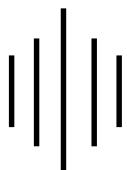
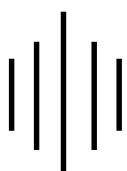




I Ei y&it u i =



d{kk XII oha



QI y mRi knu , oa m | ku 'kkL=

1/fo | kspr i kkx 1/2  
Nukhl x<+ek/; fed f'k{kk e.My] jk; ig

## i<sub>tu</sub> & i= dh ; kstuk

### Scheme of Question Paper

fo"<sub>k</sub>; % QI y mRiknu ,oa m|ku 'kkL=

i wkkd % 75

I e; % 3 ?ka/s

i jh{kk % gk; j I dsMjh 12ohz

1/2 'kskf.kd mnas; ds vuq kj eku

(A) Weightage as per Educational objective:

10 Ø0	mnas;	vd	ifr'kr
1-	Klu (Knowledge)	30	40%
2-	vocks (Understanding)	30	40%
3-	vuijks ,oa dksly (Application & Skill)	15	20%
; ksx		75	100%

% bdkbj vdk s dk eku

10Ø0	bdkbj dk uke	bdkbj ij vkcNv r vd	i <sub>tu</sub> &i= ds ik: i vuq kj vkcnv r vd
1-	ty fudkl	05	05
2-	Hk&l ojk.k	05	05
3-	i ks  I j{k.k	10	10
4-	QI y pØ ,oa 'k"; Øe ; kstuk	05	05
5-	[krh dh fof/k; ka , oa [krh ds i dkj	05	05
6-	QI yka dh [krh	15	15
7-	Nf"k i k j l ok, a	05	05
8-	vyNv m kudh	07	07
9-	i ksk i d/ku ,oa Qyka dh [krh	10	10
10-	Qyka rFkk I fct; ka dh i jh{j.k.k dh rdudhd	08	08
	; ksx	75	75

## ॥ ፳ ዓይነት ስርዓት ስርዓት (Difficulty Level)

10 ØO	mnas ;	vd	i fr'kr
1-	I jy (Easy)	30	40%
2-	vld r (Average)	30	40%
3-	dfBu (Difficult)	15	20%
		; kx	75
			100%

የነዕስ ከተማ = fn'kk funsk ,oa fodYi ; kst uk %

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

- oLrfu"B itu e@105% cgfodYih; itu rFkk 105% fjDr LFKku dh i fr@mfpr tkMh cuk, dk itu fn; k tkosk vks ; g iR; d l V e@itu Øekd 1 gksk A
- iR; d l V e@1] 2 ,oa3 vdks ds ituka e@fHkkurk jgsxh A l eLr 04 vd ; k bl l s vf/kd vdks ds y?kmÙkj h; rFkk nh?kmÙkj h; ituka e@fodYi fn; k tkuk gSA fodYi itu ml h bdkbZ l srFkk l eku mnas ; kdsjgxsA 04 vd ; k bl l s vf/kd vdks ds itu iR; d l V e@,d l eku jgsxh A
- vf/kdre mÙkj l hek      vfry?kmÙkj h;      1/2 vd@30 'kCn½/3 vd@50 'kCn½  
y?kmÙkj h;      1/4 vd@75 'kCn½/5 vd@150 'kCn½  
nh?kmÙkj h;      1/6 vd ; k vf/kd@250 'kCn½

# itu & i= dk Cyfi

## Blue Print of Question Paper

fo<sup>"</sup>k; % QI y mRiknu ,oa m|ku 'kkL=

i wklid %75

I e; %3 ?ka/s

**i jh{k% gk; j I dsMjh 112oh%**

bdkbz I -Ø-	bdkbz	bdkbz ij vkcfVr vd	vd okj itu							dy itu
			1 vd	2 vd	3 vd	4 vd	5 vd	6 vd	6 vd ; k bl ls vf/kd	
1	ty fudkl	5	&	1	1	&	&	&	&	2
2	Hk&l o{k.k	5	2	&	1	&	&	&	&	(2+1)
3	i ksk l j{k.k	10	1	&	1	&	&	1	&	(1+2)
4	QI y pØ , oa 'k"; Øe ; kstuk	5	&	&	&	&	1	&	&	1
5	[ksrh dhfof/k; ka o [ksrh ds i zdkj	5	&	&	&	&	1	&	&	1
6	QI yka dh [ksrh	15	1	&	1	&	1	1	&	(1+3)
7	Nf"k i z kj l sk, i	5	1	&	&	1	&	&	&	(1+1)
8	vyN r m  kfudh	7	1	1	&	1	&	&	&	(1+2)
9	i ksk i D/kL , oa Qyka dh [ksrh	10	2	2	&	1	&	&	&	(2+3)
10	Qyka rFkk l fct ; ka ds i j h{j{k.k dh rduhd	8	2	1	&	1	&	&	&	(2+2)
	; kx 1vd%	75	10	10	12	16	15	12	&	75 vd
	; kx 1l d ; k%		1(10)	5	4	4	3	2	-	(1+18)

**Set - A**

**gk; j I dsMjh Ldy I VHQdV ijkk**

**Higher Secondary School Certificate Examination**

**I fiiy&itu i=**

**SAMPLE PAPER**

**fo"k; % (Subject) - QI y mRiknu ,oa m|ku 'kkL=**

**I e; 3 ?k.Vk (Time- 3 Hrs)**

**d{kk % (Class) - ckjgoha 12ohk**

**i khd 75 (M.M.)**

**(Instruction) & Kunzkh**

- 1- I kk itu gy djuk vfuok; ZgSA

Attempt all the Question

- 2- itu Øekd 01 ea10 vd fu/kkjr gSA bI eanksmi [k.M gSA [k.M ^v\*\* ea05  
cgfodYih; itu rFkk [k.M ^c\*\* ea05 fjDr LFkkuk dh i firZ vFkok mfpr  
I ckk tkSM, A iR; d itu dsfy, 1 vd vkcfVr gSA

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. Each question carries 1 marks.

- 3- itu Øekd 02 I situ Øekd 06 rd vfr y?kRrjh; itu gSA iR; d itu ij 02 vd vkcfVr gSA mRrj dh vf/kdre 'kCn I hek 30 'kCn A

Q. No. 02 to 06 are very short answer type question & carries 02 marks each. Maximum word limit 30 words.

- 4- itu Øekd 07 I situ Øekd 10 rd y?kRrjh; itu gSA iR; d itu ij 03  
vd vkcfVr gSA mRrj dh vf/kdre 'kCn I hek 50 'kCn A

Q. No. 07 to 10 are short answer type question & carries 03 marks each. Maximum word limit 50 words.

- 5- itu Øekd 11 I situ Øekd 14 rd y?kRrjh; itu gSA iR; d itu ea  
vkfjd fodYi gSvkj iR; d itu ij 04 vd vkcfVr gSA mRrj dh vf/kdre  
'kCn I hek 75 'kCn A

Q. No. 11 to 14 are short answer type question & carries 04 marks each. Each question has internal choice. Maximum word limit 75 words.

- 6- itu Øekd 15 Is itu Øekd 17 rd nh?kñRrjh; itu gSA iR; d itu e  
vkrfjd fodYi gSvkj iR; d itu ij 05 vd vkcVr gSA mRrj dh vf/kdre  
'kCn I hek 100 'kCn A

Q. No. 15 to 17 are long answer type question & carries 05 marks each.  
Each question has internal choice. Maximum word limit 100 words.

- 7- itu Øekd 18 Is itu Øekd 19 rd nh?kñRrjh; itu gSA iR; d itu e  
vkrfjd fodYi gSvkj iR; d itu ij 06 vd vkcVr gSA mRrj dh vf/kdre  
'kCn I hek 150 'kCn A

Q. No. 18 to 19 are long answer type question & carries 06 marks each.  
Each question has internal choice. Maximum word limit 150 words.

I gh fodYi pudj fyf[k; s &

(1x5=5)

**Choose the correct alternative-**

- (i) fuEu tjhc eafdl dh yEckbZ 100 QhV gkrh gs &  
 1½ ehVj tjhc                                    1½ vfhk; Urk tjhc  
 1½ jø; q tjhc                                    1½ x.Vj tjhc

Which of the following chain is 100 feet in length-

- |                   |                    |
|-------------------|--------------------|
| (a) Meter chain   | (b) Engineer chain |
| (c) Revenue chain | (d) Guntar chain   |
- (ii) dkcmMfte gs , d &  
 1½ thok.kq uk'kh                                    1½ [kj i r okj uk'kh  
 1½ QOp uk'kh    1½ mijkDr l Hkh

Corbendazim is a -

- |                  |                      |
|------------------|----------------------|
| (a) Bacteriacide | (b) Weedicide        |
| (c) Fungicide    | (d) All of the above |
- (iii) /ku dk ifjokj gs &  
 1½ xfeuh    1½ ekyos h  
 1½ Øl hQjh    1½ l kysus h

The family of paddy is-

- |                |                |
|----------------|----------------|
| (a) Graminee   | (b) Malvaceae  |
| (c) Cruceferae | (d) Solanaceae |
- (iv) fuEu i kks dk okuLifrd uke efxQjk bMdk gs &  
 1½ uhcw    1½ ve: n  
 1½ vkyok    1½ vke

The botanical name *Mangifera indica* is of -

- |           |           |
|-----------|-----------|
| (a) Lemon | (b) Guava |
| (c) Aonla | (d) Mango |

- (v) fuEu dh tkp ty ehVj l sdjrs g&  
 $\frac{1}{4}\frac{1}{2}$  i fDVu]  $\frac{1}{4}\frac{1}{2}$  tSyh i fj i Do fcJnw  
 $\frac{1}{4}\frac{1}{2}$  rki eku  $\frac{1}{4}\frac{1}{2}$  mijkDr l Hkh

The following is Judged by Jelmeter

- |                 |                        |
|-----------------|------------------------|
| (a) Pectin      | (b) Jelly making point |
| (c) Temperature | (d) Above in all       |

### [k.M ^V\*\* / Section "A"]

fjDr LFkuka dh ifrl djs &

$\frac{1}{4} \times 5 = 5$

Fill in the blanks -

- (i) iR; d tjh c ds l kfk rhjk adh l q; k ----- gsrh gSA

The number of Arrow with each chain is .....

- (ii) Qysk dkMz i l kj dk ----- l k/ku gSA

Flash card is ..... aids of extension

- (iii) ^yky clk\*\* ----- e gSA

"Lal Bag" is in .....

- (iv) ^Xolfy; j 27\*\* ----- dh fdLe gSA

"Gwalior 27" is variety of .....

- (v) tSyh -----  ${}^0C$  rki Øe ij id tkrh gSA

Jelly gets ripened ..... in  ${}^0C$  temperature

itu 2&	ty fudkl xqkkad dks i fjHkkf"kr dhft , A	$\frac{1}{2}\frac{1}{2}$
	Define Drainage coefficient.	
itu 3&	'ksy m   ku dks l qki eal e>kb; sA	$\frac{1}{2}\frac{1}{2}$
	Explane Rock Garden in brief.	
itu 4&	Vh&cfMax dk ukekdr fp= cukb; sA	$\frac{1}{2}\frac{1}{2}$
	Draw a labelled diagram of T-budding.	
itu 5&	dktwdh tyok; ql qki eal e>kb; sA	$\frac{1}{2}\frac{1}{2}$
	Explain the climate of Cashewnut in brief.	

itzu 6&	Qykpak D; kdh tkrh g\\$ \	1/1 \$1 3/4 2 1/2
	Why blanching is done ?	
itzu 7&	ty fudkl dsdkbz N% ykk fyf[k, A	(1/2x6=3)
	Write any six advantages of Drainage.	
itzu 8&	, d ehVj tjhc l s 500 ehVj dh njh ukih x; h A tjhc 0.3 ehVj cMh Fkh A jsk dh okLrfod njh Kkr dhft, A	1/3 1/2
	A 500 meter distance is measured by meter chain. The chain is defective which is 0.3 meter longer than the standard chain. Calculate the actual length of the line.	
itzu 9&	^dkd ** [kjirokj dk fu; a.k d\\$ sdjks\ l e>kb; sA	1/3 1/2
	How will you control "Kaans" ( <i>Soccharum spontaneum</i> )	
itzu 10&	xlkuk dh [krh dh tkudkjh fuEu fcUnykaeanhft, &	1/3 1/2
	Give following information of sugar cane cultivation -	
(a)	okll ifrd uke (Botanical name)	
(b)	ifjokj (Family)	
(c)	mi t (Yield)	
itzu 11&	tokgj jkstxkj ; kstuk dks l {ki e\\$ l e>kb; sA	1/4 1/2
	Explain 'Jawahar Rozgar Yojna' in brief.	
	<b>^vFkok** (OR)</b>	
	vks pkfjd f'k{k.k , oavuks pkfjd f'k{k.k e\\$ vrj fyf[k, A 1/2 1/2 8 1/2	(1/2x8)
	Write difference between formal and non formal education. (any eight)	
itzu 12&	hkkjrh; Nf"k vut dku l Fku }kjk fodfl r xykc dh dkbz vkB fdLek ds uke fyf[k, A	1/2x8
	Write any eight variety of Rose which is released by I.A.R.I.	
	<b>^vFkok** (OR)</b>	
	, d vPNh gfj ; kyh dh dkbz vkB fo'kskrk, i fyf[k, A	(1/2x8)
	Write any eight characteristics of good Lawn.	
itzu 13&	vkrfjd dkjd vke ds, dku rj Qyu dksfdl i dkj i kfor djrk g\\$ \	1/4 1/2
	How does internal causes affect alternate bearing of Mango.	

