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Y—120—2019

FACULTY OF SCIENCE

B.Sc. (Sixth Semester) (Backlog) EXAMINATION

NOVEMBER/DECEMBER, 2019

(CBCS Pattern)

PHYSICS

Paper XV

(Fiber Optical Communication)

(Saturday, 21-12-2019)

Time : 10.00 a.m. to 12.00 noon

Time—2 Hours

Maximum Marks—40

N.B. :— All questions are compulsory.

1. Explain types of fibers and give the transmission ray characteristics. 15
Or
 - (a) Explain Snell's law. 8
 - (b) Explain total internal reflection with neat labelled diagram. 7
2. Explain with neat labelled diagram, how ray transmission occurs in graded index fibers. 15
Or
 - (a) Explain single mode fiber. 8
 - (b) Explain maximum core diameter in single mode operation 7
3. Write short notes any *two* : 10
 - (a) Skew ray
 - (b) Normalized frequency
 - (c) Intermodal dispersion in step index fiber
 - (d) Cutoff wavelength.

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