3. What is night break phenomenon ?

4. What are aquaporins ?

B. Write short notes on any *two* from the following : $4 \times 2$

5. $CO_2$ assimilation in CAM plants with suitable diagram.

6. Pathway of photorespiration (represent schematically).

7. Importance of phytochrome in flowering response.

8. Channel proteins.

C. Answer any *one* from the following : $8 \times 1$

9. What is the difference between adaptation and acclimation ? Discuss about the physiological and molecular responses in plants to mitigate heat stress. $2 + 6$

10. Define monocarpic senescence. What are SAGs and SDGs ? Briefly describe the biochemical mechanism of senescence on macromolecules. 1 + 3 + 4

[ *Internal Assessment* – 5 Marks ]

## BOT-302.2

( *Biochemistry* )

[ *Marks* : 25 ]

D. Answer any *two* from the following : 2×2

11. Schematically represent the formation of peptide bond between two amino acids.

12. What is epimerism ? Give example.

13. What is the function of ubiquitin molecule ?

14. What is meant by turnover number ?

E. Write short notes on any *two* from the following : 4×2

15. Translocation of fatty acid through carnitine shuttle.

16. Oxidation products (sugar acids) of monosachharides.

17. Nitrogen containing secondary metabolites of plant origin.

18. Plant phenolics.

F. Answer any *one* from the following : $8 \times 1$

19. Briefly describe the secondary and tertiary organisation of protein structure. Write a short note on biologically important peptides. $6 + 2$

20. What is steady state assumption in Michaels-Menten equation ? State the importance of Km. Briefly describe Lineweaver-Burk plot. $3 + 2 + 3$

[ *Internal Assessment* – 5 Marks ]