**^vFkok\*\* (OR)**

I kbM xfñx dk I fp= o.ku dhft , A ½\$2<sup>3</sup>/<sub>4</sub>½

Describe side grafting with a labelled diagram.

i tu 14& I rjk Ldñsk cukus dh vko'; d I kexh , oafof/k fyf[k, A ½\$2<sup>3</sup>/<sub>4</sub>½

Write essential materials and method of preparing Orange squash.

**^vFkok\*\* (OR)**

Qy , oal Cth ifjj{.k. ds vLFkk; h fl ) kr fyf[k, A ½dkbZ pkj½ (1x4=4)

Write temporary principles of fruit and vegetable preservation. (any four)

i tu 15& 'kL; ; kst uk dh fo'kskrk, j fyf[k, A ½dkbZ i kp½ (1x5=5)

Write characteristics of cropping scheme.

**^vFkok\*\* (OR)**

mRre QI y pØ ds vko'; d y{.k. fyf[k, A ½dkbZ i kp½ (1x5=5)

Write essential criteria of good crop rotation. (Any five)

i tu 16& 'kñd [krh dh ubZ rduhdh dks l {ki eal e>kb; sA ½½

Explain new technology of dry farming in brief.

**^vFkok\*\* (OR)**

vrorhñ [krh ds i dkjka dks l {ki eal e>kb; sA ½½

Explain types of inter cropping in brief.

i tu 17& i Mñ QI y I svf/kd mi t i kr djusdsfy, I pko fyf[k, A ½dkbZ nI ½ (½x10=5)

Write suggestion for fetching more yield from Ratoon cropping

**^vFkok\*\* (OR)**

I ks kchu I svf/kd mRiknu i kr djusdsfy, I pko fyf[k, A ½dkbZ nI ½ (½x10=5)

Write suggestion for fetching more yield from Soyabean. (any ten)

i tu 18& I jte[kh dh [krh fuEu fcUnyka eal {ki eal e>kb; sA (1x6=6)

½½ egRo] ½½ tyok; ] ½½ Hkfe

½½ [kkn , oamo] d ½½ chtnj ½½ mi t

Wxplain cultivation of Sunflower on following points in brief.

- (a) Importance              (b) Climate              (c) Soil  
(d) Manures and fertilizers      (e) Seedrate              (f) Yield

**^vFok\*\* (OR)**

வக; LVj e'k: e dh mRi knu fof/k l aki ea l e>kb; sA              (1x6=6)

Explain production method of Oyster Mushroom in brief.

iz u 19& [kj i rokj fu; a.k dh d"klk fof/k; k j fyf[k, A 1/akbl N%

Write the mechanical method of weed control. (any six)

**^vFok\*\* (OR)**

dhV fu; a.k dh d"klk fof/k; k j fyf[k, A 1/akbl N%

Write the cultural method of insect pest control. (any six)

&&00&&

d{kk 12oh

fo"k; & QI y mRiknu ,oa m|ku 'kkL=

~|xi y mRrj\*\*

mRrj 1& [k.M 1/2 oLrfu"V itu

(1x5=5)

- (i) & C
- (ii) & I
- (iii) & V
- (iv) & n
- (v) & v

[k.M 1/2 fJDr LFku

(1x5=5)

- (i) 10
- (ii) n';
- (iii) cxykj
- (iv) ve: n
- (v) 104-6°C

mRrj 2& fdI h Hkh Kkr {ksQy | s24 ?ksdh vof/k dsnkjku ftruh xgjkbzrd ds ikuh  
dk fudkl fd;k tkrk gsmI s ty fudkl xqkhd dgrsgA 1/2

m|ku dsvrxk iRFkjka; k pVvukudh Nf=e igkMh cukdj ml e>kfM+kj ; k  
ikks mxuk 'ksy m|ku gSA bl e fo'kskdj Qu] ije] Msi uk] dsvVI vkn  
ikks yxkrs gSA 1/2

mRrj 4&

mRrj 5&	dktwds t yok; qxez, oavkn] l eñz rVh; {k= mi ; Dr] vf/kd 'khr esupl kua gkfudkj d½	½½
mRrj 6&	Cykpx djrs g§ D; kfd& ½½ vuko'; d rFkk gkfudkj d , Utke u"V gks tkrs g§A ½½ Qyka ds vñj mifLFkr vkDl htu de gks tkrh g§A ½½ Qy eyk; e rFkk uje gks tkrs g§A ½½ thok.kvka dh l a; k de gks tkrh g§A ½½ yl yl sinkFkZ rFkk nkDl/k ckgj fudy tkrs g§A ½dkbz nks dkj .k fy [kus i j 2 vd½	
mRrj 7&	ty fudkl dsykk & ½½ enk eñok; qI pkj c<rk g§A ½½ [ks dh r\$ kjh , oacpkbz l e; ij dh tk l drh g§A ½½ ty Lrj uhpk gks tkrk g§A ½½ Hkfe dh Hkkfrd jkl k; fud , oatfod n'kk l qjrh g§A ½½ enk rki Bhd jgrk g§A ½½ enk l jpu k ea l qkj gksk g§A ½½ ykk nk; d thok.kvka dh fØ; k 'khyrk eñof) gksk g§A	(½x6=3)
mRrj 8&	okLrfod yEckbz ¾ $\frac{L^1}{L} \times$ eki h x; h nyj $L^1 = L + e^{3/4} 30 \times 0.3^{3/4} 30 \times 3 e^{hVj}$ ¾ $\frac{30.3}{30} \times 500^{3/4} 505 e^{hVj}$	½½ ½ \$1\$1 ½ ¾ ½
mRrj 9&	dkd [kj i rokj dk fu; a.k & ½½ xt"e dkyhu] xgjh tdkbz ½½ Myi hu ; k fl esthu 4&5 kg dks 1000 yhVj ikuh eñ?kksydj 2&3 clk dkd i kks eafNMdko djgA	½½ ½ \$2 ¾ 3½
mRrj 10&	xlluk dh [krh & (A) okuLifrd uke & I dje vklQI huje	(1x3=3)
	<i>(Saccharum officinarum)</i>	

- (B) i fjokj & xfeuh (Graminae)
- (C) mi t & 500 l s 850 fDøVy@ gDVsj
- mRrj 11& bl ; kstuk dks Hkkjr ds i Fk e i zkkueah Lo- Jh tokgj yky ug: dh tle 'krkCnh o"kl 1889&90 eaykxwfd; k x; k Fkk A bl ds ek/; e l s xteh.k {ks=ka ea xjhch jskk l s uhps thou ; ki u dj jga ifjokjka ds cjkst xkj l nL; ka dks jkst xkj mi yC/k djk; k tkrk gSA ; g ; kstuk NAREGA dsuke l stku k tkrk gSA bl l s xteh.k {ks=ea , sh l kenkf; d ifj l Ei fRr; ka ea l tu tks mudh vkkFkld rFkk l kekftd fLFkfr ds l p<hdj.k ea l gk; d gsk vkkFkld c<ks=jh gsrq mRij d gks rFkk xteh.k xjhck ds vkkFkld Lrj ea LFkk; h l qkj ykus eami ; kxh gSA
- 141

### **~vFkok\*\***

Ø.	<b>vks pkfjd f'k{k.k</b>	<b>vukS pkfjd f'k{k.k</b>
1-	f'k{k.k i kB; Øe i j dflunr jgrk gSA	1- f'k{k.k dk; Z vko'; drk , oa l eL; k , oa l eL; k eyd gksk gSA
2-	i kB; Øe i wZ fu/kkfjr gksk gSA	2- i kB; Øe f'k{k{kFkhZ dh vko'; drk& ut kj cuk; s tkrsgsA
3-	fl )kr , oa i z ks nkuk crk; s tkrsgsA	3- djds l h[kusdk fl )kr i j vkl/kkfjr gksk gSA
4-	I Hkh f'k{k{kFkhZ yxHkx l eku mez ds gksr gSA	4- f'k{k{kFkhZ foFkhUu mez ds tS &cPp; ce} 0; Ld vklfn gksr gSA
5-	Nk= dks f'k{k{kFkhZ dk ds funz kkud kj pyuk i Mfrk gSA	5- f'k{k{kFkhZ ka dh l gefr l s gh fn'kk funz ku gksk gSA
6-	Nk= fo"k; ka dk v/; ; u djrs gSA	6- f'k{k{kFkhZ l eL; kvka dk v/; ; u djrs gSA
7-	Nk= fMlykek ; k fMxh l s I cf/kr gksk gSA	7- i ek.k i =kal s dkbZl dk ughagksk A
8-	I kfkk ds fu; ek dk vuqkyu vko'; d gSA	8- f'k{k{kFkhZ cgr dp Lor= gksr gSA
9-	ed; /; s fo   kfFkhZ ka ds 0; fDrRo dk fodkl djuk gSA	9- 0; kogkfjd thou ea i Hkko Mkyuk gSA
10-	vf/kdkak f'k{k.k dk; Z d{k kh rd gh l hfer jgrk gSA	10- cgr l k f'k{k.k dk; Z d{k kh rd ckj Hkh gksk gSA

11-	f' k{kk. k f' k{kk 'kkL= fl ) karka	11-	f' k{kk. k i z k j f' k{kk ds fl ) karka ij
	}kjk l pkfyr gksk gSA		l pkfyr gksk gSA
12-	vf/kdkj v/; kdika ds gkfk ea	12-	vf/kdkj i k; % f' k{kffFkz ka ds gkfk ea
	gksk gSA		gksk gSA
			(½x 8 = 4)
mRrj 12&	(i) ekguh (ii) xak (iii) i w k l kfu; k		
	(iv) l nkcgkj (v) l jskk (vi) Hkhe		
	(vii) l dkkrk (viii) xytkj (ix) xytkj		
	(x) l w kh; (xi) ekfgh dh cgu i ek		
	(xii) Lokrh (xiii) ga (xiv) gkehHkkHkk		
	(xv) fg a kfxuh (xvi) uouhr (xvii) fprou		
	(xviii) fnYyh fi ll st		(½x 8 = 4)

### ^vFkok\*\*

	vPNh gfj; kyh dh fo'kkrk, j &	(½x 8 = 4)
1½	gfj; kyh , d h gks tksfd nj I sgh ugh cfYd i kl I snksus eHkh l qj yxsA	
2½	fdl h i dkj ds nqll/k u vk; sA	
3½	ijk o"kl Hkj gjk jx cuk jgsA	
4½	dkey rFkk l ?ku gksA	
5½	I llk ds ifr l gu'khy gksA	
6½	jks , oadhl ds ifr jkskd {kerk gksA	
7½	?kk l pikkus okyh u gksA	
8½	gfj; kyh ij Nk; k u i MsA	
mRrj 13&	vkrfjd dkjd vke ds, dkUrj Qyu dksbl i dkj i llfor djrk gS&(1x4)	
1½	i kkkadk Qyr Lohkko& vke ea i gys o"l Qy vxzdfydkvka ij i sk gks s gS	
	rksvxys o"l vxzdfydk Qy i sk u djdsijkg i sk djrh gS ft l I snl jso"l	
	i kkkfcuk Qyr dsjg tk rk gSA i fj .k keLo: i vke ea, dkUrj Qyu gksk gA	
2½	djusdh vknr (Flushing habit)- vke dso k vuojr : i l sof) ugha	
	djrsft l ds dkj .k , dkUrj QI u gks tk rk gSA	
3½	uj rFkk eknk Qyksa ds vui kr (Sex ratio)- jkekuh 113%] rkski jh 15%] n'kgjh	
	3%] yaxMlt 5%] l kekuh] rkrki jh fdLe n'kgjh , oayaxMlt fdLe dh ryuk ea	

fu; fer QI y nsrk gSA vFkkj ujQy dh I q; k elnk Qy dh ryuk eade  
 gks i j , dkUrj Qyu gksk gSA  
 14½ dkckgkbM V rFkk ukbVktu dk vuqkr (C:N ratio)- C:N ratio 10:1 I okt/kd  
 vupdy gSA tc i kskka ea ukbVktu dh vf/kdrk vks dkckgkbM V dh deh gks  
 rks , dkUrj Qyu gksk gSA  
 15½ chtk.kqdk fxjuk (Ovule abortion)- Qy cuusdh i kqdk coLFkkvkae acht k.kq  
 {kh.k gks tkrs gsvkj Qyr ekjh tkrh gSifj. kkeLo: i , dkUrj Qyu gksk gA  
**~vFkok\*\***  
 I kbM xfp/e dk I fp= o.ku & 12\$2<sup>3</sup>4½

