17- Ok¸kRkk fdLk dgRk g\ Ok¸kRkk d dkj.k 'kjhj Ek gkUk OkkYk dkb Pkkj Ckkâ¸k dkf'kdh¸k Ikfjs0kRkUk fYkf[k,A

What is called ageing? Write any four extraceular changes caused by aging.

¼vFkOkk½

Ok¸kRkk dk ^^dkYkhTkUk Okkn** D¸kk g\ Ok¸kRkk d dkb Pkkj IkEk[k Yk{k.k fYkf[k,A

What in collegen theory of ageing? Write any four characteristic of ageing?

Ik'Uk 18- ,d Ok.kkU/k Ik:"k RkFkk Okkgd L«kh }kjk mRIkUUk LkRkkUkk dh Ok.kkU/kRkk dh Ok'kkXkfRkdh dLkh gkXkhA j[kkfPk«k }kjk LkEkÖkkb¸kA

What will be heriditary of the family where a colour blind man got married with a carrier woman. Explain with ray diagram.

¼vFkOkk½

,d ghEkkQhfYkd Ik:"k RkFkk LkkEkkU¸k L«kh }kjk mRIkUUk LkRkkUkk dh Ok'kkXkfRkdh dLkh gkXkhA j[kkfPk«k }kjk LkEkÖkkb¸k\

When a haemophilic man marry a general woman then what will their family heriditary. Explain with ray diagram.

Ik'Uk 19- UkkEkkfdRk fPk«k CkUkkdj Ik¸kkXk }kjk fLk) dhfTk, fd idk'k Lk'Yk"k.k Ek vkDLkhTkUk XkLk fUkdYkRkh gA

Prove with the help of experiment and labelled diagram that oxygen gas is evolved during photosynthesis.

¼vFkOkk½

UkkEkkfdRk fPk«k CkUkkdj Ik¸kkXk }kjk fLk) dhfTk, fd Ikdk'k Lk'Yk"k.k dh fØ¸kk Ek dkCkUk Mkbvk DLkkbM dh vkOk'¸kdRkk IkMRkh g\

Prove with the help of experiment and labelled diagram that carbon di-oxide is essential for photosynthesis.

lEiy mRRkj LkV&Ckh

mRRkj 1-¼v½ Lkgh fOkdYIk&

¼1½ v 3& QkLQkfjd vEy

¼2½ v vekfu;k

¼3½ Ck ,ihdYpj

¼4½ v lkbyUV thu

¼5½ Ck fo"kk.k

¼Ck½ fjDRk LFkkUk dh lkfRk dhfTk,

¼1½ vUkYk[kUk

¼2½ dVPkØd

¼3½ Ek.MYk

¼4½ dkjhUkh CkDVhfj¸kk fM¶FkhjkbZ

¼5½ lkY lkUkjh /kEkUkh

mÙkj 2 typical raceme ¼AUkkEk lkj 2 vd½

mÙkj 3¼v½ /kkUk& HkLkh Lk RkYk fUkdkYkk TkkRkk gA

[kkn d mlk¸kkXk e pkoy fn¸kk TkkRkk gA

vkfn LkHkh lkj mÙkj lkj 1 vd

¼Ck½ jCkj & RkUk d n/k (latex) Lk

Vk¸kj VîCk ,Ok vU¸k jCkj LkkEkXkh CkUkku e 2 vd A

mÙkj 4 /kEkfUk¸kk dh nhOkkj EkkVh gkRkh g D¸kkfd jDRk nCkkOk d LkkFk CkgRkk gA fTkLkLk mLk nCkkOk dk LkgUk dj Lkd ,Ok QV Uk] vRk% Xkgk Lkdjh gkRkh gA f'kjkvk l jDRk /kj &/kj CkgRkk gA vr% QVUk dh LkHkkOkUkk Ukgh gkRkh gA fTkLkLk lkRkYkh gkRkh g fTkLkd dkj.k mUkdh Xkgk PkkMh gkRkh gA

mÙkj 5 STD = Sexually Transmitted Diseases – 1+½+½ = 2

1- ,MLk 2- TkUVkbYV glk 3- NGU

mÙkj 6 [kYkk lkfjLkPkj.k Ckn lkfjLkPkj.k

1- bLkEk #f/kj UkfYk¸kk Ek CkgRkk g 1- bLkEk #f/kj UkfYk¸kk Ek Ukgh CkgRkk vkj vUkd LFkkuk lkj mRRkdk d Lkh/k lid Ek CkgRkk gA

