

	INDIAN SCHOOL AL WADI AL KABIR		
Class: XII	Department: SCIENCE 2026– 27 SUBJECT: ENGINEERING GRAPHICS	Date: 16/08/2026	
Worksheet No: 3 WITH ANSWERS	UNIT 3: BEARINGS	Note: A4 FILE FORMAT	
NAME OF THE STUDENT:		CLASS & SEC: XII B	ROLL NO.

MULTIPLE CHOICE QUESTIONS

1. A bearing is used in a machine mainly to:

- a) Increase friction between moving parts
- b) Reduce friction between moving parts
- c) Increase the weight of the shaft
- d) Prevent the shaft from rotating

2. A shaft is subjected to a load acting perpendicular to its axis. Which type of bearing is most suitable for supporting this load?

- a) Thrust bearing
- b) Radial bearing
- c) Footstep bearing
- d) Collar bearing

3. A rotating shaft in a machine is subjected to a load acting along the axis of the shaft. Which bearing is most suitable for carrying this load?

- a) Radial bearing
- b) Thrust bearing
- c) Bushed bearing
- d) Ball bearing

4. A student is asked to identify a bearing in which balls are placed between an inner race and an outer race. Which bearing is being described?

- a) Bushed bearing
- b) Footstep bearing

- c) Ball bearing
- d) Collar bearing

5. A machine requires a bearing for a slow-moving shaft where simplicity, low cost, and easy construction are important. Which option would be the most appropriate?

- a) Bushed bearing
- b) Ball bearing
- c) Roller bearing
- d) Thrust ball bearing

6. CRS in an open bearing stands for -----.

- a) centre to cross section
- b) centre to centre distance
- c) cross section
- d) corner to corner distance

7. In a bush bearing, the base plate or sole is recessed up to-----

- a) 2 mm
- b) 5 mm
- c) 3 mm
- d) 4 mm

8. The journal bearings are used to support only the -----.

- a) parallel loads
- b) radial loads
- c) axial loads
- d) slant loads

9. Which machine part prevents the rotation or sliding of the bush?

- a) Body of bearing
- b) Pulley
- c) Dowel pin
- d) Oil hole

10. A drawing which shows how parts are put together is known as:

- a) Perspective drawing
- b) Assembly drawing
- c) Isometric drawing
- d) Detail drawing

11. A machine element which supports and guides a rotating shaft is called....

- a) Bearing
- b) Pulley
- c) Cotter
- d) Coupling

12. The portion of the shaft lying within the bearing is called -----

- a) brass
- b) bush
- c) journal
- d) body

13. A machine part which is not sectioned is called -----

- a) bush
- b) snug
- c) rivet
- d) None of the above

14. Sectioned area is shown by -----

- a) colouring
- b) Hatching lines
- c) dots
- d) All of these

15. Which bearing consists of a U-shaped cast iron body?

- a) Bushed bearing
- b) Open bearing
- c) Pivot bearing
- d) Plummer block bearing

16. Bush is made up of -----

- a) Cast iron
- b) Steel
- c) Gun metal
- d) Wood

17. Which bearing is useful for shafts rotating at low speed?

- a) Bushed bearing
- b) Open bearing
- c) Pivot bearing
- d) Plummer block bearing

18. Use of bearings helps to reduce -----

- a) Electricity

- b) Friction
- c) load
- d) Dowel pin

19. A counterbore sunk hole is drilled at the top of the body to hold the lubricant, which facilitates reducing the friction between the ----- and -----.

- a) Shaft and bush
- b) Oil hole and bush
- c) Base plate and shaft
- d) Body of bearing and shaft

20. Bearings are used as a mechanical component to a certain part, and this is done by utilising the small ----- of the bearings, which makes them rotate easily.

- a) Magnetic force
- b) Tensile force
- c) Frictional force
- d) Gravitational force

DESCRIPTIVE QUESTIONS

1. The figure shows the assembly of an 'Open Bearing'. Disassemble the parts correctly and then draw to scale 1:1 its following views of the components. Keep the position of components the same with respect to H.P and V.P. both;