11½ ey ovr dk p; u djrs gSA  
 12½ I k[k dk p; u i sly ekvkbz, oa, SPNd gksA  
 13½ ey ovr ij xfp/Vx ukbQ dh I gk; rk dVku yxrks gSA  
 14½ I k[k ij LQklu dh Hkkj u dVku yxrks gSA  
 15½ I k[k dks eyovr ij yxkdj i ksyhFku i VVh ckdk nsrs gSA  
 16½ 1½ ekg ea i kskk r\$ kj gks tkrk gSA  
 mRrj 14& **I rjk Ldks k&** (2+2=4)  
**vko'; d I kexh & Qyka dk jI & 1 yhVj] ikuh & 1 yhVj] phuh & 2kg, I kbFVd**  
 vEy & 15gm, i ksf'k; e eVk ckb I YQkbV & 2gm, Qy dh I qdk & 4gm,  
 [kks dk jx & vko'; drkuq kj A  
**fof/k&** 11½ Qyka dk p; u & LoLFkj rktk Qy  
 12½ Qyka dks /kksuk , oa Nhyuk A  
 13½ Qyka l sji fudkyuk A  
 14½ pkI uh cukuk A  
 15½ pkI uh eajI feykuk A  
 16½ jx] ji ll feykuk A  
 17½ futbhi Nr ckry eaHkjuk A  
 18½ I hy djuk , oaycy yxkuk A

## ^vFkok\*\*

- Qy ,oa l Cth ifjj{lk.k ds vLFkk; h fl )kr&** (1x4=4)
- 11½ I Qkbz (Cleaning)-** I M&xys rFkk pkv [kk; s gq nkxh Qyka ,oa l fct ; ka dks vyx dj nsrgsA QykadksI kQ djdsI ko/kkuh i o; i fV; ka ,osVkdjkaeHkjus I svf/kd I e; rd I jf{kr jgrsgsA
- 12½ de rki Øe (Low Temperature)-** de rki Øe ij j [kusI sI etho fu"Øh; ; k de I fØ; gksrgsftI I sQy ,oa l fct; ka vf/kd I e; rd I jf{kr jgrs gSA
- 13½ vf/kd rki Øe-** I kekU; I svf/kd rki Øe ij Hkh Qy ,oa l fct; ka dks vf/kd I e; rd I jf{kr j [k I drs gSA
- 14½ ueh rFkk gox I scpklo&** QykadksB.Ms 'kld ,oaueh jfgr okrkoj.k ej [kus ij thok. kyka dk vf/kd i Hkko ugha i Mf k A ftI I sQy ,oa l fct; kHvf/kd I e; rd I jf{kr jgrsgsA
- 15½ gYds dHvk.kq uk'kd i nkFkk dk iz kx&** Qyka rFkk I fct; ka dks I jf{kr j [kusdsfy, phuh] fl jdk] ued] rsy o I kSM; e ctsk V dk iz kx ykHkdkjh jgrk gSA bl I svYidky dsfy, mUgkI jf{kr j [k I drs gSA
- mRrj 15& 'kL; ; kstuk dh fo'kskrk, i &** (1x5=5)
- 1½ ftu [kskaeaQI y pØ vi uk; k tk jgk gsmudk {ksQy I eku gksuk pkfg, A**
- 2½ ftruso"kZ dk QI y pØ gksmrusgh ; k xqkkd I a; k ea [ks gksuk pkfg, A**
- 3½ pljs dh QI ykdk {ksQy yxHkx 10 ifr'kr gksuk pkfg, A**
- 4½ QI y pØ ea ijrh Øe j [kuk pkfg, A**
- 5½ 'kL; ; kstuk ea Hkfe] Je] i [t] fl pkb] [kkn vlfn dk I espr mi ; kx gksuk pkfg, A**

## ^vFkok\*\*

- mRre QI y pØ ds vko'; d y{lk.k&** (1x5=5)
- 1½ QI y pØ ,s k gksfd ifro"kZ QI ykdk dy {ksQy yxHkx cjkjcj gh gksA**
- 2½ QI y pØ vf/kdre fl )krka dk ikyu dj jgk gksA**
- 3½ QI y pØ bl izdkj dk gksuk pkfg, fd foHkUu i Hkko Mkyusokys dkj dkadks /; ku ea j [kdj rskj fd; k tkuk gksA**

- 14½ mi yC/k I d k/kukadk I eipr <x I smi ; kx gks A  
 15½ Hkfe dh mojrk dk gkI U; ure gks A  
 mRrj 16& 'kld [krh dh ubz rdudhli & (½x10=5)  
 16½ xh'e dkyhu tckbzA  
 17½ eM cUnh A  
 18½ I lkk I gu djus okyh QI ya mxkuk t\$ & Tokj] cktjk tk\$ puk vyl h  
     vkfnA  
 19½ cht nj dh ek=k de A  
 15½ i ksk vrj.k vf/kd A  
 16½ thokdk [kkn dk iz kx A  
 17½ , h VRI i kbjV jlk; u t\$ & fl fydku] , ukDy\$ gkbMRDI h yekbu vkfn dk  
     iz kx A  
 18½ okVj gkoLVA A  
 19½ eYp A  
 1/10½ I lkk I gu djus okyh QI yksd fdLe t\$ s xgwc-306] puk G-24

### **^vFkok\*\***

- vrorit [krh ds izkj&** (1¼x4=5)
- 1/1½ I ekukUrj QI y mxkuk (Parallel cropping)- , d I kfk nks, \$ h QI yksdksysuk  
     ftuds fodkl dk <x vyx&vyx rFkk muds chp 'kli; ifr; ksrk dh  
     ifjfLFkfr gksI ekUrj QI y gSA mnkgj.k vjgj dsI kfk eik dk mnZdksyukA  
 12½ I gpj : i eQI y mxkuk (Companion cropping)- bl [krh e, d QI y  
     nlijh QI y dh i hkokj ij vI j ughAMkyrh gSA vFkli-nksQI yksd h i hkokj  
     'kq QI y dscjkcj fey tkrh gSA t\$ sxUuk dsI kfk xgwi; k I jI ksdh QI y  
     mxkuk A
- 13½ fl uj tfVd [krh (Synergetic cropping)- bl e, e; QI y rFkk xksk QI y  
     nksd h mi t vyx&vyx 'kq QI yksd h mi t dh ryuk e, c<+tkrh gSA  
     t\$ scjI he \$ I jI k xUuk \$ vkywA
- 14½ cgptiyh QI y mxkuk (Multistoried cropping)- fofhkuu Åpkbz vks c<okj

	okyh 3&4 QI y&I kf&I kf mxkuk gh cgeftyh [krh gSA mnkgj.k & ukfj; y&dkyhfep&dkdk&vllukl A	
mRrj 17&	<b>iMh QI y I s vf/kd mit ikr djus ds I pko &amp;</b> (½x10=5)	
1½	xllus dh mi ; Dr fdLe dh cokbz t\$ s & C 1148, CO1158	
2½	ed; QI y Qjojh&ekpz ds iEke I Irkg eavo'; dkV yA	
3½	[kr dh I Qkbz dj iFr; kaks tyk nA	
4½	ijkuh emka dks rkM\$A	
5½	xllus dh iMh ea i gyh fl pkbz nj I s djA	
6½	150&200kg u=tu@gDV\$ j dh nj I snA	
7½	ul Jh r\$ kj dj xi fQfyA djA	
8½	3&4 ckj fudkbz xMkbz djA	
9½	dhV , oajks dk fu; a.k djA	
10½	, d gh ckj iMh QI y yA	
	<b>~vFkok**</b>	
	<b>I ks kchu I s vf/kd mRiknu ikr djus ds I pko &amp;</b> (½x10=5)	
1½	I ks kchu mfpr ty fudl okyh nkeV] efV; kj] VkeV enk eaks A	
2½	65&80kg cht@gDV\$ j dh nj I s ck\$ A	
3½	cht dks mi pkfjr rFkk jkbzks; e dYpj I s fuos'kr dj ck\$ A	
4½	mlur 'khy fdLe t\$ & xk\$ol nk\$ vadj] P.K. 172 vlfn ck; A	
5½	20&30kg u=tu] 60&80kg QkLQkj I ] , oa40&60kg ik/k'k ifrgDV\$ j nA	
6½	t\$&tykbz ds iEke I Irkg rd vo'; ck\$ A	
7½	vk'; drkuq kj fl pkbz djA	
8½	nksckj fudkbz xMkbz djA ½ pkbz ds 30 o] 45o:fnu½	
9½	dhVks dk fu; a.k djA	
10½	jksks dk fu; a.k djA	
11½	xe&ue tyok; qokys {ks-ka e cokbz djA	
mRrj 18&	<b>I jtekh dh [krh &amp;</b> ¼x6¾6½	
1½	egRo& rsy] cyt e 24&30% rsy dh ek=k fyukfyd vEy ds vf/kd gks ds dkj.k dksVky dh of) dksjkdrk gSA	

- ½ tyok; & 50cm dh okf"kd o"kk] cht v[dj.k 4&5°C rki eku] cht i dus ds  
 I e; de rki eku ½gedkj½ ds ifr l o[nu'ky A cht idrs I e; LoPN]  
 pedhys/kii mi ; Dr A  
 ½ H[fe& cy[plnkej] efV; kj H[fe ty fudkl okyh mi ; Dr pH 6.7-8.5  
 ½ [kkn , oamo]d & 80kg u=tu] 60kg QkLQkj I ifr gDV\$ j A 1@3 u=tu  
 Qy f[kyus ds I e; nA  
 ½ chtnj & 8kg @gDV\$ j  
 ½ mi t & 15&20 fD[Vy@gDV\$ j

### **^vFkok\*\***

- Vk; LVj e'k: e ds mRiknu fof/k &** ½x6³/6½  
 ½ [ks h dk ek/; e & /kku dk ijk ; k xg dh H[ h yrs gSA  
 ½ mi pkj djuk & bl s xeZ ikuh mi pkj ; k l akf/kr xeZ ikuh mi pkj ; k  
 jkl k; fud mi pkj fof/k l smi pkfjr djrs gSA t\$ sjkl k; fud mi pkj 25 yhVj  
 ikuh e½gm dkcMkfe , o35 feyh Qkelyhu e2-5gm ijk dks12&15 ?k/s ds  
 fy, Micks gSA  
 ½ chtkbz ; k LiMuk djuk& 60&70% ueh ijk ; k H[ h eachtkbz djrs gSA  
 ½ cht c<ekj fLFkfr & chtkbz fd; s x; sek/; e dks i kyhFkhu eHkj dj thvkbz  
 rkj eyVdk nrsgSA 8 fnu dsckn i kyhFkhu FkSyh dkVdj i%yVdk nrsgA  
 mRiknu d{k dh vknz k 70% gks pkfg, A l cg&'kce gatkjs; k Li j l ikuh  
 dk fNMdko djrs gSA  
 ½ rMkbz & FkSy; kadkVus ds 3&4 fnuk e'e'k: e mRiknu ijk gks tkrk gSA i w  
 fodfl r e'k: e dks gYds gkFk l sekMdj rMkbz dj gSA  
 ½ mi t & 2½kg ek/; e l s 2&3kg e'k: e mRiknu gks gSA  
**mRrj 19& [kj i rokj fu; e.k dh ; kf=d fof/k; kj &** (1x6)  
 ½ [kj i rokj dks gkFk l sm [kkMuk (Hand pulling)  
 ½ gkFk l sfudkb&xMkbz djuk (Hand hoeing)  
 ½ [kj i rokj dks dkVuk (Weeds moving)  
 ½ Nf=e vkoj .k (Mulching)

15½ ck<+ } kjk (Flooding)  
16½ vlx yxkdj (Burning)  
17½ ou fcunyakdk o.ku djusij 1x6= 6 vcl½  
**~vFok\*\***

**dhv fu; a.k ds d"kz k fof/k; k&** (1x6)  
18½ [ks eə 'kL; ko' kskka dks u"V djuk &  
19½ [kj i rokjka dks u"V djuk  
20½ xt"e dkyhu t̪kbz  
21½ fl pkbz  
22½ QI y pØ  
23½ dhv i frjksh fdLekak i z kx  
24½ o.ku \$ mnkgj .k nusij 1x6= 6 vcl½  
**&&00&&**

## Set - B

**gk; j I dsMjh Ldy I VHQdV ijkk**

**Higher Secondary School Certificate Examination**

**I fiiy&itu i=**

**SAMPLE PAPER**

**fo"k; % (Subject) - QI y mRiknu ,oa m|ku 'kkL=**

**I e; 3 ?k.Vk (Time- 3 Hrs)**

**d{kk % (Class) - ckjgo" k12ohk**

**i kkd 75 (M.M.)**

### **(Instruction) & Kunzkh**

- 1- I kk itu gy djuk vfuok; ZgSA

Attempt all the Question

- 2- itu Øekd 01 ea10 vd fu/kkjr gSA bl eanksmi [k.M gSA [k.M ^v\*\* ea05  
cgfodYih; itu rFkk [k.M ^c\*\* ea05 fjDr LFkkuk dh i firZ vFkok mfpr  
I ckk tkSM, A iR; d itu dsfy, 1 vd vkcfVr gSA

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. Each question carries 1 marks.