2- #f/kj gkEkkLkh.M Ek Hkjk gkRkk gA 2- bLkEk ghEkkLkh.M Ukgh gkRkkA

mÙkj 7 ¼v½ Relaxin Harmone ¼fjyDlhu gkeku½ 1×3=3

¼Ck½ Lactogen Harmone ¼yDVktu gkeku½

¼Lk½ Gonads Harmone ¼tun gkeku½

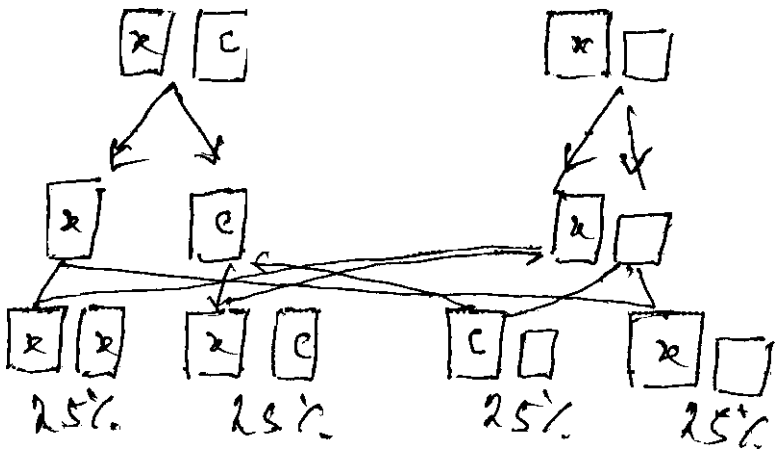
mÙkj 8 1- dkf'kdk foHkktu 1×3=3

2- lkLkfIRk dk nj djUkk A

3- Tkh.kRkk Ek f0kYkc ;k led{k mRrj

mÙkj 9 TkCk fdLkh fØ;k dh RkhOkRkk CkgRk Lk lkFkd lkFkd dkjdk d }kjk fUk/kkfjRk gkRkh g RkCk mLk fØ¸kk dh nj U¸kUkRkEk Ekk«kk Ek mlkfLFkRk dkjd d }kjk LkhfEkRk dh TkkRkh gA 1×3=3

mÙkj 10- 0kkgd L«kh LkkEkkU¸k lk:"k



2+1=3

mÙkj 11 1- 'kjhj Lkj{kk 1×4=4

2- RkklIk fUk¸k«k.k

3- f0kVkfEkUk dk fUkEkk.k

4- mRLkTkUkA ¼bLkh lkdkj LkEkd{k mÙkj lkj vd lknkUk djA½

vFkOkk

1- LkjPkUkkREkd <kPkk CkUkkUkk 1×4=4

2- vRkjkxk dh Lkj{kk

3- vk/kkj lknkUk djUkk

4- XkfRk ,Ok lkPkYkUk Ek lgk;rk

¼bLkh lkdkj LkEkd{k mÙkj lkj vd lknkUk djA½

mÙkj 12 1- TkhOkk Ek fOkfHkUUkRkk, vkRkh g Tkk fOkdkLk d fYk, vkOk'¸kd gA 1×4=4

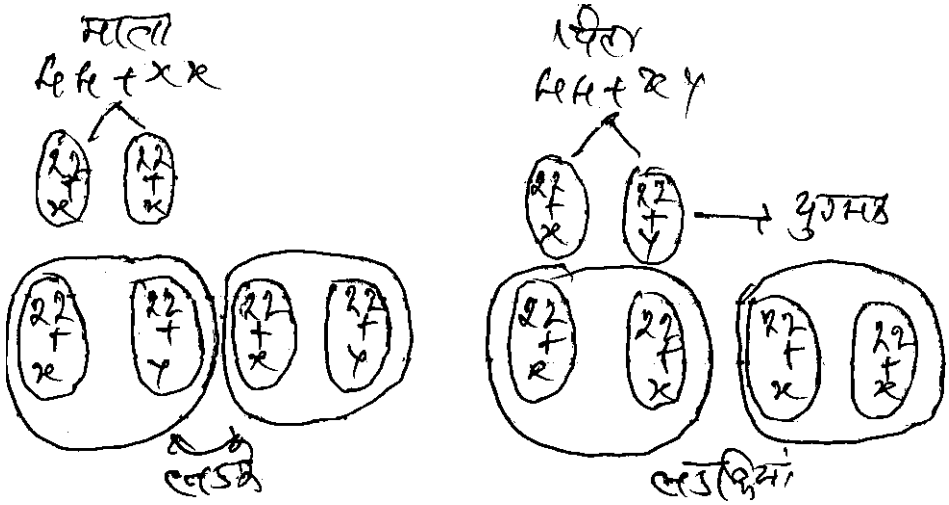
2- vf/kd mRlkknd TkkfRk d lkk/kk d mRlkknUk Ek

