

Register No.:

417

April 2024

*Time - Three hours
(Maximum Marks: 100)*

- [N.B. 1. Answer all questions under Part-A. Each question carries 3 marks.
2. Answer all the questions either (A) or (B) in Part-B. Each question carries 14 marks.]

PART - A

1. State the limitations of powder metallurgy.
2. Define Tap density.
3. Write the shotting method of powder production.
4. State the principles used in the condensation method.
5. Define Compaction.
6. State the advantages of hot pressing process.
7. Define Sintering.
8. What are the types of sintering furnaces?
9. List out the various types of bearing materials.
10. Write any three applications of cermets.

[Turn over.....

PART – B

11. (a) Explain the various pressing properties of metal powders.
(Or)
(b) Explain the two methods of determination of green strength of powder compacts.
12. (a) Explain the principle and operation of ball milling process.
(Or)
(b) Explain about powder production by precipitation process.
13. (a) List the various cold pressure shaping technique. Describe any two in detail with necessary sketches.
(Or)
(b) Explain the hot rolling process with suitable figure.
14. (a) Explain the liquid phase sintering process.
(Or)
(b) What is meant by Air-Gas ratio? Explain the two types of gases used in sintering furnace atmosphere.
15. (a) Explain the production method of Bearings.
(Or)
(b) Describe the production of dispersion strengthened materials.
