

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. Shape memory alloys find wide applications in _____ []
(a) Gear boxes (b) Reversible fasteners (c) Rails (d) Stirrers
2. Cu-Zn-Al is an example of _____ []
(a) Composite (b) Shape memory alloys (c) Tool bit (d) Drilling bit
3. Shape memory alloys exhibits _____ []
(a) Straight line (b) Parabolic curve (c) Hysteresis curve (d) Logarithmic curve
4. Cermets have usually less than _____% metal by volume. []
(a) 20 (b) 30 (c) 40 (d) 50
5. The metallic elements in cermets are usually _____ []
(a) Al, Cu, Pb (b) Cu, Pb, Mg (c) Ni, Mo, Co (d) Pb, Mg, U
6. Steel bonded carbides are mostly produced by _____ []
(a) Melting (b) Welding
(c) Soldering (d) Powder Metallurgy
7. The volume percent of TiC in steel bonded carbides is _____ []
(a) 1 to 5 (b) 5 to 10 (c) 10 to 15 (d) 25 to 45
8. 'Mo' as an alloying element contributes to _____ []
(a) Hardenability (b) Ductility (c) Brittleness (d) Strain hardening
9. The crystal structure of Niobium is _____ []
(a) FCC (b) HCP (c) BCC (d) BCT
10. The most expensive refractory metals is _____ []
(a) Nb (b) Ta (c) W (d) Re

Cont.....2

II Fill in the Blanks:

11. The melting temperature of Molybdenum is _____ °C.
12. The density of tungsten is _____ gm/cm³
13. The crystal structure of Rhenium is _____
14. Cellular phones and computers contains _____ capacitors.
15. The most widely used permanent and nonmelting electrode is _____
16. The melting point of Rhenium is _____ °C.
17. Niobium is used in _____ steels as grain refiner and strengtheners.
18. The concept to make composite materials by varying the microstructure is an example of _____ materials.
19. _____ is an ideal for minimising thermo mechanical mismatch in metal ceramic bonding.
20. Titanium with graded density and porosity is an example of _____

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Cont.....2

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11. Cellular phones and computers contains _____ capacitors.
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