3- Uk¸k y{k.k ¸kDRk TkhOk mRlkUUk gkRk gA

4- Xk.kLk«kk lkj TkhOk dh jf[kd fOkU¸kkLk dh lkf"V gkRkh gA

¼;k LkEkd{k mÙkj lkj vd fn¸k Tkk¸k½

vFkOkk



2 vd

mÙkj13 1- VEkkVj - Lycopersicum esculentum ½×½×4=4

2- djYkk - Mamordica charantia

3- fHk.Mh - Hibiscus esculentum

4- vkYk - Solanum Tuberosum ½×½×4=4

vFk0kk

'kgn & Ek/kEkD[kh & Bombyx mori

j'kEk & PkhUkh j'kEk dhV & Apisindica

EkDRkk & Pearl Oyester – Pictada vulgaris

Ykk[k & Lacifer

mÙkj 14- EkkUk0k 0kDd d LkEkd{k dkV lkj 2 vd A 2$2 ¾ 4

Lkgh &2 UkkEkkdUk lkj & 2 vd

vFk0kk

EkkUk0k ân¸k d L.S. lkj & 2 vd A 2$4 ¾ 6

Lkj PkUkk ,0k UkkEkkdUk lkj 2$2 vd

mÙkj 15- mRNA Ek mlkfLFkRk UkkbVkTkUkh CkLk dk fVlYkV g Tkk DNA [k.M Lk lkfRkdr gkRkk g ,0k f0kf'k"V vEkhUkk vEYkk dk dkM djRkk g A

bLkh d LkEkd{k lkfjHkk"kk lkj & 1 vd A

f0k'k"kRkk, 1$4 ¾ 5

1- ¸kg fVlYkV dkM gA

2- ¸kg dkEkk foghUk gkRkk gA

3- dkM Lk0kkf«kd gkRkk gA

4- dkM Lkfnx/kRkk

mÙkj16 1- Fkk¸kjkbM & ¸kg XknUk Ek '0kkLkuyh ¸kk L0kj ¸k«k d TkkM Ek nkUkk RkjQ ,d&,d dh Lk[¸kk Ek lkkb TkkRkh gA 1½+1½+2=5

T_4 Fkk¸kjkDLkhUk] T_3 ¼Vkb vk¸kMkFkk¸kjkDLkhUk½

jkx & tM okeurk] feDlhMek] ?k?kk] gklhekVk

2- ,fMUkYk XkfFk &nkUkk 0kDdk d 'kh"k lkj VkIkh d LkEkkUk ,d ljpuk gkRkh gA gkEkkUk& ,LVkTkUk] ,Mhfyu] UkkUk ,Mhfyu A

vYi L=ko.k&,fMLkUk] dkULkjkXk] gkblkkXYkkbLkhfEk¸kk jkXk gk TkkRkk gA

vFk0kk

vfRk L«kk0k.k Lk 1½+1½+2=5

1- mIkIkPk¸kh fØ¸kk¸ Ck< TkkRkh g

2- V;Ekj jkXk gk TkkRkk gA

3- Xk0Lk jkXk gk TkkRkk gA

4- L0kHkk0k XkfFk dgYkkRkh g vFkkRk L0kHkk0k Ek Ikfj0kRkUk gk TkkRkk gA

mÙkj 17- TkCk 'kjhj dh dk¸k{kEkRkk Ek dEkh vkRkh g mEk Ck<Uk d dkj.k ml 0k¸kRkk dgRk gA

