1 (a) Define cutting speed, feed and depth of cut.
(b) Write a short note on twist drill
(c) What is truing and dressing of a grinding wheel
(d) Difference between jigs and fixture.
(e) What do you mean by Up Milling and Down Milling?

SECTION-A

2(a) Explain the tool signature and its effects.
(b) What are the different properties of cutting tool material?

3(a) Give a neat diagram of lathe and describe its main parts.
(b) Write a short note on any three operations performed on a lathe

4(a) Explain main parts of a shaper with a neat diagram
(b) Write difference between shaper and planner

SECTION-B

5(a) Explain in brief Gear Hobbing, Gear Shaping, Gear Shaving, Gear Burnishing
(b) What are the methods of surface finishing of a gear?

6(a) Explain the various elements of a grinding wheel
(b) What are the common shapes of a grinding wheel?

7(a) Explain various types of clamping devices
(b) What are the qualities of a good cutting fluid?