

Name: _____ Hall Ticket No.

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Answer All Questions. All Questions Carry Equal Marks. Time: 20 Min. Marks: 10.**I Choose the correct alternative:**

1. In Fluidized bed furnace process, the reducing gas used for reduction of iron ore is ----- []
(a) Hydrogen (b) Nitrogen (c) Argon (d) Mythelene
2. Fe-20Cu-1.0C alloy is made with tensile strength of 125,000 psi and density of 7.46 g/cc by the technique called ----- []
(a) Powder Metallurgy technique (b) Green compaction technique
(c) Casting method (d) Mechanical alloying
3. Activation energy for sintering is lowered by []
(a) Chemical addition (b) Increasing the time
(c) Increasing the temperature (d) Reducing atmosphere
4. Antiseizure properties are improved and oil corrosion is reduced in ... bearings. []
(a) Bronze (b) Iron (c) Fe-Cu (d) Overlay
5. The best activators added in activated sintering are []
(a) Al & Cu (b) Pd & Ni (c) Ni & Cu (d) Cu & Zn
6. An example of contact materials for highest electrical loads where burn off occurs is []
(a) Mo (b) Cu (c) Ag (d) Au
7. Re precipitation occurs in _____ []
(a) Sintering (b) Liquid phase sintering (c) HIP (d) CIP
8. WC– Co is mostly used as _____ []
(a) Liner (b) Shock absorber (c) Damper (d) Tool material
9. Neck growth in sintering occurs during mechanism. []
(a) Recovery and recrystallization (b) Condensation and evaporation
(c) Volume diffusion (d) Surface diffusion
10. SmCo₅ is used as a _____ []
(a) Tool material (b) Wear resistant material
(c) Magnetic material (d) Electrical material

II Fill in the blanks

11. The driving forces for both recovery and recrystallisation are associated with ----- resulting from defect rearrangement or removal.
12. The strengthening elements used in aluminum powder metallurgy technique are ----- (at least two elements)
13. The principal requirements for DC applications of soft ferro magnets is
14. Fuel elements used in nuclear reactors are produced by forging technique.
15. PERM alloy is a soft magnet consisting of ----- base alloys.
16. An example of cobalt base permanent magnet is -----
17. ----- carbides are produced by direct method of carbon reaction.
18. Bearing materials produced by powder metallurgy contain a pore volume between -----
19. ALNICO alloys are hardened alloys.
20. Liquid phase sintering is widely in the field of -----

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7. SmCo_5 is used as a _____ []
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Cont.....2

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