Introduction of Partial Derivative-
Definition of all Derivatives-Why Partial Derivative only gets involves in a PDE. Does Partial derivative implies Continuty, Directional derivative, Differentiability?
-lect-4.pdf (R. Alam- MA 102 IITG Notes- http://www.iitg.ac.in/rafik/tutorials.html)
-lecture26.pdf (IITK-Sammugham Notes- http://home.iitk.ac.in/~psraj/mth101/lecture_notes.html)

Definition of Derivative based on Linear map-
http://giovannileoni.weebly.com/uploads/3/1/0/5/31054371/msii-lectures-2012-05-04-signed.pdf
Definition of Derivative based on partial derivative and dot product-
-lecture26.pdf (IITK-Sammugham Notes- http://home.iitk.ac.in/~psraj/mth101/lecture_notes.html)

Introduction of PDE and Lagranges Method for finding Solution of Quasilinear PDEs- Slides
Lecture1-PDE.pdf, Lecture2-PDE.pdf, Lecture3-PDE.pdf
T. Amarnath Book (Quasilinear case- Geometry)

Geometry of the Solutions of 1st order PDEs and Formulas-
T. Amarnath Book

Difference between ODEs and PDEs
Chapter 1: (http://www.math.iitb.ac.in/~siva/ma515.1501.html)

Directions of Characteristics and Base Characteristics
Solution behavior on the Intersection of two characteristics
Chapter 2A, 2B, 2C (http://www.math.iitb.ac.in/~siva/ma515.1501.html)
See these in my uploaded notes in the folder named- Shivaji_PDE

Envelope:
https://en.wikipedia.org/wiki/Envelope_(mathematics)
Appendix: Envelopes: Shivaji Notes (http://www.math.iitb.ac.in/~siva/ma515.1501.html)

Singular Solution for ODEs
https://en.wikipedia.org/wiki/Singular_solution

Singular Solution for PDEs
T. Amarnath Book (Page 8)

Orthogonal Family
Lecture4-PDE.pdf

Definition of Envelope-
Envelope (mathematics) - Wikipedia.pdf (Wikipedia)
Very Good One--
https://www.math24.net/envelope-family-curves/
http://www.math.iitb.ac.in/~siva/ma51515/AppEnvelopes.pdf

Complete, General, Singular Integrals-
T. Amarnath Book Page 8-11

Compatibility of two 1st order PDEs-
T. Amarnath Book

Monge cone-
T. Amarnath Book and Wikipedia

Monge Directions
- Shivaji Notes

Charpits Method- T Amarnath Book

Classification of second order PDEs and Canonical Transforms-
Lecture6-PDE.pdf and T. Amarnath Book

D. Alembert Solution in infinite and semi infinite Domain--

T. Amarnath Book

Characteristic Properties

Duhamel Principle for Wave Equation
NPTEL Botes-
https://nptel.ac.in/courses/111103021/27.pdf
T. Amarnath Book

Duhamel Principle for Heat Equation
https://nptel.ac.in/courses/111103021/22.pdf

Maximum/Minimum Definiton:
Necessary and Sufficient Conditions fo 1D and 2D:
http://home.iitk.ac.in/~psraj/mth101/lecture_notes/lecture5.pdf
http://home.iitk.ac.in/~psraj/mth101/lecture_notes/lecture9.pdf
http://home.iitk.ac.in/~psraj/mth101/lecture_notes/Lecture30.pdf

Maximum Principle for Harmonic/Laplace/Poission Equations-
http://www.math.iitb.ac.in/~siva/ma51515/chapter6.pdf (chapter6.pdf)

For Elliptic Problems
Renardy Rogers PDE Book Pages-101-105

Stability of Dirichlet Problem and Nonstability of Neumann Problem for Laplace Equation and (Non)Uniqueness of Solution-
T. Amarnath Book

Fourier Series-
Fourier Series.pdf (IITG Notes)

It is NOT Necessary that the theorems available in the Books and Notes (also in my notes) are correctly mentioned. I gave several examples where the book statements are misleading. You have to find the correct one by matching it from other notes/places and read all the parts of the book throughlly to have the clear idea.

Note that the notations given in the slides can/may vary from the class notes. You have to ONLY FOLLOW the class notes and its notations as, this course has been covered ONLY by using black boards than slides in all sections. Slides are intended to help those students who do not follow the class properly or do not come to the class regularly..

It would be always beneficial: If you have the class Notes and understood it properly during the class itself. In case of any query, you may come to my room:
Science Block: 04/318, Block-4, Dept. of Math., IIT Patna
during office hours 11AM-2PM or 4-7PM. Please leave a mesage before you come to check that I am busy during that time for any meeting or not.

****
BOOK READING is ALWAYS HELPFUL to have CLEAR IDEA than reading only class notes/slides.

The book reading is necessary to avoid the typos and corrections which may have happened during class lecture unintentionally.
****