- 3- itu Øekd 02 I situ Øekd 06 rd vfr y?kRrjh; itu gSA iR; d itu ij 02 vd vkcfVr gSA mRrj dh vf/kdre 'kCn I hek 30 'kCn A

Q. No. 02 to 06 are very short answer type question & carries 02 marks each. Maximum word limit 30 words.

- 4- itu Øekd 07 I situ Øekd 10 rd y?kRrjh; itu gSA iR; d itu ij 03  
vd vkcfVr gSA mRrj dh vf/kdre 'kCn I hek 50 'kCn A

Q. No. 07 to 10 are short answer type question & carries 03 marks each. Maximum word limit 50 words.

- 5- itu Øekd 11 I situ Øekd 14 rd y?kRrjh; itu gSA iR; d itu ea  
vkfjd fodYi gSvkj iR; d itu ij 04 vd vkcfVr gSA mRrj dh vf/kdre  
'kCn I hek 75 'kCn A

Q. No. 11 to 14 are short answer type question & carries 04 marks each. Each question has internal choice. Maximum word limit 75 words.

- 6- itu Øekd 15 Is itu Øekd 17 rd nh?kñRrjh; itu gSA iR; d itu e  
vkrfjd fodYi gSvkj iR; d itu ij 05 vd vkcVr gSA mRrj dh vf/kdre  
'kCn I hek 100 'kCn A

Q. No. 15 to 17 are long answer type question & carries 05 marks each.  
Each question has internal choice. Maximum word limit 100 words.

- 7- itu Øekd 18 Is itu Øekd 19 rd nh?kñRrjh; itu gSA iR; d itu e  
vkrfjd fodYi gSvkj iR; d itu ij 06 vd vkcVr gSA mRrj dh vf/kdre  
'kCn I hek 150 'kCn A

Q. No. 18 to 19 are long answer type question & carries 06 marks each.  
Each question has internal choice. Maximum word limit 150 words.

I gh fodYi pudj fyf[k; s &

(1x5=5)

**Choose the correct alternative-**

(i) {ks i fLrdk eafy [krs g& &

1/2 uhps l s Åij

1/2 Åij l suhps

1/2 ckW s l snkW s

1/2 nkW s l skW s

In the field book it is written :-

(a) From bottom to top

(b) from top to bottom

(c) From left to right

(d) from Right to left

(ii) , e-l h-i-h, - gS , d&

1/2 QQpuk' kh

1/2 thok.kq uk' kh

1/2 [kj i rokj uk' kh

1/2 mijkDr l Hkh

MCPA is a -

(a) Fungi cide

(b) Bacteria cide

(c) Weedi cide

(d) All of the above

(iii) puk dk i fjokj gS &

1/2 l kysus h

1/2 yk; feukd h

1/2 Øl hQjh

1/2 xfeuh

The family of Gram is -

(a) Solanaceae

(b) Leguminaceae

(c) Cruceferae

(d) Graminee

(iv) fuEu i kks dk okuLifrd uke , sukdkfMz e vldI hMIVy gS &

1/2 vke

1/2 dVgy

1/2 ve: n

1/2 dktw

The botanical name *Anacardium occidentale* is of the following plant

(a) Mango

(b) Jack fruit

(c) Guava

(d) Cashewnut

- (v) r<sup>g</sup> kj t<sup>g</sup>h dk Hkkj gks<sup>r</sup>k gS &  
 ½ phuh dk 1½ x<sup>g</sup>uk ¾ Qy dk 1½ x<sup>g</sup>uk  
 ½ phuh dk 2½ x<sup>g</sup>uk ¾ Qy dk 2½ x<sup>g</sup>uk

The weight of prepared Jelly is-

- |                       |                       |
|-----------------------|-----------------------|
| (a) 1½ times of sugar | (b) 1½ times of fruit |
| (c) 2½ times of sugar | (d) 2½ times of fruit |

[k.M ^c\*\* @ Section "B"]

fjDr LFkuka dh ifrl djks &

¼x5=5)

**Fill in the blanks -**

- (i) Økl LVkQ ea ----- Hktk, j gsrh gSA  
 There are ..... arms in a cross-staff.
- (ii) oUnkou xkMlu ----- ea fLFkr gSA  
 Vrindavan garden is situated at .....
- (iii) Vhoh i d kj dk ----- lk/ku gSA  
 T.V. is ..... aids of extension.
- (iv) Ldf<sup>g</sup>sk ea ----- ifjj{kh inKFkZ dk mi ; ks gsrk gSA  
 ..... is used as preservative in squash
- (v) [ktk ----- dh fdLe gSA  
 Khaza is variety of .....

itu 2& i "Bh; ty fudkl dh fof/k; kadsuke fyf[k, A ½dkbZ pkj½ ¼x4=2½

Write the name of method of surface drainage. (any four)

itu 3& xwh dk ukekfdr fp= cukt; sA ½½

Draw a well labelled diagram of gootee.

itu 4& ^t<sup>g</sup>h jks<sup>r</sup>h gSA\*\* D; ka\ I e>kb; sA ¼ \$1 ¾ 2½

"Jelly weeps." why ? Explain.

itu 5& vkyk dk ikk jki .k I qki ea l e>kb; sA ½½

Explain planting of Aonla in brief.

itzu 6&	ckwI k; dks I {ki e{I e>kb; sA	12½
	Explain Bonsai in brief.	
itzu 7&	ty fudkl dsdkbZ N%mnas; fyf[k, A	(½x6=3)
	Write any six objectives of Drainage.	
itzu 8&	vki xgivk dk fu; a.k d{ s djxsA	13½
	How will you control <i>Phalaris minar</i>	
itzu 9&	I ks kchu dh [ks h dh tkudkjh fuEu fcUnykae fyf[k, %	(1x3=3)
	tyok; ] 1c½ chtnj] 1½ mi t	
	Write following information of soybean cultivation.	
(a)	Climate, (b) Seedrate (c) Yield.	
itzu 10&	, d 820 QhV dh njh batfu; j tjhC l seki h x; h A tjhC 3 bp cMh Fkh rks ukih x; h njh dh okLrfod yEckbZ dh x.kuk dhft, &	13½
	820 feet distance is measured by engineer chain. The chain is defective which is 3 inch longer than the standard chain. Calculate the actual length of measured distance.	
itzu 11&	tokgj jkstxkj ; kstuk dks I {ki e{I e>kb; sA	14½
	Explain 'Jawahar Rozgar Yojna' in brief.	
	<b>^vFok** (OR)</b>	
	vks pkfjd f'k{k.k , oavuks pkfjd f'k{k.k e{vrj fyf[k, A ½dkbZ 8½ (½x8)	
	Write difference between formal and non formal education. (any eight)	
itzu 12&	Hkkjrh; Nf"k vud ikku l Fku }jk fodfl r xykc dsdkbZ vkB fdLekadsuke fyf[k, A	(½x8)
	Write any eight variety of Rose which is released by I.A.R.I.	
	<b>^vFok** (OR)</b>	
	, d vPNh gfj ; kyh dh dk{ vkB fo'kskrk, j fyf[k, A	(½x8)
	Write any eight characteristics of good Lawn.	
itzu 13&	vkrfjd dkjd vke ds , dkUrj Oyu dks fdI idkj i{kfor djrk g{ \ I e>kb; s	14½
	How does internal causes effect alternate bearing of Mango. Explain.	

**^vFkok\*\* (OR)**

I kbM xfñx dk I fp= o.ku dhft , A ½\$2<sup>3</sup>/<sub>4</sub>½

Describe side grafting with a well labelled diagram.

i tu 14& I rjk Ldñsk cukus dh vko'; d I kexh , oafof/k fyf[k, A ½\$2<sup>3</sup>/<sub>4</sub>½

Write essential materials and method of preparing Orange squash.

**^vFkok\*\* (OR)**

Qy , oal Cth ifjj{.k. ds vLFkk; h fl ) kr fyf[k, A ½dkbZ pkj½ (1x4=4)

Write temporary principles of fruit and vegetable preservation. (any four)

i tu 15& 'kL; ; kst uk dh fo'kskrk, j fyf[k, A ½dkbZ i kp½ (1x5=5)

Write characteristics of cropping scheme.

**^vFkok\*\* (OR)**

mRre QI y pØ ds vko'; d y{.k. fyf[k, A ½dkbZ i kp½ (1x5=5)

Write essential criteria of good crop rotation. (Any five)

i tu 16& 'kñd [krh dh ubZ rduhdh dks l {ki eal e>kb; sA ½½

Explain new technology of dry farming in brief.

**^vFkok\*\* (OR)**

vrorhñ [krh ds i dkjka dks l {ki eal e>kb; sA ½½

Explain type of inter cropping in brief.

i tu 17& i Mñ QI y I svf/kd mi t i kr djusdsfy, I pko fyf[k, A ½dkbZ nI ½ (½x10=5)

Write suggestion for fetching more yield from Ratoon cropping

**^vFkok\*\* (OR)**

I ks kchu I svf/kd mRiknu i kr djusdsfy, I pko fyf[k, A ½dkbZ nI ½ (½x10=5)

Write suggestion for fetching more yield from Soyabean. (any ten)

i tu 18& I jte[kh dh [krh fuE u fcUnyka eal {ki eal e>kb; sA (1x6=6)

½½ egRo] ½½ tyok; ] ½½ Hkfe

½½ [kkn , oamo] d ½½ chtnj ½½ mi t

Wxplain cultivation of Sunflower on following points in brief.

- (a) Importance              (b) Climate              (c) Soil  
(d) Manures and fertilizers      (e) Seedrate      (f) Yield

**^vFok\*\* (OR)**

வக; LVj e'k: e ds mRi knu fof/k l fki esl e>kb; sA      (1x6=6)

Explain production method of Oyster Mushroom in brief.

iz u 19& [kj i rokj fu; a.k ds ; k=d fof/k; k f yf[k, A 1/akbZ N%

Write the mechanical method of weed control. (any six)

**^vFok\*\* (OR)**

dV fu; a.k ds d"Zk fof/k; k f yf[k, A 1/akbZ N%

Write the cultural method of insect pest control. (any six)

&&00&&

d{kk 12ohā

fo"k; & QI y mRiknu ,oa m|ku 'kkL=  
~i ~i y mRrj\*\*

mRrj 1&	[k.M 1½ oLrfu"V itu	(1x5=5)
(i)	& v	
(ii)	& l	
(iii)	& c	
(iv)	& n	
(v)	& v	

[k.M 1½ fJDr LFkku	(1x5=5)
(i) pkj	
(ii) e§ j	
(iii) JØ; &n"; (Audio-Visual)	
(iv) i k's/f'k; e e/kckb l YQkbV	
(v) dVgy	

mRrj 2&	i "Bh; ty fudkl dh fo/k; ka ds uke&
1½	vLFkk; h ukfy; k] 1½ dV&vkmV ukfy; k]
1¾	LFkk; h ukfy; k] 1¾ l ery Hkfie ea eMka dks dkVdj

mRrj 3&

mRrj 4&	tSyh jkrh gSD; kfd &	1½ \$1¾2½
1½	[kVkl dh vf/kdrk	
1¾	'kDdj dh deh	
mRrj 5&	vypyk ds i ksk jks .k & i ksk vrj.k 10 x 10m xM<sd vldkj 1x1x1m] 50kg f.y.m., ½kg l qjQWQV rFkk 0-25kg E; jy/ vWD i k'k +25 xte , YMGI pwkz	