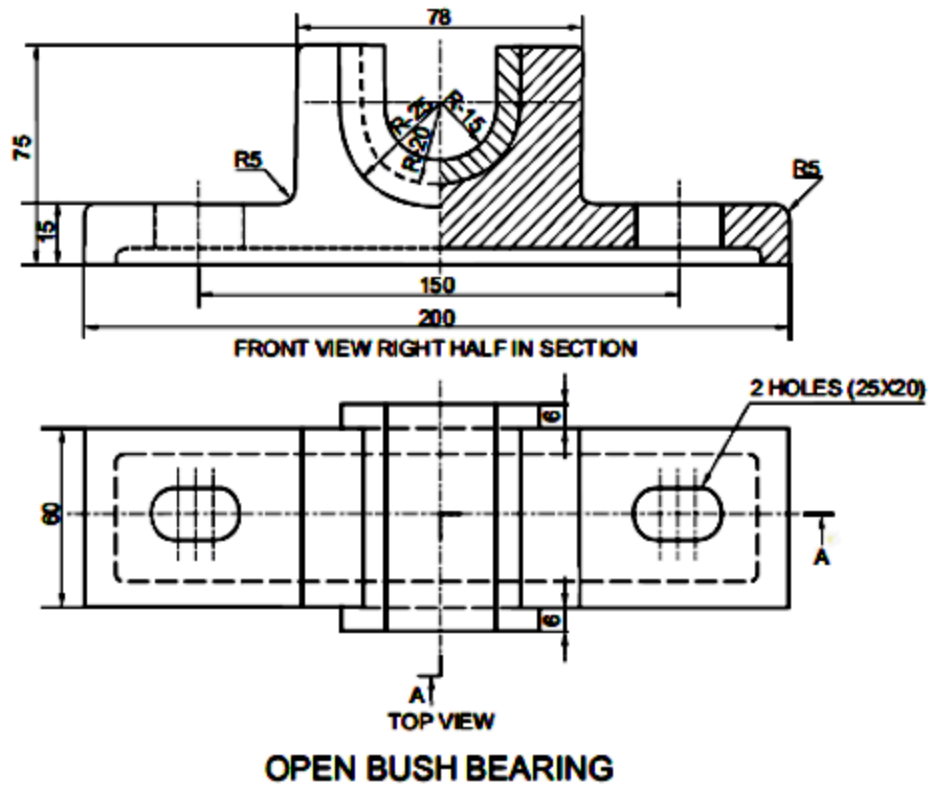
1) BODY

- a) Front view, left half in section.
- b) Top view, without section.

2) BUSH

- a) Front view, left half in section.
- b) Side view, viewing from the left.

3) Print titles of both and the scale used. Draw the projection symbol. Give 6 important dimensions.



2. The Fig shows the assembly of a Bushed Bearing. Disassemble the parts, and draw orthographic views of the following parts to scale 1:1, keeping the same position:

a) BODY

i) Front View, right half in section.

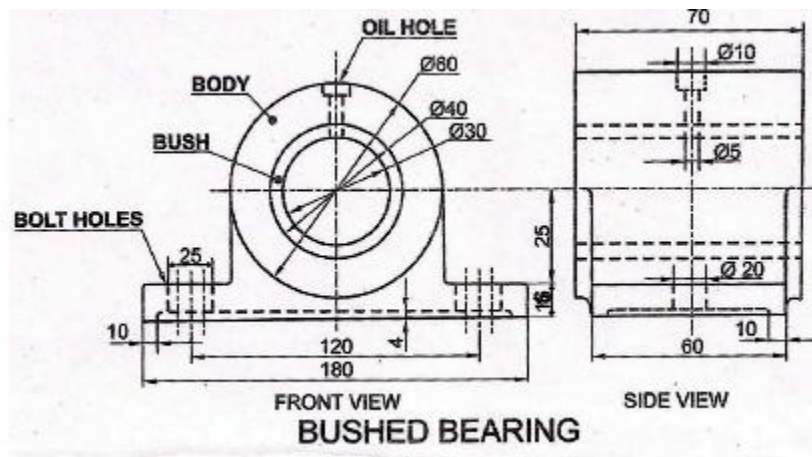
ii) Top View.

b) BUSH

i) Front View, left half in section.

ii) Top View.

c) Give 6 important dimensions, Title, Projection symbol and Scale.



ANSWERS

MULTIPLE CHOICE QUESTIONS

1. b) Reduce friction between moving parts
2. b) Radial bearing
3. b) Thrust bearing
4. c) Ball bearing
5. a) Bushed bearing
6. b) Center-to-center distance
7. c) 3 mm
8. b) Radial loads
9. c) Dowel pin
10. b) Assembly drawing
11. a) Bearing
12. c) Journal
13. b) Snug
14. b) Hatching lines
15. b) Open bearing
16. c) Gun metal
17. b) Open bearing
18. b) Friction
19. a) Shaft and bush
20. c) Frictional force

SOLUTIONS FOR DRAWINGS

1.OPEN BEARING (Dis-assembly)

1) BODY

a) FRONT VIEW (Left Half in Section):

- i) Drawing left half with mounting hole and recess at bottom.
- ii) Drawing right half.
- iii) Hatching lines.

b) TOP VIEW:

- i) Drawing boundary with four vertical lines.
- ii) Hidden lines.
- iii) Drawing both mounting holes.
- iv) Drawing cutting plane.

