

6 SEM TDC BOT M 1

2016

(May)

BOTANY

(Major)

Course : 601

(**Plant Physiology**)

Full Marks : 48

Pass Marks : 19

Time : 2 hours

90P 1246 S (222)
04/06/16



*The figures in the margin indicate full marks
for the questions*

1. (a) Fill in the blanks : 1×5=5
- (i) Non-development of chlorophyll in plants is called ____.
 - (ii) The RQ volume of fats is ____ than unity.
 - (iii) Growth is an irreversible increase in mass, weight and ____.

(2)

(iv) Seeds which do not have dormancy are called ____.

(v) The leaflets of Indian telegraph plant moves up and down due to the variation of ____ of the petiole.

(b). Write short notes on the following : $3 \times 3 = 9$

(i) Efficiency of C_4 plants

(ii) Sigmoid curve

(iii) Diffusion pressure deficit

2. Describe the Calvin cycle. How does this cycle differ from Hatch-Slack cycle? $8+3=11$

Or

What is nitrogen cycle? Describe the role of nitrogen in plant life. Write notes on *nif* gene and nitrification. $2+3+6=11$

3. What are macroelements? Describe their roles in plant nutrition. What is salt antagonism? $1+7+3=11$

Or

What are cytokinins? Describe their mode of action and physiological effects. $2+3+6=11$

4. What do you mean by photoperiodism? Write the differences between short-day and long-day plants. What role phytochrome plays in flower initiation? $2+6+4=12$

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(Continued

(3)

Or

Write explanatory notes on the following :

$6+6=12$

(a) ETS in respiration

(b) Physiological effects of water deficit



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