IkR¸kd Ckkâ¸k dkf'kdh¸k Ikfj0kRkUk Ek 1 vd

vFk0kk

dkYkhTkUk okn fYk[kUk Ikj 1 vd

0k¸kRkk d dkj.k fYk[kUk Ikj 4 vd A

mÙkj 18- 0k.kkU/kRkk dh 0k'kkXkfRkdh fYk[kUk Ikj 3 vd

vkj[k Ikj 3 vd

vFk0kk

ghEkkQhfyd Ik:"k RkFkk LkkEkkU¸k L«kh dh LkRkkUkk Ek 0k'kkXkfRkdh d 0k.kUk Ikj 3 vd

vkj[k Ikj 3 vd

mÙkj 19- UkkEkkfdRk fPk«k Ikj 2 vd &

O_2 dh fØ¸kk Ikj 4 vd A

vFk0kk

UkkEkkfdRk fPk«k Ikj 2 vd

CO_2 dh vk0k'¸kdRkk dk Iknf'kRk djUk fof/k d o.ku ij & 4 vd

Set - B

gk;j ld.Mjh Ldy lfVfQdV ijh{kk

Higher Secondary School Certificate Examination

lEiy&i'u i=

SAMPLE PAPER

fo"k; %& (Subject) - tho foKku **le; 3 ?k.Vk (Time- 3 Hrs)**

d{kk %& (Class) - 12oh **i.kZd 75 (M.M.)**

(Instruction) & ¼fun'k½

1- lHkh i'u gy djuk vfuok;z g A

Attempt all the Question

2- i'u Øekd 01 e 10 vd fu/kkfjr g A nk mi[k.M g A [k.M ^^v** e 05 cgfodYih; i'u rFkk [k.M ^^c** e 05 fjDr LFkkuk dh ifr vFkok mfpr lc/k tkfM, A iR;d i'u d fy, 1 vd vkcfVr g A

Q. No. 01 Carries 10 Marks. There are two sub-section, Section A is Multiple choice carries 05 marks and section B is fill in the blanks or match the column carries 05 marks.

3- i'u Øekd 02 l i'u Øekd 06 rd vfr y?kqRrjh; i'u g A iR;d i'u ij 02 vd vkcfVr g A mRrj dh vf/kdre 'kCn lhek 30 'kCn A

Q. No. 2 to 06 are very short answer type question & it carries 02 marks each. Word limit is maximum 30.

4- i'u Øekd 07 l i'u Øekd 10 rd y?kqRrjh; i'u g A iR;d i'u ij 03 vd vkcfVr g A mRrj dh vf/kdre 'kCn lhek 50 'kCn A

Q. No. 07 to 10 are short answer type question & it carries 03 marks each. Word limit is maximum 50.

5- i'u Øekd 11 l i'u Øekd 14 rd y?kqRrjh; i'u g A iR;d i'u e vkrfjd fodYi g vkj iR;d i'u ij 04 vd vkcfVr g A mRrj dh vf/kdre 'kCn lhek 75 'kCn A

Q. No. 11 to 14 are short answer type question & it carries 04 marks each. Each question has internal choice. Word limit is maximum 75.

6- i'u Øekd 15 l i'u Øekd 17 rd nh?kmRrjh; i'u g A iR;d i'u e vkrfjd fodYi g vkj iR;d i'u ij 05 vd vkcfVr g A mRrj dh vf/kdre 'kCn lhek 100 'kCn A

Q. No. 15 to 17 are long answer type question & it carries 05 marks each. Each question has internal choice. Word limit is maximum 100.

7- i'u Øekd 17 l i'u Øekd 19 rd nh?kmRrjh; i'u g A iR;d i'u e vkrfjd fodYi g vkj iR;d i'u ij 06 vd vkcfVr g A mRrj dh vf/kdre 'kCn lhek 150 'kCn A

Q. No. 17 to 19 are long answer type question & it carries 06 marks each. Each question has internal choice. Word limit is maximum 150.

