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Code No. : S-361

Roll No.....

Total No. of Sections : 03

Total No. of Printed Pages : 04

OR

i kni dks' kdk ds fol j.k nkc] fol j.k nkc U; Wkrk rFkk vk' kD; rk nkc ea vUrI Ecu/k dks I e>kb, A

Describe the interrelationship among Diffusion Pressure Deficit, Osmotic Pressure and Turgor Pressure.

ç'u 2- i kSkka ea f'lyk e ifjogu dh fØ; k fof/k dks I fki ea I e>kb, A

Describe the mechanism of Pholem transport in brief.

OR

i dK'k I aySk.k dh 'Z' ifjdYi uk dks I e>kb, A

Explain the 'Z' scheme of photosynthesis.

ç'u 3- fyfi Mf ds i dKj , oa t fof/k egro dks I e>kb, A

Describe the types and biological significance of Lipids.

OR

i Wkst OkLoW i kFkos dks I e>kb, A

Describe pentose phosphate pathway.

ç'u 4- vkDI hu dh I j'puk rFkk t fof/k egro dks I e>kb, A

Explain the structure and biological significance of Auxins.

OR

cht i d f'ir ds dkj . kka dks I e>kb, A

Explain the causes of seed Dormancy.

ç'u 5- fj dK EchuW Mf, u-, - V Duky k h ds , at kb EI dks I e>kb, A

Describe the enzymes in Recombinant DNA Technology.

OR

i kni mrd I dKZ dh fof/k rFkk mi ; k s xrk dks I e>kb, A

Explain the technique and applications of plant tissue culture.

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Annual Examination - 2019

B.Sc. Part - III

BOTANY

Paper - I

PLANT PHYSIOLOGY, BIOCHEMISTRY AND BIOTECHNOLOGY

Max.Marks : 50

Min.Marks : 17

Time : 3 Hrs.

Vhi % [k.M 'v* eanI vfry? k'kjh iz'u g' f'lgagy djuk vfuok; ZgA [k.M 'c* eay? k'kjh ç'u , oa [k.M '1* eanI? k' m'Ykjh ç'u g' [k.M 'v* dks I cl sigygy dja

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'

fu fukdr vfry? k'kjh ç'uka ds m'Ykj , d ; k nks okD; ka ea nA

Answer the following very short-answer-type questions in one or two sentences. (1x10=10)

ç'u 1- lykTeks kbfI I I s vki D; k I e>rs gA

What do you understand by the term plasmolysis?

ç'u 2- etp dh ifjdYi uk fdI dKf; Zh; v f'k fØ; k dks I e>krh gA

Name the physiological process to which Munch's mass flow hypothesis explains.

ç'u 3- C₃ i kSkka ea dKZU MkbZ vkDI kbM dks xg.k djus okys ; k s x d dk uke fyf[k, A

Which compound is the carbon di oxide acceptor in C₃ plants.

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ç'u 4- XykbdkfyfI l rFkk Ø§l pØ dks tkMius okys ; kfxd dk uke fyf[k, A
Name the compound which is the connecting link between Glycolysis and
Kreb's cycle.

ç'u 5- l fØ; , oafuf"Ø; vo'kksk.k ea varj fyf[k, A
Differentiate between active and passive absorption of water.

ç'u 6- C₃ rFkk C₄ i kßka ea nks varj fyf[k, A
Write two difference between C₃ and C₄ plants.

ç'u 7- ok"i kd tZu rFkk xVSku ea varj crkb, A
Differentiate between Transpiration and Guttation.

ç'u 8- yEcs fnu okys i kßka ds nks mnkgj .k fyf[k, A
Give two examples of long day plants.

ç'u 9- i kni -mÜkd l ØZku ds Ñf"k ea dkbZ nks mi ; kx fyf[k, A
Write two significance of Plant-Tissue Culture in Agriculture.

ç'u 10- lykflEM ds i djkja ds uke fyf[k, A
Name the types of Plasmids.

Section - 'B'

fuEukdr y?lq mYkj; ç'ula ds mYkj 150&200 'kñ l hek ea na
Answer the following short-answer-type questions with word
limit 150-200 (3x5=15)

ç'u 1- ok"i kd TkZu D; k gS l fki ea LVkpkZ 'kxj ifjdYi uk dks l e>kb, A
What is transpiration? Describe Starch Sugar hypothesis in brief.

OR

tMks ds }kjk ty vo'kksk.k dh fØ; kfof/k dks l e>kb, A
Explain the absorption of water by roots.

ç'u 2- Ø§ fy; u vEy miki p; vde pØ½ dks l e>kb, A
Explain Crassulean Acid Metabolism (CAM cycle) in brief.

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OR

, ekbe fujkdkla dks l e>kb, A
Explain Enzyme inhibitors.

ç'u 3- vkDI hmSvo QkLQkj kbySku , oa Qk/kQkLQkj kbySku ea varj crkb, A
Differentiate oxidative phosphorylation and photophosphorylation.

OR

i kßka ea ukbVS/ vodj .k dh ifØ; k dk o.ku dhft, A
Describe the process of Nitrate reduction in plants.

ç'u 4- cht i d qir dks l ekir djus dh fof/k; k; rFkk cht i d qir ds egRo dks
l e>kb, A

Explain the methods of breaking of seed dormancy and write the
significance of seed dormancy.

OR

QkbVtØe dks l fki ea l e>kb, A
Explain Phytochorme in brief.

ç'u 5- oDVj D; k gS tufvd bñtfu; fja ea oDVj ds mi ; kx dks l e>kb, A
What are vectors ? Describe the role of vectors in the field of Genetic
Engineering.

OR

thu esi x D; k gS bl ds egRo dks l e>kb, A
What is Gene Mapping? Write its significance.

Section - 'C'

fuEukdr nñkZ mYkj; ç'ula ds mYkj 300&350 'kñ l hek ea na
Answer the following long-answer-type questions with word
limit 300-350 (5x5=25)

ç'u 1- i kßs ds vko' ; d , oa vuko' ; d rRo dks l sgS fdUghapkj vko' ; d rRoka
dh Hkfedk dks l e>kb, A

What are essential and nonessential elements of Plants? Describe the
role of any four essential elements.

P.T.O.