	I s xM< k Hkj dj t ykbz e i kks yxkrs gSA	1/2 vd 1/2
mRrj 6&	cMs o{kks dks dkV&NkWdj vR; Ur gh ckuk j [kus dh dyk ckWl k; gSA t\$ fo'kky cjxn o{k dks 0-5 I s 1m Åpk cukuk A	1/4 \$1 1/2 vd 1/2
mRrj 7&	ty fudkl dsmnns; &	(1/2x6=3 vd)
1/1/2	Hkfie dh Hkkfrd n'kk ea ldkj djuk A	
1/2/2	Hkfie eok; q l pkj djuk A	
1/3/2	Hkfie eanyny u gksusnuk A	
1/4/2	mfpr rki Øe cuk; sj [kuk A	
1/5/2	gkfudkj d yo. kks dk , d=.k jkduk A	
1/6/2	Nf"k fØ; k, i l e; ij djuk A	
1/7/2	ykk nk; d thok. kks dh fØ; k'khyrk e of) djuk A	
1/8/2	MhukbVifQd'sku dks jkduk A	
mRrj 8&	xgjk dk fu; f.k &	1/4 \$2 1/4 3 vd 1/2
1/1/2	m[kkMedj (Uprooting)	
1/2/2	vkbI kis kks jku 50% - 75% dk iz kx djuk A	
mRrj 9&	I ks kchu dh [ks h&	(1x3=3)
1/4/2	tyok; q& bl dsfy, xe&ue tyok; qmi ; Dr gksk gSA cht vd .k grq40°F rFkk cf) dsfy, 75&80°F rki Øe mi ; Dr jgrk gSA QI y idrs l e; o"kkz dk gksuk gkfudkj d gSA	
1/5/2	cht nj & 65&80 kg/gDVsj	
1/6/2	mi t & 30&35 fDøVy@gDVsj	
mRrj 10&	okLrfod yEckbl $\frac{L^1}{L} \times$ eki h x; h njh A	1/4 vd 1/2
	$L^1 = 100 + e, L = 100, e = \frac{3}{12} = \frac{1}{4} = 0.2$ QV	1/4 vd 1/2
	I gh yEckbl $\frac{100.25}{100} \times 820 = 822.05$ QhV	1/4 vd 1/2
		1/4 \$1 \$1 1/4 3 vd 1/2



mRrj 12&	(i) ekguh	(ii) xak	(iii) i w k l kfu; k
	(iv) l nkcgkj	(v) l jskk	(vi) Hkhe
	(vii) l tkrk	(viii) xytkj	(ix) xytkj
	(x) l w kh;	(xi) ekfgh dh cgu i ek	
	(xii) Lokrh	(xiii) g	(xiv) gkehHkkHkk
	(xv) fgx kfxuh	(xvi) uouhr	(xvii) fprou
	(xviii) fnYyh fi ll st		(½x 8 = 4)

### ^vFkok\*\*

vPNh gfj; kyh dh fo'kskrk, j & (½x 8 = 4)

- 1/1/ gfj; kyh , s h gks tksfd nj I sgh ugh cfYd i kl I snksus eHkh I qj yxsA
- 1/2/ fdI h i dkj ds nq/k u v k; s A
- 1/3/ ijk o"kl Hkj gjk jx cuk jgs A
- 1/4/ dkey rFkk I ?ku gks A
- 1/5/ l lk ds ifr I gu'ky gks A
- 1/6/ jks , oadhV ds ifr jkskd {kerk gks A
- 1/7/ ?kl pikkus okyh u gks A
- 1/8/ gfj; kyh ij Nk; k u i MsA

mRrj 13&	vkrfjd dkjd vke ds ,dkUrj Qyu dks bl i dkj i kfor djrk gS &
1/1/	i kksadk Qyr Lohkk & vke ea igyo"l Qy vxz dfydkvka ij i sk gks s gS
	rksvxys o"l vxz dfydk Qy i sk u djdsijk i sk djrh gS ft I I sn jso"l
	i ksk fcuk Qyr dsjg tk rk gSA i fj .k keLo: i vke ea ,dkUrj Qyu gksk gA
1/2/	ubzof) djusdh vknr (Flushing habit)- vke dso k vuojr : i I sof) ugha
	djrsft ds dkj.k ,dkUrj QI u gks tk rk gSA
1/3/	uj rFkk eknk Qyksa ds vui kr (Sex ratio)- jkekuh 113%] rkski jh 15%] n'kgjh
	3%] yksM 5%] I kekuh] rkrki jh fdLe n'kgjh ,oayksM fdLe dh nyuk ea
	fu; fer QI u nsrk gSA vFkk uj Qy dh I [; k eknk Qy dh nyuk ea de
	gks i j ,dkUrj Qyu gksk gSA
1/4/	dkckgkbM rFkk ukbVst u dk vui kr (C:N ratio)- C:N ratio 10:1 I okt/kd

vudy gSA tc i k<sup>g</sup>kk<sup>a</sup>ek<sup>b</sup>V<sup>c</sup>tu dh vf/kdrk v<sup>d</sup> dkck<sup>e</sup>kbM<sup>f</sup> dh deh gks  
 rks , dkUrj Qyu gksk gSA  
 15½ chtk.kqdk fxjuk (Ovule abortion)- Qy cuusdh i k<sup>g</sup>kk<sup>a</sup> coLFkkvkae<sup>b</sup>chtk.kq  
 {kh.k gks tkrsg<sup>c</sup>v<sup>d</sup> Qyr ekjh tkrh gSifj.kkeLo: i , dkUrj Qyu gksk gA  
 14½

### **^vFkok\*\***

I kbM x<sup>a</sup>p<sup>b</sup>e dk I fp= o.ku &

12\$2<sup>3</sup>/4½

1½ ey oUr dk p; u djrs<sup>a</sup>A  
 1½ I k[ k dk p; u i<sup>b</sup>l y ek<sup>c</sup>kb<sup>d</sup>, oa , sPNd gksA  
 1½ ey oUr ij x<sup>a</sup>p<sup>b</sup>Vx ukbQ dh I gk; rk dVku yxrks<sup>c</sup>A  
 1½ I k[ k i j LQk<sup>a</sup> dh Hkk<sup>b</sup> dVku yxrks<sup>c</sup>A  
 1½ I k[ k dks eyoUr ij yxkdj ikyhFku i VVh ck<sup>d</sup> nrs<sup>e</sup>g<sup>f</sup>A  
 1½ ekg ea i k<sup>g</sup>kk r<sup>h</sup> kj gks tkrk gSA  
 mRrj 14& I rjk Ld<sup>a</sup>s k& (2+2=4)  
 vko'; d I kexh & Qyka dk jI & 1 yhVj] ikuh & 1 yhVj] phuh & 2kg, I kbFVd  
 vEy & 15gm, i k<sup>g</sup>s'k; e e<sup>b</sup>k ckb I YQkbV & 2gm, Qy dh I q<sup>c</sup>dk & 4gm,  
 [kks dk j<sup>d</sup> & vko'; drku<sup>e</sup> kj A  
**fof/k&** 1½ Qyka dk p; u & LoLFk] rktk Qy  
 1½ Qyka dks /k<sup>a</sup>uk , oa Nhyuk A  
 1½ Qyka l sji fudkyuk A  
 1½ pkI uh cukuk A  
 1½ pkI uh e<sup>b</sup>jI feykuk A  
 1½ j<sup>c</sup>] jI H feykuk A  
 1½ fut<sup>d</sup>h<sup>e</sup> Nr ckry e<sup>f</sup>hkjuk A  
 1½ I hy djuk , oaycy yxkuk A  
 ^vFkok\*\*

Qy , oa I Cth ifjj{k.k ds vLFkk; h fl )kr&

(1x4=4)

- 11½ I Qkbz (Cleaning)-** I M&xys rFkk pkV [kk; s gq nkxh Qyka ,oa l fct ; k dks vyx dj nsrgsA QykadksI kQ djdsI ko/kkuh i ožl i fV; ka ,osVkdjkaeHkjus I svf/kd I e; rd I jf{kr jgrsgsA
- 12½ de rki Øe (Low Temperature)-** de rki Øe ij j [kus l s l etho fu"Øh; ; k de l fØ; gksrgsftl l sQy ,oa l fct; kavf/kd l e; rd I jf{kr jgrsgsA
- 13½ vf/kd rki Øe-** I kekU; I svf/kd rki Øe ij Hkh Qy ,oa l fct; k dks vf/kd l e; rd I jf{kr j[k l drsgsA
- 14½ ueh rFkk gok l scpho& QykadksB.Ms 'kld ,oaueh jfgr okrkoj.k ej [kus ij thok.ka dk vf/kd i Hkko ugha i Mrk A ftl l sQy ,oa l fct; kWvf/kd l e; rd I jf{kr jgrsgsA**
- 15½ gYds dhlk. kq uk'kd i nFkk dk i z kx& Qyk rFkk l fct; k dks l jf{kr j [kus dsfy, phuh] fl jdk] ued] rsy o l ksM; e catks V dk i z kx ykHkdjkj h jgrk gSA bl l svYidky dsfy, mUgsl jf{kr j [k l drsgsA**
- mRrj 15& 'kL; ; kstuk dh fo'kskrk, j & (1x5=5)
- 1½ ftu [kskaeQI y pØ vi uk; k tk jgk gsmudk {ksQy l eku gksuk pkfg, A
- 2½ ftruso"kl dk QI y pØ gksmrus gh ; k xqkkd l f; k ea [ks gksuk pkfg, A
- 3½ pkjs dh QI ykdk {ksQy yxHkx 10 ifr'kr gksuk pkfg, A
- 4½ QI y pØ ea ijrh Øe j [kuk pkfg, A
- 5½ 'kL; ; kstuk ea Hkfe] Je] i pth] fl pkb] [kkn vlfn dk l espr mi ; kx gksuk pkfg, A

### ~vFkok\*\*

- mRre QI y pØ ds vko'; d y{k.k&** (1x5=5)
- 1½ QI y pØ ,s k gksfd ifro"kl QI ykdk dy {ksQy yxHkx cjkjcj gh gksA
- 2½ QI y pØ vf/kdre fl )kdkdk ikyu dj jgk gksA
- 3½ QI y pØ bl i zdkj dk gksuk pkfg, fd foHkUu i Hkko Mkyusokysdkjaka dks /; ku ea j [kdj r\$ kj fd; k tkuk gksA
- 4½ mi yC/k l d k/kukdk l espr <k l smi ; kx gksA
- 5½ Hkfe dh mojrk dk gk U; ure gksA

- mRrj 16& 'k<sup>h</sup>d [kr<sup>h</sup> dh ubz rdutdh & (½x10=5)
- 1½ xt<sup>h</sup>e dkyhu t<sup>h</sup>kbZA
- 2½ eM clnh A
- 3½ I [kk I gu djus okyh QI ya mxuk t<sup>h</sup> & Tokj] cktjk tk<sup>h</sup> puk vyl h vlfna
- 4½ cht nj dh ek=k de A
- 5½ i k<sup>h</sup>k vrj.k vf/kd A
- 6½ thokak [kkn dk i<sup>h</sup> k<sup>h</sup> A
- 7½ , sh V<sup>h</sup>U<sup>h</sup> i kbj<sup>h</sup>V j l k; u t<sup>h</sup> & fl fydku] , ukDy<sup>h</sup> gkbM<sup>h</sup>D<sup>h</sup> h yekbu vlfna dk i<sup>h</sup> k<sup>h</sup> A
- 8½ okVj gko<sup>h</sup>LV<sup>h</sup>A
- 9½ eYp A
- 10½ I [kk I gu djus okyh QI y<sup>h</sup>adsfdLe t<sup>h</sup> s xg<sup>h</sup>C-306] puk G-24

**^vFok\*\***

- vrord<sup>h</sup> [kr<sup>h</sup> ds i<sup>h</sup>dkj&** (1¼x4=5)
- 1½ I ekukUrj QI y mxuk (Parallel cropping)- , d I kfk nks, sh QI y<sup>h</sup>adksysuk ftuds fodkl dk <x vyx&vyx rFkk muds chp 'k<sup>h</sup>; ifr; k<sup>h</sup>xrk dh ifjfLFkfr gksI ekUrj QI y gSA mnkgj.k vjgj dsI kfk e<sup>h</sup> dk mnZdksy<sup>h</sup>uka
- 2½ I gpj : i e<sup>h</sup>QI y mxuk (Companion cropping)- bl [kr<sup>h</sup> e<sup>h</sup>, d QI y n<sup>h</sup> j h QI y dh i<sup>h</sup>kokj i j v l j ughMkyrh gSA vFkk~nksQI y<sup>h</sup>adh i<sup>h</sup>kokj 'k<sup>h</sup> QI y dscjkjc fey tkrh gSA t<sup>h</sup> sx<sup>h</sup>luk dsI kfk xg<sup>h</sup>; k l j l k<sup>h</sup>dh QI y mxuk A
- 3½ fl uj tfVd [kr<sup>h</sup> (Synergetic cropping)- bl e<sup>h</sup>ed; QI y rFkk xl<sup>h</sup>sk QI y n<sup>h</sup>kska dh mi t vyx&vyx 'k<sup>h</sup> QI y<sup>h</sup>adh mi t dh ryuk e<sup>h</sup>c<+tkrh gSA t<sup>h</sup> scjl he \$ l j l k<sup>h</sup> xl<sup>h</sup>uk \$ vkywA
- 4½ cge<sup>h</sup>tyh QI y mxuk (Multistoryed cropping)- foftklu Åpkbz vks c<okj okyh 3&4 QI ya l kfk&l kfk mxuk gh cge<sup>h</sup>tyh [kr<sup>h</sup> gSA mnkgj.k & ukfj; y&dkyhfep&dkdk&vlukl A

mRrj 17& **i M̄ QI y I s vf/kd mi t i llr djus ds I pko &** (½x10=5)  
 ½½ xllus dh mi ; Dr fdLe dh cokbz t\$ s & C 1148, CO1158  
 ½½ e[; QI y Qjojh&ekpz ds i Eke I lrkg evo'; dkV yaA  
 ½½ [ks dh I Qkbz dj i fRr; kaks tyk naA  
 ½½ i jkuh emka dks rkMsA  
 ½½ xllus dh i M̄ ea i gyh fl pkbz nj I s djA  
 ½½ 150&200kg u=tu@gDV\$ j dh nj I snA  
 ½½ ul jh r\$ kj dj xi fQfyk djA  
 ½½ 3&4 ckj fudkbz xMkbz djA  
 ½½ dhV , oajks dk fu; a.k djA  
 ½½ , d gh ckj i M̄ QI y yaA