Ik'Uk1 ¼v½ Lkgh f0kdYIk PkUkdj fYkf[k,&

1- TkhfUk¸kk 'kCn Ikjk Xkdj.k d bLk HkkXk Ikj IkHkk0k n'kkRkk g&

¼v½ dkf¸kd mRRkd Ikj ¼Ck½ TkM Ikj

¼Lk½ Ik"Ik Ikj ¼n½ Hk.k Ikk"k Ikj A

2- Q:yk ,LQkbfVMk Lk IkkIRk ghXk gkRkk gA

¼v½ TkM dk jfTku ¸kDRk L«kk0k.k ¼Ck½ QYk

¼Lk½ Ik"IkØEk ¼n½ IkfÙk¸kk

3- Ek.MYk dk f}Lkdjh¸k vUkIkkRk g&

¼v½ 1¼1¼1 ¼Ck½ 3¼1

¼Lk½ 9¼3¼3¼1 ¼n½ 9¼1¼1¼5

4- RkYkLkh d Ikk/k Ek bLk Ikdkj dk Ik"IkØEk Ikk¸kk TkkRkk g&

¼v½ dVkfj¸kk ¼Ck½ dVPkØd

¼Lk½mnECkjd ¼n½ Ek.Md A

5- vIk.k IkHkkf0kRkk Ek TkCk YkkYk ,0k LkQn jXk d Ik"Ik ¸kXEk f0kdYIkk Lk ØkLk djk¸kk TkkRkk g Rkk mRIkUUk gkUk 0kkYkk Ik"Ik dk jXk gkRkk g&

¼v½ YkkYk ¼Ck½ LkQn

¼Lk½ CkXkUkh ¼n½ XkYkkCkhA

Que 1 (A) Select the best choice -

(i) The word "Zenia" shows the effect on this part of pollen grain;

(a) on morphological tissue (b) on embryosac

(c) on flower (d) on Endosperm

(ii) Heeng is obtained from this part of Ferula asafoetida;

(a) Resin secretion of root (b) fruits

(c) Inflorescence (d) leaves

(iii) Dihybrid ratio of Mendal is -

(a) 1:1:1:1 (b) 3: 1

(c) 9:3:3:1 (d) 9:1:1:5

(iv) This type of inflorescence is found in Tulsi -

(a) Cyathium (b) Verticillaster

(c) Hypanthodium (d) Capitulum

(v) What F_1 of incompelete dominance red and white flower are crossed then produced colour of flower is

(a) red (b) white

(c) violet (d) pink

¼Ck½ fjDRk LFkkUkk dh lkfRk dhfTk,&

¼1½ Ek«k dk ihyk jXk &&&&0k.kd d dkj.k gkRkk gA

¼2½ CkhTkk.M Lk fUk"kPkUk lk'PkkRk &&&&&CkUkRkk gA

¼3½ Lk¸kEk[kh &&&&lk"lkØEk dk mnkgj.k gA

¼4½ 'kh"k lkHkkfOkRkk &&&&gkEkkUk }kjk fUk/kkfjRk gkRk gA

¼5½ jkmCkkfYQ¸kk LkIkUVkbUkk &&&&&dYk dk lkknIk gA

(i) The yellow colour of urine is due to ..... pigment.

(ii) ..... is formed from ovule after fertilization.

(iii) Sunflower is an example of ..... inflorescences.

(iv) Apical dominance is directed by ..... harmone.

(v) Raw bo flabia serpentene is an example of ..... family.

lk'Uk 2- vTkhj Ek fdLk lkdkj dk lk"lkØEk lkk¸kk TkkRkk g\

Which type of inflorescence is found in fig?

lk'Uk 3 fUkEUk lkk/kk d dkUk&dkUk Lk HkkXk fd :lk Ek mlk¸kkXkh gkRkk g&

¼v½ PkUkk ¼Ck½ LkIkXk/kk A

Which part of the following plant is useful in whcih form -

(a) Gram (b) Surpgandha

lk'Uk 4- Ckn lkfjLkPkj.k Rk«k Ek jDRk nkCk vf/kd D¸kk gkRkk g\

Why there is more blood pressure in closed circulatory system?

lk'Uk 5- Tk0k m0kjd fdLk dgRk g\

What is called biofertilizer?

lk'Uk 6- ROD and CONS Ek dkb nk vRkj fYkf[k, \

Write any two differences between ROD and CONS

lk'Uk 7- EkkUk0k 'kjhj Ek fUkEUk f0kÑfRk,kk fdLk dkj.k gkRkh gA

¼v½ TkM 0kkEkUkRkk ¼Ck½ ?k?kk ¼Lk½ fEkDLkhfMek A

What are the causes of following deformaties in human body;

(a) Cretinism (b) Goitre (c) Myxiedema.

lk'Uk 8- fTkCkfYkUk d dkb RkhUk lkEk[k mlk,kkXk fYkf[k,\

Write any three main function of Gibberline.

