



Class 12 Engineering Graphics

Chapterwise PYQs

Machine Drawing - Shaft Couplings | 2026-27 Board Revision

Chapter 5: Machine Drawing - Shaft Couplings

This chapterwise PYQ practice PDF contains NCERT-based board-style machine drawing questions for shaft couplings. The local source set does not expose separate extractable previous-year rows for this chapter, so the questions are organised by the board pattern students practise for Engineering Graphics.

Section	Marks	Questions
A: Very Short Answer Questions	1 mark each	6
B: Short Construction Questions	2 marks each	5
C: Drawing-Sequence Questions	3 marks each	5
D: Board-Style Machine Drawing Questions	4 marks each	4
E: Long Answer Drawing Practice	5 marks each	4

Section A: Very Short Answer Questions

1 mark each

- State the main purpose of a shaft coupling in machine drawing. [2026-27 Board-style Practice]
- Name one coupling used to join two shafts in the same straight line. [2026-27 Board-style Practice]
- What is the function of a key in a shaft coupling assembly? [2026-27 Board-style Practice]
- Why are bolts shown equally spaced on the flange circle of a flange coupling? [2026-27 Board-style Practice]
- Which view is usually drawn as the sectional front view of a muff coupling? [2026-27 Board-style Practice]
- Why is hatching not shown on shafts when the cutting plane passes along their length? [2026-27 Board-style Practice]

Section B: Short Construction Questions

2 marks each

- Differentiate between a muff coupling and a flange coupling in two points. [2026-27 Board-style Practice]

- Write two precautions for drawing the keyway in a protected flange coupling. [2026-27 Board-style Practice]
- Mention two details that must remain coaxial while drawing a shaft coupling. [2026-27 Board-style Practice]
- Why are hidden lines avoided in a full sectional front view of a coupling? [2026-27 Board-style Practice]
- State two checks before darkening bolts and nuts in a flange coupling side view. [2026-27 Board-style Practice]
- [2026-27 Board-style Practice]

Section C: Drawing-Sequence Questions

3 marks each

- Explain the drawing sequence for the sectional front view of a muff coupling. [2026-27 Board-style Practice]
- Describe how the side view of a flange coupling is projected from the front view. [2026-27 Board-style Practice]
- List three checks for showing the key, shaft and sleeve correctly in a coupling. [2026-27 Board-style Practice]
- Explain the construction order for an unprotected flange coupling assembly. [2026-27 Board-style Practice]
- Prepare a neat labelled freehand outline showing shaft, sleeve, key, flanges, bolts and nuts. [2026-27 Board-style Practice]
- [2026-27 Board-style Practice]

Section D: Board-Style Machine Drawing Questions

4 marks each

- Draw the sectional front view and side view of a muff coupling. Show shafts, sleeve, sunk key, centre line and hatching clearly. [2026-27 Board-style Practice]
- Draw an unprotected flange coupling using proportionate dimensions. Indicate shafts, flanges, keys, bolts, nuts and pitch circle. [2026-27 Board-style Practice]
- Given the shaft diameter and flange thickness, construct the sectional front view and side view of a protected flange coupling. [2026-27 Board-style Practice]
- Draw the assembly view of a split muff coupling and write the order in which sleeve halves, bolts, keys and shafts are completed. [2026-27 Board-style Practice]
- [2026-27 Board-style Practice]

Section E: Long Answer Drawing Practice

5 marks each

- Draw a complete machine drawing of a muff coupling, including sectional front view, side view, centre lines, keyway, hatching and title block notes. [2026-27 Board-style Practice]
- Draw a complete flange coupling assembly with shafts, flanges, sunk keys, bolt circle, nuts, hatching and projection symbol.

- [2026-27 Board-style Practice]
- Compare muff coupling, split muff coupling and flange coupling with reference to function, main parts, sectional view and drawing precautions.
- [2026-27 Board-style Practice]
- Explain, with a neat labelled sketch, how a student should attempt a shaft-coupling machine drawing question in the board examination.
- [2026-27 Board-style Practice]