### **~vFkok\*\***

**I ks kchu I s vf/kd mRiknu i llr djus ds I pko &** (½x10=5)  
 ½½ I ks kchu mfpr ty fudl okyh nkeV] efV; kj] VkeV enk eaks A  
 ½½ 65&80kg cht@gDV\$ j dh nj I s cks A  
 ½½ cht dks mi pkfjr rFkk jkbtkf; e dYpj I s fuof'kr dj cks A  
 ½½ mlur 'khy fdLe t\$ & xkjo nkk] vdj] P.K. 172 vlfn ck; A  
 ½½ 20&30kg u=tu] 60&80kg QkLQkj ] , oa40&60kg i k/k'k ifrgDV\$ j naA  
 ½½ t\$&tykbz ds i Eke I lrkg rd vo'; cks A  
 ½½ v\$'; drku\$ kj fl pkbz djA  
 ½½ nks ckj fudkbz xMkbz djA ½pkbz ds 30 of 45oafnu½  
 ½½ dhVak dk fu; a.k djA  
 ½½ jkska dk fu; a.k djA  
 ½½ xe&ue tyok; qokys {ks-ka ecpkbz djA  
 mRrj 18& **I jtekh dh [ks &** ½x6¾6½  
 ½½ egRo& rsy cyt e24&30% rsy dh ek=k fyukfyd vEy ds vf/kd gks ds  
 dkj.k dks v\$ty dh of) dks jksdrk gSA  
 ½½ tyok; & 50cm dh okf"kd o"kk] cht vdj.k 4&5°C rki eku] cht idus ds  
 I e; de rki eku ¼gedkj½ ds ifr I o\$u'khy A cht idrs I e; LoPN]  
 pedhys/k mi ; Dr A

- ¼½ Hkfe& cyþnkej] efV; kj Hkfe ty fudkl okyh mi ; Dr pH 6.7-8.5  
 ½½ [kkn , oamojd & 80kg u=tu] 60kg QkLQkj I ifr gDVsj A 1@3 u=tu  
 Qy f[kyus ds l e; nA  
 ½½ chtnj & 8kg @gDVsj  
 ¾½ mi t & 15&20 fDøVy@gDVsj

### ~vFkok\*\*

- vk; LVj e'k: e ds mRiknu fof/k &** ¼x6³/6½  
 ¼½ [krh dk ek/; e & /kku dk ijk ; k xgwdh Hkw h yrs gSA  
 ½½ mi pkj djuk & bl s xel ikuh mi pkj ; k lakkf/kr xel ikuh mi pkj ; k  
 jkl k; fud mi pkj fof/k l smi pkfjr djrs gSA t s jkl k; fud mi pkj 25 yVj  
 ikuh e½gm dkcMkfe , oa35 feyh Qkelyhu e½2.5gm ijk dks12&15 ?k/sds  
 fy, Micks gSA  
 ¾½ chtkbz ; k LkMuk djuk& 60&70% ueh ijk ; k Hkw h eac ht kbz djrs gSA  
 ½½ cht c<okj fLFkfr & chtkbz fd; s x; sek/; e dks ikyhFkhu e½Hkj dj thvkbz  
 rkj e½Vdk nrsgA 8 fnu dsckn ikyhFkhu FkSyh dkVdj i½% yVdk nrsgA  
 mRiknu d{k dh vknz k 70% gkuk pkfg, A l çg&'kke gtkjs; k Lij j l s ikuh  
 dk fNMdko djrs gSA  
 ½½ rMkbz & FkSy; kadkVusds3&4 fnuka e'e'k: e mRiknu ijk gks tkrk gSA i½  
 fodfl r e'k: e dks gYds gkfka l sekMkj rMkbz djgA  
 ½½ mi t & 2½kg ek/; e l s 2&3kg e'k: e mRiknu gks gSA  
**mRrj 19& [kj i rokj fu; a.k dh ; kf=d fof/k; kj &** (1x6)  
 ¼½ [kj i rokj ka dks gkfka l sm [kkMuk (Hand pulling)  
 ½½ gkfka l sfudkb&xMkbz djuk (Hand hoeing)  
 ¾½ [kj i rokj ka dk dkVuk (Weeds moving)  
 ½½ Nf=e vkoj .k (Mulching)  
 ½½ ck<+ }kj k (Flooding)  
 ½½ vlx yxkdj (Burning)  
 ½½ ou fcUnyak dk o.ku djus ij 1x6= 6 vcl½

**^vFkok\*\***

dhV fu; a.k ds d"kZk fof/k; k&  
(1x6)  
1/1½ [ks' es 'kL; ko' kskka dks u"V djuk &  
1/2½ [kj i rokjka dks u"V djuk  
1/3½ xt"e dkyhu t̄kbz  
1/4½ fl pkbz  
1/5½ QI y pØ  
1/6½ dhV i frjksh fdLekak i z kx  
10.kL \$ mnkgj.k nus ij 1x6= 6 vod½  
&&00&&

**Set - C**

**gk; j I dsMjh Ldy I VHQdV ijkk**

**Higher Secondary School Certificate Examination**

**I fiiy&itu i=**

**SAMPLE PAPER**

**fo"k; % (Subject) - QI y mRiknu ,oa m|ku 'kkL=**

**I e; 3 ?k.Vk (Time- 3 Hrs)**

**d{kk % (Class) - ckjgoha 12ohk**

**i khd 75 (M.M.)**

**(Instruction) & Kunzkh**

- 1- I kk itu gy djuk vfuok; ZgSA

Attempt all the Question

- 2- itu Øekd 01 ea10 vd fu/kkjr gSA bl eanksmi [k.M gSA [k.M ^v\*\* ea05  
cgfodYih; itu rFkk [k.M ^c\*\* ea05 fjDr LFkkuk dh i firZ vFkok mfpr  
I ckk tkSM, A iR; d itu dsfy, 1 vd vkcIVr gSA

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. Each question carries 1 marks.

- 3- itu Øekd 02 l situ Øekd 06 rd vfr y?kRrjh; itu gSA iR; d itu ij 02 vd vkcIVr gSA mRrj dh vf/kdre 'kCn I hek 30 'kCn A

Q. No. 02 to 06 are very short answer type question & carries 02 marks each. Maximum word limit 30 words.

- 4- itu Øekd 07 l situ Øekd 10 rd y?kRrjh; itu gSA iR; d itu ij 03  
vd vkcIVr gSA mRrj dh vf/kdre 'kCn I hek 50 'kCn A

Q. No. 07 to 10 are short answer type question & carries 03 marks each. Maximum word limit 50 words.

- 5- itu Øekd 11 l situ Øekd 14 rd y?kRrjh; itu gSA iR; d itu ea  
vkfjd fodYi gSvkj iR; d itu ij 04 vd vkcIVr gSA mRrj dh vf/kdre  
'kCn I hek 75 'kCn A

Q. No. 11 to 14 are short answer type question & carries 04 marks each. Each question has internal choice. Maximum word limit 75 words.

- 6- itu Øekd 15 Is itu Øekd 17 rd nh?kñRrjh; itu gSA iR; d itu e  
vkrfjd fodYi gSvkj iR; d itu ij 05 vd vkcVr gSA mRrj dh vf/kdre  
'kCn I hek 100 'kCn A

Q. No. 15 to 17 are long answer type question & carries 05 marks each.  
Each question has internal choice. Maximum word limit 100 words.

- 7- itu Øekd 18 Is itu Øekd 19 rd nh?kñRrjh; itu gSA iR; d itu e  
vkrfjd fodYi gSvkj iR; d itu ij 06 vd vkcVr gSA mRrj dh vf/kdre  
'kCn I hek 150 'kCn A

Q. No. 18 to 19 are long answer type question & carries 06 marks each.  
Each question has internal choice. Maximum word limit 150 words.

I gh fodYi pudj fyf[k; s &

(1x5=5)

**Choose the correct alternative-**

(i) x.Vj tjh c dh yEckbZ gkrh gs &

1½ 100 QhV

1½ 66 ehVj

1½ 66 QhV

1½ 100 ehVj

The length of guntur chain is-

(a) 100 feet

(b) 66 meter

(c) 66 feet

(d) 100 meter

(ii) v'oxdk dk ifjokj gs A

1½ xfeuh

1½ yX; feukd h

1½ ØhQjh

1½ lksus h

The family of "Aswegandha" is-

(a) Graminee

(b) Leguminoceae

(c) Cruceferae

(d) Solanaceae

(iii) LVVkd kbDyhu gs , d &

1½ [kj i rokj uk'kh

1½ thok.kq uk'kh

1½ QOp uk'kh

1½ mijkDr l Hkh

Stroptocyclene is a-

(a) Weedi cide

(b) Bactericide

(c) Fungi cide

(d) All of the above

(iv) fuEu i ksk ds lk l hfM; e Xoktkok okuLifrd uke gs &

1½ vke

1½ dVgy

1½ dktw

1½ ve: n

The botanical name *Psidium guajava* is of the following plant

(a) Mango

(b) Jaelfruit

(c) Cashewnut

(d) Guava

- (v) r<sup>s</sup> kj t<sup>s</sup>h dh fcDI o<sup>v</sup>; qgksr h g<sup>s</sup>&  
 $\frac{1}{4}\frac{1}{2}$  75-78°  $\frac{1}{4}\frac{1}{2}$  85&88°  
 $\frac{1}{4}\frac{1}{2}$  65&68°  $\frac{1}{4}\frac{1}{2}$  55&58°

Brix value of prepared Jelly is -

- (a) 75&78° (b) 85&88°  
(c) 65&68° (d) 55&58°

### [k.M ^c\*\* @ Section "B"]

fjDr LFkuka dh i<sup>r</sup>l djs &

$\frac{1}{4} \times 5 = 5$

Fill in the blanks -

- (i) vfk; Urk tjhc ea ----- Vx gksr g<sup>s</sup>A  
There are ..... tags in Engineer chain
- (ii) jke fuokl i kdz ----- ea fLFkr g<sup>s</sup>A  
Ramnivas park is situated at .....
- (iii) Qkskste fjdkMZ it kj dk ----- lk/ku g<sup>s</sup>A  
Phonogram record is..... aids of extension.
- (iv) vkei kyh ----- dh fdLe g<sup>s</sup>A  
Amrapali is variety of .....
- (v) Vkesks dpi dk fcDI o<sup>v</sup>; q----- gksr g<sup>s</sup>A  
Brix value of Tomato ketchup is .....

- it u 2& ty fudk; dks i<sup>r</sup>kkf"kr dhft , A  $\frac{1}{2}\frac{1}{2}$   
Define drainage.
- it u 3& ty m|ku dks l<sup>r</sup>ki eal e>kb; sA  $\frac{1}{2}\frac{1}{2}$   
Explain water garden in brief.
- it u 4& bukp<sup>r</sup> dk ukekfir fp= cukb; sA  $\frac{1}{4} \$1\frac{3}{4}2\frac{1}{2}$   
Draw a well labelled diagram of Inarching.
- it u 5& ^t<sup>s</sup>h ug<sup>r</sup>terh g<sup>s</sup>A\*\* D; k\ l e>kb; sA  $\frac{1}{2}\frac{1}{2}$   
"Jelly do not solidify." Why ? Explain.

itzu 6&	dVgy dk iksk jks .k lks eal e>kb; sA	12½	
Explain planting of Jackfruit in brief.			
itzu 7&	ty fudkl dh dkbs N%of/k; ksds uke fyf[k, A	(½x6=3)	
Write the name of any six method of drainage.			
itzu 8&	vjgj dh [ks dh tkudkjh fuEu fcUnyka esfyf[k, A	(1x3=3)	
okuLifrd uke ½c½ chtnj ½ ½ mi t			
Write following information of Arhar (Redgram) cultivation.			
(a)	Botanical name	(b) Seed rate	(c) Yield
itzu 9&	, d 1248 fyd dh njh x. Vj tjhc l suki h x; h A tjhc 0-4 fyd Nks/h Fkh rks ekih x; h njh dh l gh yEckbz dh x.kuk dlft, A	(3)	
Aditance of 1248 link is measured by Guntar chain. The chain is defective which is 0.4 link shorter than standard chain. Calculate the actual lenght of measured distance.			
itzu 10&	vki ekFkk dk fu; a.k dS sdjks\ l e>kb; sA	13½	
How will you control Motha ( <i>Cyperus rotundus</i> ). Explain.			
itzu 11&	tokgj jkstxkj ; kstuk dks lks eal e>kb; sA	14½	
Explain 'Jawahar Rozgar Yojna' in brief.			
<b>^vFkok** (OR)</b>			
vks pkfjd f'k{k.k , oavuks pkfjd f'k{k.k esvvrj fyf[k, A ½dkbs 8½ (½x8)			
Write difference between formal and non formal education. (any eight)			
itzu 12&	Hkkjrh; Nf"k vuq lku l Fku }jkj fodfl r xykc dh dkbs vkB fdLekads uke fyf[k, A	(½x8)	
Write any eight variety of Rose which is released by I.A.R.I.			
<b>^vFkok** (OR)</b>			
, d vPNh gjj; kyh dh dkbs vkB fo'kskrk, j fyf[k, A (½x8)			
Write any eight characteristics of good Lawn.			
itzu 13&	vkrfjd dkjd vke ds ,dkUrj Qyu dksfdl i dkj i kfor djrk g\\$ \ 14½		
How does internal causes effect alternate bearing of Mango.			