lk'Uk 9- fMDLkUk ,0k TkkYkh d fLk)kRk d vk/kkj lkj jLkkjkg.k dh fØ,kk f0kf/k;k dk LkEkÖkkb,k\

Explain the ascent of sap on the basis of Dixon & Jolly principle.

lk'Uk 10- L0kRk«k vlkC,kg0k d fUk,kEk dk Pkdj CkkM d }kjk Lk'"V dhfTk, \

Explain the law of independent assortment with the help of checker board.

lk'Uk 11- R0kPkk d dkb Pkkj dk,k fYkf[k,A

Write any four main functions of skin (integumentary system)

¼vFk0kk½

ddkYk Rk«k d dkb Pkkj lkEk[k dk,k fYkf[k, \

Write any four main functions of Skeletal system.

lk'Uk 12- TkhUk f0kfUkEk,k d dkb Pkkj EkgR0k fYkf[k, \

Write any four importance of crossing over.

¼vFk0kk½

EkkUk0k Ek fYkXk fUk/kkj.k fdLk lkdkj gkRkk g\

How sex determination takes place in man.

lk'Uk 13- LkCTkh lknkUk djUk 0kkYk dkb Pkkj iknik d LkkEkkU¸k ,0k 0kKkfUkd UkkEk fYkf[k,\

Wirte the common and botanical name of any four vegetable yielding plants.

¼vFk0kk½

'kgn] j'kEk] EkDRkk] Ykk[k lknkUk djUk 0kkYk TkRkvk d LkkEkkU¸k ,0k 0kKkfUkd UkkEk fYkf[k, \

Write the common and scientific name of animals, which give Honey, silk, pearl and lac.

lk'Uk 14- EkkUk0k 0kDd d YkCk0kRk dkV dk UkkEkkfdRk fPk«k CkUkkb¸k

Draw labelled diagram of L.S. of Human Kidney.

¼vFk0kk½

EkkUk0k ân¸k d YkCk0kRk dkV dk UkkEkkfdRk fPk«k CkUkkb¸k\

Draw labelled diagram of L.S. of Human Heart.

lk'Uk 15- dUædh¸k vEYk dk dkUk Lkk lkdkj lkk¸kh vUk0kkf'kd lknkFk dgYkkRkk g\ bLk vEYk dh Lkjpkukk LIk"V dhfTk,A

Which form of nucleic acid is called genetic material? Explain the struc-

ture of this material.

¼vFkOkk½

vUkOkkf'kd dkM D,kk g\ bLkdh dkb Pkkj IkEk[k f0k'k"kRkk, fYkf[k,A

What is called genetic code? Write its any four characteristics.

Ik'Uk 16- fUkEUk vRk%L«kkOkh XkfFk,kk dgk Ikk,kh TkkRkh g ,Ok bUkd }kjk L«kkkf0kRk gkEkkULk dk UkkEk fYkf[k, RkFkk bUkd vYi L=ko.k Lk EkkUkOk 'kjhj Ikj D,kk IkHkkOk IkMRkk g\

1- Fkk,kjkbM XkfFk

2- ,fMUkYk XkfFk A

Where the following endocrine glands are found? Write name of harmone secreted by these glands, and the effects of hyposecretion of these glands.

(i) Thyroid gland

(ii) Adrenal gland

¼vFkOkk½

Fkk,kjkbM XkfFk ,Ok ,fMUkYk XkfFk EkkUkOk 'kjhj Ek dgk Ikk,kh TkkRkh g bUkd }kjk L«kkf0kRk gkEkkULk dk UkkEk fYk[kRk g, bUkd vfRkL«kkOk.k Lk 'kjhj Ikj D,kk IkHkkOk IkMRkk g\

Where the thyorid and adrenal glands arefound in human body and what is their secretion. Write its name and the effects of their hypersecretion.

Ik'Uk 17- Ok,kRkk fdLk dgRk g\ Ok,kRkk d dkj.k 'kjhj Ek gkUk OkkYk dkb Pkkj Ckkâ,k dkf'kdh,k Ikfj0kRkUk fYkf[k,A

What is called ageing? Write any four extraceular changes caused by aging.

¼vFkOkk½

Ok,kRkk dk ^^dkYkhTkUk Okkn** D,kk g\ Ok,kRkk d dkb Pkkj IkEk[k Yk{k.k fYkf[k,A

What in collegen theory of ageing? Write any four characteristic of age-

ing?

