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GIET UNIVERSITY, GUNUPUR - 765022
M. Tech (First Semester) Examinations, January - 2024
MPEEC1032 - Optical Networks
(ECE)

Time: 3 Hrs

Maximum: 70 Marks

(The figures in the right-hand margin indicate marks.)

PART – A**(2 x 10 = 20 Marks)**

Q.1. Answer all questions

	CO#	Blooms Level
a. Write down techniques to reduce optical feedback.	CO2	K1
b. State the function of couplers.	CO3	K2
c. Draw the generalized view of an optical ADM.	CO4	K1
d. Mention the basic principle of WDM.	CO1	K3
e. Write an example of WDM Link.	CO4	K1
f. Define control plane.	CO3	K3
g. Define interfacing.	CO1	K1
h. List the benefit of Bidirectional line switched ring.	CO2	K1
i. Why WDM Network is called so?	CO3	K2
j. Differentiate between broadcast and switched network.	CO2	K1

PART – B**(10 x 5=50 Marks)**Answer **ANY FIVE** of the following questions

	Marks	CO#	Blooms Level
2. a. Describe path, line, section and physical layers in SONET layer.	5	CO1	K2
b. Write short note on i) SONET Link ii) SDH Link	5	CO1	K3
3.a. Illustrate the building blocks of optical network.	5	CO2	K2
b. Differentiate between circulator and isolator.	5	CO2	K4
4. a. Explain the difference between bit interleaved and packet interleaved optical time division multiplexing.	5	CO3	K2
b. Determine the major components of SDH.	5	CO3	K2
5.a. Describe why optical layer protection needed.	5	CO4	K1
b. Briefly explain statistical dimensioning models.	5	CO4	K2

6. a.	Explain the revised SDH transport hierarchy with a neat diagram.	5	CO2	K3
b.	Elaborate the way of managing a WDM Channel at the ADM.	5	CO3	K2
7. a.	Explain the working of wavelength routing PON with proper diagram.	5	CO2	K4
b.	Explain light path topology design (LTD) problem in brief.	5	CO2	K2
8. a.	Explain the terms enhanced HFC and FTC.	5	CO1	K3
b.	Describe the difference among protection at different layers.	5	CO2	K2

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