2) BUSH

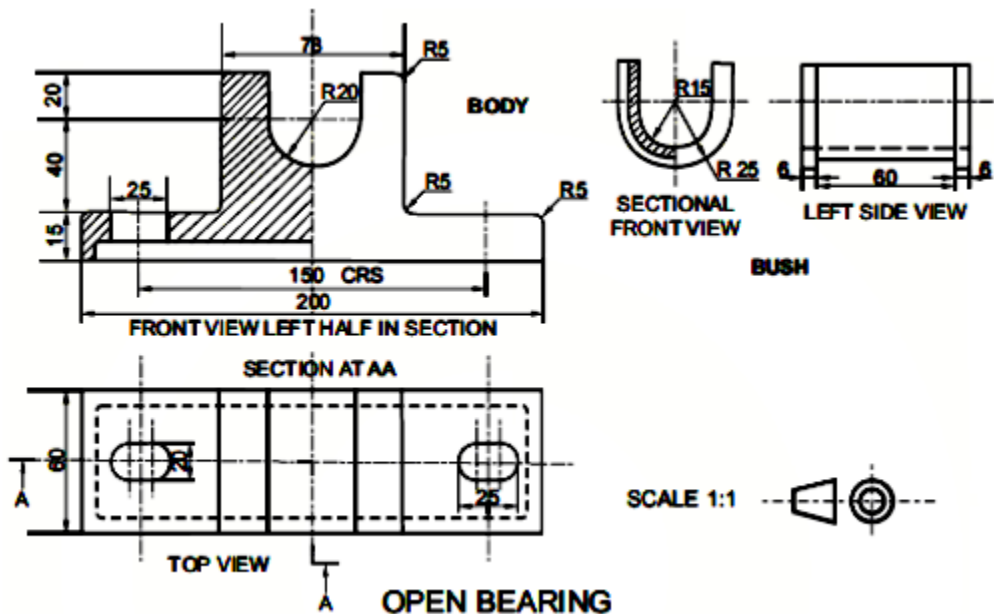
a) FRONT VIEW (Left Half in Section):

- i) Drawing left half.
- ii) Drawing right half.
- iii) Hatching lines.

b) LEFT SIDE VIEW:

- i) Drawing complete view with hidden lines.

- 3) Printing titles of both, scale used, drawing projection symbol, and six dimensions.

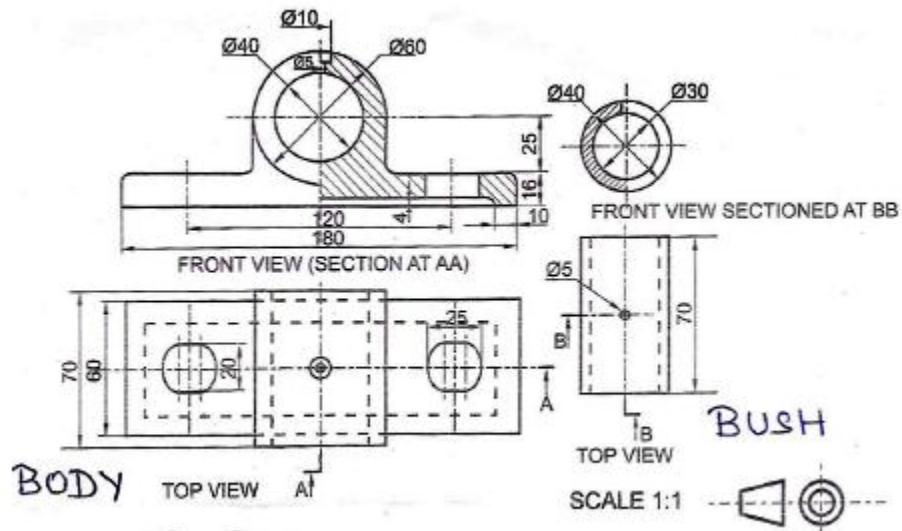


2. DIS-ASSEMBLY OF BUSHED BEARING

a) BODY

- i) Front View. Drawing right half in section.
- Drawing left half without section.

- ii) Top View with cutting plane.
- b) BUSH
- i) Front View, left half in section.
- ii) Top View with cutting plane.
- c) DETAILS: Printing title, scale used, drawing projection symbol and printing six dimensions



Prepared by:
Ms Aiswarya Deepthi P

Checked by:
HOD Science