Ik'Uk 18- ,d 0k.kkU/k Ik:"k RkFkk 0kkgd L«kh }kjk mRIkUUk LkRkkUkk dh 0k.kkU/kRkk dh 0k'kkXkfRkdh dLkh gkXkhA j[kkfPk«k }kjk LkEkÖkkb¸kA

What will be heriditary of the family where a colour blind man got married with a carrier woman. Explain with ray diagram.

¼vFkOkk½

,d ghEkkQhfYkd Ik:"k RkFkk LkkEkkU¸k L«kh }kjk mRIkUUk LkRkkUkk dh 0k'kkXkfRkdh dLkh gkXkhA j[kkfPk«k }kjk LkEkÖkkb¸k\

When a haemophilic man marry a general woman then what will their family heriditary. Explain with ray diagram.

Ik'Uk 19- UkkEkkfdRk fPk«k CkUkkdj Ik¸kkXk }kjk fLk) dhfTk, fd idk'k Lk'Yk"k.k Ek vkDLkhTkUk XkLk fUkdYkRkh gA

Prove with the help of experiment and labelled diagram that oxygen gas is evolved during photosynthesis.

¼vFkOkk½

UkkEkkfdRk fPk«k CkUkkdj Ik¸kkXk }kjk fLk) dhfTk, fd Ikdk'k Lk'Yk"k.k dh fØ¸kk Ek dkCkUk Mkbv kDLkkbM dh vk0k'¸kdRkk IkMRkh g\

Prove with the help of experiment and labelled diagram that carbon dioxide is essential for photosynthesis.

lEiy mRRkj LkV&lh

mRRkj 1-¼v½ Lkgh fØkdYlk& 1$1$1$1$1 ¾ 5

1- Lk

2- v

3- Lk

4- Ck

5- n

¼Ck½ fjDRk LFkkUk dh lkfRk dhfTk, 1$1$1$1$1 ¾ 5

¼1½ ,kjkØkEk

¼2½ CkhTk

¼3½ Ek.Md

¼4½ vkDLkhTkUk

¼5½ ,lkkLkk,kUkLkhA

mÙkj 2- bLkEk mnECkjd (Hypanthndium) lkdkj dk lk"lkØEk lkk,kk TkkRkk gA

mÙkj 3- PkUkk & bldk chti= (Cotyledons) – nkYk d :lk Ek mlk,kkXkh gA

LklkXk/kk & lkfÙk,kk dk jLk vk[k d fYk,

TkM & QhVLk Ckkgj fudkyu e ,o dfe uk'kd

EkkUkfLkd jkXk Ek] mlk,kkXkh PkEkjkXk Ek

mÙkj 4- D,kkfd jDRk Okkfgfuk,kk d }kjk jDRk >Vd d LkkFk CkgRkk g fTkLkLk ,d nkc mRlkUUk gk TkkRkk g Tkk fd LkkEkkU,k lkfjLkPkj.k Lk vf/kd gkRkk gA

mÙkj 5 ,k ,d lkdkj d Lk{Ek Tkh0k g Tkk HkfEk dh m0kjk 'kfDRk dk Ck<kRk g ,0k Ukkbvkvkvkvk fLFkjhdj.k dk dk,k djRk gA to mojd dgYkkRk gA

mÙkj 6- 'kd (Rod) – Ekn lkdk'k d lkfRk Lk0knh gkRkh gA bUkEk jkMkflLku o.kd (pigment) tk vit A CkUkkRkk gA ,kg Lk0kXkkREkd Ukgh djRkk gA

'ykdk (Cone) & bLkEk vk,kkMkfllu pigment lkk,kk TkkRkk g ,kg jXk dh vUkHkfRk djkRkk gA

mÙkj 7 1- Fkk¸kjkfDlu dh dEkh Lk 1$1$1 ¾ 3

2- I_2 dh dEkh Lk

3- Fkk¸kjkfDLkUk dh dEkh Lk A

mÙkj 8 ¼1½ lkk/k dh YkCkkb Ek 0kf) 1$1$1 ¾ 3

¼2½ fcuk fUk"kPkUk d CkhTk jfgRk QYk CkUkkUkk A

¼3½ illrk voLFkk (dormancey period) dk dEk dj TkYnh vdj.k ¸kk vU¸k LkEkd{k mÙkj

mÙkj 9 ¼1½ lkkUkh Lk LkLkTkUk dj mRlkUUk gkUkk 1$1$1 ¾ 3

¼2½ lkkUkh dh YkXkkRkkj iokg (continuouty flow) CkUkk¸k j[kUkk A

¼3½ lkkUkh dh Rkkj RkE¸kRkk dk CkUkk¸k j[kUk d fYk, ok"ikR ltu transportion pull ink djukA mlkjkDRk RkhUkk 'kh"kdk dk Llk"V ¼2 vd $ 1½

