

(4)

Code No. : S-361

Roll No.....

Total No. of Sections : 03

Total No. of Printed Pages : 04

OR

i kSkka ea fuf'Ø; ty vo'kSk.k dh fØ; k fof/k dk o.ku dhft, A
Explain the mechanism of passive absorption of water by plants.

ç'u 2- izdk'k-l åySk.k ds izdk'k vflkfØ; k dk o.ku dhft, A
Describe the light reaction of photo-synthesis in plants.

OR

, ltkbe ds fØ; kizkkyh ds rkyk dth-ifjdYi uk dks l e>kb, A
Describe the lock and key hypothesis of mode of enzyme action.

ç'u 3- tfoð ukbVktu fLFkjhdj.k dks foLrkj l s l e>kb; A
Describe in detail the biological nitrogen fixation.

OR

Xykbdky/kbfl l dks foLrkj l s l e>kb; A
Describe in detail the Glycolysis.

ç'u 4- nhfirdkfyrk ij , d y[k fyf[k, A
Write an essay on photoperiodism.

OR

ikni gkku ij , d y[k fyf[k, A
Write an essay on Plant Hormones.

ç'u 5- thukfed ykbcjh D; k gk bl ds fuek.kz dh ifØ; k dk o.ku dhft, A
What is Genomic library? Describe the process of construction of genomic library.

OR

ikni mükd l o/kü ds vk/kkjHkur igywka dk o.ku dhft, , oa l j p uk
fodkl dh foopuk dhft, A
Describe the basic aspects of plant tissue culture and discuss morphogenesis in detail.

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Annual Examination - 2018

B.Sc. - III

BOTANY

Paper - I

PLANT PHYSIOLOGY, BIOCHEMISTRY &
BIOTECHNOLOGY

Max.Marks : 50

Time : 3 Hrs.

Min.Marks : 17

Vhi % [k.M ^* eanl vfry?kjkjh izu g\$ ftlgagy djuk vfuok; Zgk [k.M
^c* eay?kjkjh ç'u , oa [k.M ^* eanl?k mYkjh ç'u gk [k.M ^* dks
l cl sigysgy dj

Note : Section 'A', containing 10 very short-answer-type questions, is compulsory.
Section 'B' consists of short-answer-type questions and Section 'C'
consists of long-answer-type questions. Section 'A' has to be solved first.

Section - 'A'

fuLkdr vfry?kjkjh ç'ula ds mYkj , d ; k nls okD; ka ea nA
Answer the following very short-answer-type questions in one or two
sentences. (1x10=10)

ç'u 1- ijkl j.k l svki D; k l e>rs gk
What do you understand by the term Osmosis?

ç'u 2- l e ek=d rRo D; k gk nks mnkgj.k nhft, A
What are micro elements? Give two examples.

ç'u 3- 'ol u xqkkl dks ifjHkr"kr dhft, A
Define the Respiratory Quotient.

ç'u 4- dEi l s ku fcwD; k gk
What is compensation point?

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OR

ç'u 5- cksYVax i Hkko D; k gS

What is Bolting effect?

ç'u 6- cht i d qrkOLFkk dks i fjHkkf"kr dhft, A

Define the Seed dormancy.

ç'u 7- i kSka ea dckkqkbMSV/ dk LFKkukUj.k fdl : i ea gkrk gS

In which form the carbohydrates are translocated in plants?

ç'u 8- CysdeS ds l hekd kj d fl) kr l s vki D; k l e>rs gS

What do you understand by Blackman's limiting factor Law?

ç'u 9- nks thok. kjkst h dk uke crkb; a tks okgd dk dk; Zdjrs gS

Name two bacteriophages which are use as vectors.

ç'u 10-PCR D; k gS fdl us bl dh [kkt dh\

What is PCR? Who discovered it?

Section - 'B'

fuEukdr y?k mYkj; ç'ula ds mYkj 150&200 'kn l hek ea na
Answer the following short-answer-type questions with word
limit 150-200 (5x5=25)

ç'u 1- i kSka ea rRoka dh vfuok; r k dh dl kSv; k ij fVli .kh fyf[k, A

Write a note on the Criteria for essentiality of elements in plants.

OR

fol j.k dks mnkgj.k l fgr l e>kb, A

Explain diffusion with suitable example.

ç'u 2- Øst , ukVkh dks l fki ea l e>kb, A

Explain in brief the "Kranz" Anatomy.

OR

dkcud foyS ka ds LFKkukUj.k ea ep i fjdYi uk dks l fki ea l e>kb, A

Explain in brief the Munch's hypothesis of translocation of organic solutes.

ç'u 3- ok; oh; , oa vok; oh; 'ol u ea dkbZ rhu varj fyf[k, A

Write three differences between aerobic and anaerobic respiration.

OR

l rlr , oavl rlr ol k ea dkbZ rhu varj fyf[k, A

Write three differences between saturated and unsaturated fats.

ç'u 4- vuqpu xfr; ka ij l fklr fVli .kh fyf[k, A

Write short note on Nastic movements.

OR

tfodh; ?kMh ij l fklr fVli .kh fyf[k, A

Write short note on Biological clock.

ç'u 5- l fklr fVli .kh fyf[k, A

Write short note on :-

¼½ fuosku , yheW

Insertion elements.

¼½ eksukDyky , dhckMht

Monoclonal antibodies.

OR

l fklr fVli.kh fyf[k, A

Write short on :-

¼½ dEikfTV Vka iktu

Composite Transposon.

¼½ ekdj thU

Marker genes.

Section - 'C'

fuEukdr n?k mYkj; ç'ula ds mYkj 300&350 'kn l hek ea na
Answer the following long-answer-type questions with word
limit 300-350 (8x5=40)

ç'u 1- jU/ka ds [kyus , oacm gksus dh fØ; k fof/k dk l fØ; K⁺ vk; u vfhkxu fl) kr dks l e>kb, A

Explain the mechanism of stomatal opening and closing concerned with active K⁺ ions transport hypothesis.

P.T.O.