**^vFkok\*\* (OR)**

I kbM xfñx dk I fp= o.ku dhft , A ½\$2<sup>3</sup>/<sub>4</sub>½

Describe side grafting with a well labelled diagram.

i tu 14& I rjk Ldñsk cukus dh vko'; d I kexh , oafof/k fyf[k, A ½\$2<sup>3</sup>/<sub>4</sub>½

Write essential materials and method of making Orange squash.

**^vFkok\*\* (OR)**

Qy , oal Cth ifjj{.k. ds vLFkk; h fl ) kr fyf[k, A ½dkbZ pkj½ (1x4=4)

Write temporary principles of fruit and vegetable preservation. (any four)

i tu 15& 'kL; ; kst uk dh fo'kskrk, j fyf[k, A ½dkbZ i kp½ (1x5=5)

Write characteristics of cropping scheme.

**^vFkok\*\* (OR)**

mRre QI y pØ ds vko'; d y{.k. fyf[k, A ½dkbZ i kp½ (1x5=5)

Write essential criteria of good crop rotation. (Any five)

i tu 16& 'kñd [krh dh ubZ rduhdh dks l {ki eal e>kb; sA ½½

Explain new technology of dry farming in brief.

**^vFkok\*\* (OR)**

vrorhñ [krh ds i dkjka dks l {ki eal e>kb; sA ½½

Explain type of inter cropping in brief.

i tu 17& i Mñ QI y I svf/kd mi t i kr djusdsfy, I pko fyf[k, A ½dkbZ nI ½ (½x10=5)

Write suggestion for fetching more yield from Ratoon cropping

**^vFkok\*\* (OR)**

I ks kchu I svf/kd mRiknu i kr djusdsfy, I pko fyf[k, A ½dkbZ nI ½ (½x10=5)

Write suggestion for fetching more yield from Soyabean. (any ten)

i tu 18& I jte[kh dh [krh fuE u fcUnyka eal {ki eal e>kb; sA (1x6=6)

½½ egRo] ½½ tyok; ] ½½ Hkfe

½½ [kkn , oamo] d ½½ chtnj ½½ mi t

Wxplain cultivation of Sunflower on following points in brief.

- (a) Importance              (b) Climate              (c) Soil  
(d) Manures and fertilizers      (e) Seedrate              (f) Yield

**^vFok\*\* (OR)**

வக; LVj e'k: e ds mRi knu fof/k l fki esl e>kb; sA              (1x6=6)

Explain production method of Oyster Mushroom in brief.

iz u 19& [kj i rokj fu; a.k ds ; k=d fof/k; k f yf[k, A 1/akbZ N%

Write the mechanical method of weed control. (any six)

**^vFok\*\* (OR)**

dV fu; a.k ds d"Zk fof/k; k f yf[k, A 1/akbZ N%

Write the cultural method of insect pest control. (any six)

&&00&&

d{kk 12oh

fo"k; & QI y mRiknu ,oa m|ku 'kkL=  
"i fiy mRrj\*\*

- mRrj 1& [k.M 1/4/ oLrfu"V itu (1x5=5)
- (i) & I
  - (ii) & n
  - (iii) & c
  - (iv) & n
  - (v) & I

- [k.M 1/4/ fJDr LFku (1x5=5)
- (i) 9
  - (ii) t; i j
  - (iii) J0;
  - (iv) vke
  - (v) 28 I s30

mRrj 2& QI y dh i hkokj c<kusgrqHkfe dh l rg ; k v/kks l rg l svfrfjDr ty dks Nf=e : i l sckgj fudkyuk ty fudkl dgykrk gSA 1/2/

mRrj 3& ty m|ku& ty m|ku tyk'k; dk y?kq: i gh gksk gSA m|ku dsI cI suhps okys LFku xgjk dj tyk'k; cuk;k tkrk gSA bl e@ty e@mxusokys i kks t@ sdey] dep vkn yxk; k tkrk gSA

mRrj 4& 1/2/

mRrj 5&	tyh ugha terh gSD; kd& tyh dsfy, vR; f/kd 'kDdj dk iz kx djuk A tyh dsfy, /khj&/khjs nj rd rFkk vf/kd i dkkuk A	1/1 \$1 3/4 2 vd 1/2
mRrj 6&	dVgy ds ik8k jk .k & ik8k vrj.k 10x10m, xM<sdk vkkdkj 1x1x1 m r\$ kj dj bl e50kg F.Y.M. 0.5kg E; jy vND i k/k'k rFkk 25gm 5% , YDI pwkz feykdj Hkj ns gA ik8ks tykbz l sfl rEcj rd yxkrsgA	1/2 vd 1/2
mRrj 7&	ty fudkl ds fof/k; kads uke &	(1/2x6=3 vd)
	1/1/2 vLFkk; h ukfy; k 1/3/2 LFkk; h ukfy; k 1/5/2 Vky M 1/7/2 LVku M 1/9/2 i ky M	1/2/2 dV&vkmV ukfy; k 1/4/2 eMka dks dkVdj 1/6/2 eksy M 1/8/2 i kbi M
mRrj 8&	vjgj dh [ksh okuLifrd uke & dstul dstku (Cajanus Cajan) chtnj & 12&15 kg/gDVsj mi t & 15&18 fDovy@gDVsj	1/1x3=3 vd 1/2
mRrj 9&	I gh njh 3/4 $\frac{L^1}{L} \times$ eki h x; h njh A $L^1 = L - e = 100 - 0.4 = 99.6$ fyd $L = 100$ I gh eki 3/4 $\frac{99.6}{100} \times 1248 = 1243$ fyd	1/1 vd 1/2 1/1 vd 1/2 1/1 vd 1/2
		1/1 \$1 \$1 3/4 3 vd 1/2
mRrj 10&	ekFkk dk fu; a.k & xh'e dkyhu t kbz &	1/1 vd 1/2
	1/2/2 2-4 D 4.5kg, 600&800 yhVj i ku h e?kkydj ekFkk i j fNMdko dj; k 2-8kg , IVe dks 1100 fyVj i ku h e?kkydj i oLvdj.k fNMdko dj; A	1/2 vd 1/2
mRrj 11&	bl ; kstuk dks Hkj j r ds i kke izkkueah Lo- Jh tokgj yky ug: dh tle 'krkCnh o"kl 1889&90 eaykxwfd; k x; k Fkk A bl ds ek/; e I s xkeh.k {ks=k e	

xjhch j<sup>g</sup>kk l s uhips thou ; ki u dj jga i fjojk<sup>a</sup> ds c<sup>j</sup>kst xkj l nL; k<sup>a</sup> dks jkst xkj mi yC/k djk; k tkrk gSA ; g ; kstuk NAREGA dsuke l stukuk tkrk gSA bl l s xkeh.k {ks= ea , d h l kepkf; d ifj l Eifrr; ka ea l tu tks mudh vkkFkZ rFkk l kekftd fLFkfr ds l p<sup><</sup>hdj.k ea l gk; d g<sup>j</sup> vkkFkZ c<ksjh gsr mRij d gks rFkk xkeh.k xjhck ds vkkFkZ Lrj ea LFkk; h l qkj ykus eami ; kxh gSA

14½

### **^vFkok\*\***

Ø.	<b>vks pkfjd f'k{k.k</b>	<b>vukS pkfjd f'k{k.k</b>
1-	f'k{k.k i kB; Øe ij dflnur jgrk gSA	1- f'k{k.k dk; l vko'; drk , oa l eL; k , oa l eL; k eiyd gksk gSA
2-	i kB; Øe i wZfu/kkfjr gksk gSA	2- i kB; Øe f'k{kFkZ dh vko'; drk& uj kj cuk; s tkrs gSA
3-	fl ) kr , oa iz kx nkuk crk; s tkrs gSA	3- djds l h[kusdk fl ) kr ij vkl/kkfjr gksk gSA
4-	l Hkh f'k{kFkZ yxHkx l eku mez ds gksk gSA	4- f'k{kFkZ fofHkUu mez ds tS &cPp; c <sup>j</sup> 0; Ld vkkf gksk gSA
5-	Nk= dks f'k{kdk ds funZkkud kj pyuk i Mrk gSA	5- f'k{kFkZ ka dh l gefr l s gh fn'kk funZku gksk gSA
6-	Nk= fo"k; k <sup>a</sup> dk v/; u djrs gSA	6- f'k{kFkZ l eL; kvkadk v/; u djrs gSA
7-	Nk= fMlykek ; k fMxh l s l c <sup>j</sup> /kr gksk gSA	7- i ek.k i =kal sdkbz l c <sup>j</sup> ughagksk A
8-	l tFkk dsfu; ekadk vuqkyu vko'; d gSA	8- f'k{kFkZ cgr d <sup>j</sup> Lor= gksk gSA
9-	ed; /; s fo   kfFkZ ka ds 0; fDrRo dk fodkl djuk gSA	9- 0; kogkfjd thou ea i Hkko Mkyuk gSA
10-	vf/kdkak f'k{k.k dk; l d{kk rd gh l hfer jgrk gSA	10- cgr l k f'k{k.k dk; l d{kk ds ckgj Hkh gksk gSA
11-	f'k{k.k f'k{k 'kkL= fl ) kar ka }kj l pkfyr gksk gSA	11- f'k{k.k i k j f'k{k ds fl ) kar ka ij l pkfyr gksk gSA
12-	vf/kdkj v/; kd i ka ds gkFk ea gksk gSA	12- vf/kdkj i k; % f'k{kFkZ ka ds gkFk ea gksk gSA (½x 8 = 4)
mRrj 12&	(i) ekguh (ii) xak	(iii) i k l kf; k

- (iv) I nkcgkj (v) I j<sub>g</sub>kk (vi) Hkhe  
(vii) I tkrk (viii) xytkj (ix) xytkj  
(x) I wkh; (xi) eksguh dh cgu iek  
(xii) Lokrh (xiii) g<sub>d</sub> (xiv) gkehHkkHkk  
(xv) fga kfxuh (xvi) uouhr (xvii) fprou  
(xviii) fnYyh fi ll st (1/2x 8 = 4)

### **^vFkok\*\***

vPNh gfj ; kyh dh fo'kskrk, i & (1/2x 8 = 4)

- 1/1½ gfj ; kyh , s h gks tksfd nj I sgh ugh cfYd ikl I snkskus eHkk I qj yxsA  
1/2½ fdI h i dkj ds n<sub>ll</sub>k u v<sub>k</sub>; sA  
1/3½ ijk o"klHkj gjk j<sub>x</sub> cuk jgsA  
1/4½ dkey rFkk I ?ku gksA  
1/5½ I wkk ds i fr I gu'khy gksA  
1/6½ jks , oadhlV ds i fr jkskd {kerk gksA  
1/7½ ?kkl ptkus okyh u gksA  
1/8½ gfj ; kyh ij Nk; k u i M<sub>s</sub>A  
mRrj 13& vkrfjd dkjd vke ds ,dkUrj Qyu dks bl i dkj i Hkkfor djrk g<sub>s</sub>&  
1/1½ i kskka dk Qyr LoHkkko& vke ea igys o"lQy vxz dfydkvka ij i sk gks s g<sub>s</sub>  
rksvxys o"lQy vxz dfydk Qy i sk u djds i jks i sk djrh g<sub>s</sub> ft I I snw jso"l  
i kskk fcuk Qyr dsjg tkrk gSA ifj .k<sub>le</sub>Lo: i vke ea ,dkUrj Qyu gksk gA  
1/2½ ubzof) djusdh vknr (Flushing habit)- vke dso{k vuojr : i I sof) ugha  
djrsft I ds dkj .k ,dkUrj QI u gks tkrk gSA  
1/3½ uj rFkk eknk Qyka ds vui kr (Sex ratio)- jkekuh 113%] rkski jh 15%] n'kgjh  
3%] y<sub>akM</sub> 5%] I kekuh] rkrki jh fdLe n'kgjh ,oay<sub>akM</sub> fdLe dh ryuk ea  
fu; fer Qyu nsrk gSA vFkk uj Qy dh I ; k eknk Qy dh ryuk ea de  
gks i j ,dkUrj Qyu gksk gSA  
1/4½ dkckgkbM<sub>V</sub> rFkk ukbV<sub>st</sub> u dk vuq kr (C:N ratio)- C:N ratio 10:1 I ok/kd  
vudly gSA tc i kskka es ukbV<sub>st</sub> u dh vf/kdrk v<sub>k</sub> dkckgkbM<sub>V</sub> dh deh gks  
rks ,dkUrj Qyu gksk gSA (1/4½