mÙkj 10- Pkdj CkkM CkUkkUkk 2$1 ¾ 3

9%3%3%1 dk ratio lkklRk djukA

mÙkj 11- ROkPkk d Pkkj dkb Pkkj dk¸k fYk[kUk lkj lkR¸kd Ek 1×4 vd 4 vd

vFkOkk

ddkYk Rk«k d dkb Pkkj dk¸k fYk[kUk lkj lkR¸kd Ek 1×4 vd 4 vd

mRRkj 12- Tkh0k f0kfUkEk¸k d dkb Pkkj EkgR0k fYk[kUk lkj lkR¸kd Ek 1×4 vd 4 vd

vFkOkk

lkfØ¸kk dk 0k.kUk djUk lkj 4 vd

mRRkj 13- dkb Pkkj lkknlkk d LkkEkkU¸k UkkEk lkj lkR¸kd Ek ½ vd

RkFkk 0kUkLlkfRkd UkkEk lkj ½+½ = 1×3 vd

vFkOkk

'kgn] j'kEk] EkDRkk] Ykk[k nUk 0kkYk TkRk dk UkkEk 0kKkfUkd UkkEk lhi LkkEkkU¸k UkkEk fYk[kUk lkj ½ vd ,0k 0kKkfUkd UkkEk fYk[kUk lkj ½+½ = 1×4 ¾ 4 vd

mRRkj 14 EkkUk0k 0kDd YkCk0kRk dkV dk fPk«k CkUkkUk lkj 2 vd

dEk Lk dEk Pkkj UkkEkkdUk djUk Ikj 2 vd dYk 4 vd

vFk0kk

EkkUk0k ân¸k d L0kPN fPk«k CkUkkUk Ikj 2 vd

,0k dEk Lk dEk Pkkj UkkEkkdUk Ikj 2 vd 4 vd

mRRkj 15- DNA dk Ikjk UkkEk fYk[kUk Ikj & 1 vd

DNA dh LkjPkUkk fYk[kUk Ikj & 4 vd dYk 5 vd A

vFk0kk

vUk0kkf'kd dkM dh Ikfjlkk"kk fYk[kUk Ikj &1 vd

Pkkj IkR¸kd dkb f0k'k"kRkkvk Ikj 1&1 vd ¾ 4 dYk 5 vd

mRRkj 16 gkjEkkUk d LFkkUk CkRkkUk Ikj gkjEkkUk dk UkkEk fYk[kUk ,0k Ikdkj fYk[kUk Ikj IkR¸kd XkfFk Ikj 1½+1½ + 2¾5 vd

vFk0kk

gkEkkUk d LFkkUk CkRkkUk Ikj ,0k gkEkkUk d UkkEk fYk[kUk Ikj vfRkL«kk0k 'kjhj Ikj Ikdkj fYk[kUk Ikj IkR¸kd XkfFk Ikj 1½+1½ + 2¾5 vd

mRRkj 17- 0k¸kRkk dh Ikfjlkk"kk fYk[kUk Ikj 1 vd ,0k dkb Pkkj mIk¸kDRk Ikfj0kRkUk fYk[kUk Ikj 4 vd dYk& 5 vd A

vFk0kk

dkYkhTkUk0kkn fYk[kUk Ikj 1 vd

0k¸kRkk d dkb Pkkj Yk{k.k fYk[kUk Ikj 4 vd dYk &5 vd

mRRkj 18 j[kkfPk«k CkUkkUk Ikj 3 vd

0k.kUk Ikj 3 vd dYk& 6 vdA

vFk0kk

mRRkj 19 j[kkfPk«k CkUkkUk Ikj 03 vd

0k.kUk djUk Ikj 03 vd dYk 06 vd

vFk0kk

UkkEkkfdRk fPk«k &02 vd

0k.kUk djUk Ikj &04 vd dYk 06 vdA