## **General Relativity**

Institute of Physics Bhubaneshwar

## Homework 3

Textbook: Sean Carroll's Spacetime and Geometry Remember each homework carries weight. Late submissions will not be accepted.

- 1. Exercise 1, Appendix B.
- 2. Start with metric (5.11) and show that (5.12) follows. Also show that Christoffel symbols not written in (5.12) are all zero.
- 3. Start with metric (8.43) and show that (8.44) follows. Also show that Christoffel symbols not written in (8.44) are all zero.