

**Bankura University**

**B.Sc 4th Semester (Program) Examination, 2022**

**Subject: Botany**

**Course ID: 41318**

**Course Code: SPBOT/401/C-1D**

**Course Title: Plant Physiology & Metabolism**

**Full Marks: 25**

**Time: 1 h 15 mins**

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

**UNIT-I**

1. Answers any five questions from the following: 1X5=5
- a) What is PSU?
  - b) What is role of ABA in seed germination.
  - c) What is reaction centre?
  - d) What is light de acidification?
  - e) Define Phytochrome.
  - f) What is oxidative phosphorylation?
  - g) What is transpiration Pull?
  - h) Why 'TCA cycle' is so called?

**UNIT-II**

2. Answer any two of the following: 5X2=10
- a) Explain induced fit model of enzyme action.
  - b) Briefly explain the biochemistry of symbiotic mode of nitrogen fixation.
  - c) Briefly explain the significance of C4 pathway.
  - d) Describe the role of Phyto-hormone in agriculture.

**UNIT-III**

3. Answer any one question from the following: 10x1=10
- a) What is terminal respiration? Explain briefly the ETC along with ATP synthesis mechanism in connection with cellular respiration. 2+8
  - b) Explain briefly the opening and closing of stomata in connection with transpiration. How does the conduction of water take place in plants? 5+5