15½ chtk.kqdk fxjuk (Ovule abortion)- Qy cuusdh i tjk̄lkd colFkkvkaescht k.kq  
 {kh.k gks tkrs ḡvkJ Qyr ekjh tkrh ḡifj. kkeLo: i , dklurj Qyu ḡrk ḡA  
**~vFkok\*\***

I kbM xfpWe dk I fp= o.ku &

12\$23/41%

16½ ey olr dk p; u djrs ḡA  
 17½ I k[k dk p; u i sI y ekvkbz, oa, SPNd gksA  
 18½ ey olr ij xfpVx ukbQ dh I gk; rk dVku yxkrsḡA  
 19½ I k[k ij LQk̄l dh Hkk̄l dVku yxrksḡA  
 20½ I k[k dks ey olr ij yxkdj i ksyhFku i VVh ckdk nsrḡA  
 21½ ekg ea i kqkk r̄s kj gks tkrk ḡA

mRrj 14& **I rjk Ldssk&** (2+2=4)

vko'; d I kexh & Qyka dk jI & 1 yhVj] ikuh & 1 yhVj] phuh & 2kg, I kbFVd  
 vEy & 15gm, i ksf'k; e eVk ckb I YQkbV & 2gm, Qy dh I qdk & 4gm,  
 [kkus dk jax & vko'; drkuq kj A

**fof/k&** 21½ Qyka dk p; u & LoLFk] rktk Qy

22½ Qyka dks /kkuk , oa Nhyuk A  
 23½ Qyka l sji fudkyuk A  
 24½ pkl uh cukuk A  
 25½ pkl uh eajl feykuk A  
 26½ jax jI ll feykuk A  
 27½ futihh Ñr ckry eahkjuk A  
 28½ I hy djuk , oaycy yxkuk A

**~vFkok\*\***

**Qy , oa I Cth ifjj{k.k ds vLfk; h fl )kr&** (1x4=4)

29½ I Qkbz (Cleaning)- I M&xys rFkk pkV [kk; s gq nkxh Qyka , oa I fct ; ka dks  
 vyx dj nsrḡA Qyka dksI kQ djdsI ko/kuh i obI i fV; ka , osVkdjkaeHkjus  
 I svf/kd I e; rd I jgrsḡA

- 12½ de rkī Øe (Low Temperature)-** de rkī Øe ij j [kus l s l qetho fu"Øh;  
; k de l fØ; gks gft l l s Qy , oal fct; kavf/kd l e; rd l jf{kr jgrs  
g&A
- 13½ vf/kd rkī Øe-** l kekU; l svf/kd rkī Øe ij Hkh Qy , oal fct; k dks vf/kd  
l e; rd l jf{kr j [k l drs g&A
- 14½ ueh rFkk gox l scpk&** Qyka dks B.Ms 'kq , oauh jfgr okrkoj .k eaj [kus  
ij thok. kya dk vf/kd iHkko ugha iMrk A ft l l s Qy , oal fct; kHvf/kd  
l e; rd l jf{kr jgrs g&A
- 15½ gYds dHk. kq uk'kd i nkFkk dk iz kx&** Qyka rFkk l fct; k dks l jf{kr  
j [kus dsfy, phuh] fl jdk] ued] rs o l ksm; e catks V dk iz kx yHkkdkjh  
jgrk g&A bl l svYidky dsfy, mlgal jf{kr j [k l drs g&A
- mRrj 15& 'kL; ; kstuk dh fo'kskrk, j & (1x5=5)  
 1½ ftu [kskae] QI y pØ vi uk; k tk jgk gsmudk {ks=Qy l eku gksuk pkfg, A  
 2½ ftruso"kz dk QI y pØ gksmrus gh ; k xqkkd l a; k eaj [ks gksuk pkfg, A  
 3½ pkjs dh QI yka dk {ks=Qy yxHkx 10 ifr'kr gksuk pkfg, A  
 4½ QI y pØ eajr h Øe j [kuk pkfg, A  
 5½ 'kL; ; kstuk eajHkfe] Je] i[th] fl pkb] [kkn vlfn dk l eifpr mi; kx gksuk  
pkfg, A

### ^vFkok\*\*

- mRre QI y pØ ds vko'; d y{k.k&** (1x5=5)  
 1½ QI y pØ , k gksfd ifro"kz QI yka dk dy {ks=Qy yxHkx cjkjcj gh gksA  
 2½ QI y pØ vf/kdre fl )kka dk ikyu dj jgk gksA  
 3½ QI y pØ bl i dkj dk gksuk pkfg, fd foHkUu iHkko Mkyusokys dkj dk dks  
/; ku eaj [kdj rskj fd; k tkuk gksA  
 4½ mi yC/k l a k/kuka dk l eifpr <k l smi ; kx gksA  
 5½ Hkfe dh mojk dk gk l U; ure gksA
- mRrj 16& 'kL [ksk dh ubz rdutdh & (½x10=5)  
 1½ xh'e dkyhu t[kb] A  
 2½ eM cUnh A

- 13½ I [kk I gu djus okyh QI y mxkuk t§ & Tokj] cktjk] tk] puk] vyl h vlfna
- 14½ cht nj dh ek=k de A
- 15½ i ksk vrj.k vf/kd A
- 16½ thokak [kkn dk i z ks A
- 17½ , h VRUI i kbjV j l k; u t§ & fl fydku] , ukDyks gkbMRDI h yekbu vlfna dk i z ks A
- 18½ okVj gkoLVA A
- 19½ eYp A
- 10½ I [kk I gu djus okyh QI y dsfdLe t§ s xg C-306] puk G-24

### **^vFok\*\***

#### **vrorit [krh ds izkj&**

(1½x4=5)

- 11½ I ekukUrj QI y mxkuk (Parallel cropping)- , d I kfk nks, h QI y adksysuk ftuds fodkl dk <x vyx&vyx rFkk muds chp 'k; ifr; kfxrk dh ifjfLFkfr gks I ekUrj QI y gSA mnkgj.k vjgj dsI kfk eik dk mnZdksysukA
- 12½ I gpj : i e QI y mxkuk (Companion cropping)- bl [krh e , d QI y nli jh QI y dh i skokj ij vI j ughMkyrh gSA vFkk~nksQI y adh i skokj 'k) QI y dscjkcj fey tkrh gSA t§ sxUuk dsI kfk xg; k l j l adh QI y mxkuk A
- 13½ fl ujtVd [krh (Synergetic cropping)- bl e e; QI y rFkk xksk QI y nksadmi t vyx&vyx 'k) QI y adh mi t dh ryuk eac<+tkrh gSA t§ scjI he \$ l j l xUuk \$ vkywA
- 14½ cgfetyh QI y mxkuk (Multistoryed cropping)- fofkkUu Åpkbz vks c<okj okyh 3&4 QI y l kfk&l kfk mxkuk gh cgfetyh [krh gSA mnkgj.k & ukfj; y&dkyhfep&dkdk&vUukl A
- mRrj 17& i M QI y l s vf/kd mi t i l r djus ds I pko & (½x10=5)
- 15½ xUus dh mi ; Dr fdLe dh cokbz t§ s & C 1148, CO1158
- 16½ e; QI y Qjojh&ekpds i Eke l lrkg eavo'; dkV yA

- 13½ [ks dh I Qkbz dj ifkr; kaks t yk nA  
 14½ i jkuh eMka dks rM A  
 15½ xllus dh i Mh es i gyh fl pkbz nj I sdj A  
 16½ 150&200kg u=tu@gDV s j dh nj I sn A  
 17½ ul jh r\$ kj dj xi fQfyx dj A  
 18½ 3&4 ckj fudkbz xMkbz dj A  
 19½ dhV , oajkx dk fu; a.k dj A  
 1/10½ , d gh ckj i Mh QI y y A

### **~vFkok\*\***

- I ks kchu I s vf/kd mRiknu i llr djas ds I pko &** (½x10=5)  
 1/1½ I ks kchu mfpr ty fudl okyh nkeV] efV; kj] VkeV enk eaks A  
 1/2½ 65&80kg cht@gDV s j dh nj I scks A  
 1/3½ cht dks mi pkfjr rFkk jkbtkc; e dYpj I sfuof'kr dj cks A  
 1/4½ mlur 'khy fdLe t\$ & xkj o] nkk vodj] P.K. 172 vlfn ck; A  
 1/5½ 20&30kg u=tu] 60&80kg QkLQkj I ] , oa40&60kg i ks/k'k ifrgDV s j nA  
 1/6½ t\$p&tykbz ds i Eke I lrkg rd vo'; cks A  
 1/7½ vkl'; drkuq kj fl pkbz dj A  
 1/8½ nksckj fudkbz xMkbz dj A 1/2 pkbz ds 30 o] 45o afnu½  
 1/9½ dhV dk fu; a.k dj A  
 1/10½ jkska dk fu; a.k dj A  
 1/11½ xe&ue tyok; qokys {ks-ka e sckbz dj A
- mRrj 18& I jte[ h dh [ks &** 1/1x6<sup>3</sup>/6½
- 1/1½ egRo& rsy] cyt e 24&30% rsy dh ek=k fyukfyd vEy ds vf/kd gks ds  
 dkj .k dksytVky dh of) dks jksdrk gSA  
 1/2½ tyok; & 50cm dh okf"kd o"kk cht vodj .k 4&5°C rki eku] cht i dus ds  
 I e; de rki eku 1/4gedkj h/ ds ifr I onu'khy A cht idrs I e; LoPN]  
 pedhys/k mi ; Dr A
- 1/3½ Hkfe& cybz nkej] efV; kj Hkfe ty fudl okyh mi ; Dr pH 6.7-8.5
- 1/4½ [kkn , oamo] d & 80kg u=tu] 60kg QkLQkj I ifr gDV s j A 1@3 u=tu

Q<sub>W</sub> f[kyus ds l e; n&A  
 1b½ chtnj & 8kg @gDV\$ j  
 1Q½ mi t & 15&20 fDøVy@gDV\$ j

### ^vFkok\*\*

- Vk; LVj e'k: e ds mRiknu fof/k &** 1x6<sup>3</sup>/6½  
 1½ [ksh dk ek/; e & /ku dk ijk ; k xgwdh Hkw h yrs gSA  
 1Q½ mi pkj djuk & bl s xeZ ikuh mi pkj ; k lakkf/kr xeZ ikuh mi pkj ; k jkl k; fud mi pkj fof/k l smi pkfjr djrs gSA t\$ sjkl k; fud mi pkj 25 yVj ikuh e½gm dkcMkfe , o35 feyh Qkelyhu e2-5gm ijk dks12&15 ?k/sds fy, Micks gSA  
 1½ chtkbz ; k Li kluak djuk & 60&70% ueh ijk ; k Hkw h eactkbz djrs gSA  
 1½ cht c<ekj fLFkfr & chtkbz fd; s x; sek/; e dks i ksyhFkhu eHkj dj th-vkbz rkj eayVdk nrsgA 8 fnu dsckn i ksyhFkhu FkSyh dkVdj iμ%yVdk nrsgA mRiknu d{k dh vknz k 70% gksuk pkfg, A l çg&'kke gtkjs; k Lis j l ikuh dk fNMdko djrs gSA  
 1½ rMkbz & FkSy; kdkVus ds3&4 fnuka e'e'k: e mRiknu ijk gks tkrk gSA i½ fodfl r e'k: e dks gYds gkFkka l sekMaj rMkbz djjaA  
 1½ mi t & 2½kg ek/; e l s 2&3kg e'k: e mRiknu gksk gSA  
**mRrj 19& [kj i rokj fu; a.k dh ; kf=d fof/k; kj &** (1x6)  
 1½ [kj i rokj ka dks gkFk l sm [kkMuk (Hand pulling)  
 1½ gkFk l sfudkb&xMkbz djuk (Hand hoeing)  
 1½ [kj i rokj ka dk dkVuk (Weeds moving)  
 1½ Ñf=e vkoj .k (Mulching)  
 1½ ck<+}kj k (Flooding)  
 1½ vkx yxkdj (Burning)  
 1bu fcUnyak dk o.ku djus ij 1x6= 6 vd½

### ^vFkok\*\*

dhw fu; a.k ds d"lk k fof/k; k&

(1x6)

1/1½ [ks eə 'kL; ko'kskka dks u"V djuk &

1/2½ [kj i rokjka dks u"V djuk

1/3½ xh"e dkyhu t̪kbz

1/4½ fl pkbz

1/5½ QI y pØ

1/6½ dhV i frjksh fdLekak i z kx

10.kL \$ mnkgj .k nus i j 1x6= 6 vd1½

&&00&&