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**PRESIDENCY UNIVERSITY  
BENGALURU**

**DEPARTMENT OF RESEARCH AND DEVELOPMENT**

**Mid -Term Examinations, August 2024**

**Odd Semester:** Ph.D. Course Work 2023 - 24

**Date:** 12-08-2024

**Course Code:** PHY818

**Time:** 9.30 AM – 11 AM

**Course Name:** Physics of Organic Electronic Materials and Devices

**Max Marks:** 50

**Department:** Physics

**Weightage:** 25%

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**Instructions:**

- (i) Read the all questions carefully and answer accordingly.  
(ii) Do not write any matter on the question paper other than roll number.
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**PART A**

**Answer all the Questions. Each question carries 10 marks.**

**(3Qx 10M= 30M)**

1. Write a note on Ohmic and Schottky contacts. [CO No. 2, Comprehensive]
2. Write a note on conduction mechanisms in organic semiconductors. Explain ohmic, SCLC and TCLC conduction mechanism. [CO No. 2, Comprehensive]
3. Write a note on OLEDs, principle and working mechanism. [CO No. 2, Application]

**PART B**

**Answer all the Questions. Each question carries 20 marks.**

**(1Qx 20M= 20M)**

4. Write a note on fluorescence, phosphorescence and TADF using Jablonski diagram. [CO No. 2, Comprehensive]