

**Roll No.**

**Total No. of Pages : 01**

**Total No. of Questions : 08**

**M.Tech.(ECE) (Sem.-1)**

# OPTICAL NETWORKS

**Subject Code : MTEC-PE1X-18-2**

**M.Code : 75175**

**Date of Examination : 19-01-23**

**Time : 3 Hrs.**

**Max. Marks : 60**

**INSTRUCTIONS TO CANDIDATES :**

1. Attempt any FIVE questions out of EIGHT questions.  
2. Each question carries TWELVE marks.

1.
  - a) Explain the benefits of SONET/SDH over PDH.
  - b) Why is Optical Network known as digital Wrapper Technology? Briefly explain the capability of OTN.
2. Enlist and explain the applications of Multiprotocol Label Switching in an IP network.
3. What do you mean by OADM? What are the key attributes that must be taken care while choosing a OADM? Explain different types of OADM architectures.
4. What do you mean by optical cross connects? Explain the key functions of OXC.
5. Discuss the functions of network management in detail. What is the need of decentralization in management framework?
6. Discuss various protection techniques used in SONET /SDH.
7. **Write a short note on:**
  - a) First Passage Traffic Model
  - b) Blocking Traffic Model.
8.
  - a) Give two important features of GPON. Briefly describe.
  - b) Explain the concept of input and output buffering in brief.

**NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.**