

**Chettinad**

College of Engineering & Technology

Approved by AICTE, New Delhi and Affiliated to Anna University, Chennai.

Department Mechanical Engineering**ME8491- Engineering Metallurgy****Unit II - MCQ Bank**

1. Alloy of copper and zinc is known as _____

- A. **Brass**
- B. Bronze
- C. Duralumin
- D. Nichrome

ANSWER: (A)

2. Major constituent of the gun metal is _____

- A. **Copper**
- B. Nickel
- C. Iron
- D. Zinc

ANSWER: (A)

3. Major constituent of Duralumin alloy is _____

- A. Copper
- B. Nickel
- C. Iron
- D. **Aluminum**

ANSWER: (D)

4. Cast iron is a product of _____

- A. **Cupola**
- B. Bessemer converter
- C. Open hearth furnace
- D. Blast furnace

ANSWER: (A)

5. Wrought iron is a product of _____

- A. Cupola
- B. Bessemer converter
- C. **Puddling furnace**
- D. Blast furnace

ANSWER: (C)

6. Red hardness of an alloy steel can be improved by adding _____

- A. **Tungsten**
- B. Vanadium
- C. Manganese
- D. Titanium

ANSWER: (A)

7. Abrasion resistance of an alloy steel can be improved by adding _____

- A. Tungsten
- B. Vanadium
- C. Manganese
- D. **Chromium**

ANSWER: (D)

8. Wear resistance of an alloy steel can be improved by adding _____

- A. Tungsten
- B. Vanadium
- C. **Manganese**
- D. Titanium

ANSWER: (C)

9. Corrosion resistance of an alloy steel can be improved by adding _____

- A. Tungsten
- B. Vanadium
- C. **Chromium**
- D. Titanium

ANSWER: (C)

10. Tensile strength of an alloy steel can be improved by adding _____

- A. **Nickel**
- B. Vanadium
- C. Manganese
- D. Titanium

ANSWER: (A)

11. Which of the following induces fine grain distribution in alloy steel?

- A. Nickel
- B. **Vanadium**
- C. Manganese
- D. Titanium

ANSWER: (B)

12. Which is the primary element used for making stainless steel alloy?

- A. **Chromium**
- B. Zirconium
- C. Vanadium
- D. Indium

ANSWER: (A)

13. Addition of _____ gives stainless steels an austenitic structure.

- A. Molybdenum
- B. **Carbon**
- C. Nickel
- D. Vanadium

ANSWER: (B)

14. Stainless steels with little carbon and no nickel are called _____

- A. **Ferritic stainless steel**
- B. Austenitic stainless steel
- C. Martensitic stainless steel
- D. Duplex stainless steel

ANSWER: (A)

15. Stainless steels with high strength, but low corrosion resistance are known as _____

- A. Austenitic stainless steel
- B. Ferritic stainless steel
- C. **Martensitic stainless steel**
- D. Duplex stainless steel

ANSWER: (C)

16. Which of the following are applications of Ferritic stainless steels?

- A. Aircraft engine parts, heat exchangers
- B. Milk, kettles
- C. **Oil burner parts, furnace elements**
- D. Pumps and valve parts

ANSWER: (C)

17. The low-carbon, high-alloyed steels which possess high strength and toughness are known as _____

- A. Carbon steels
- B. Alloy steels
- C. **Maraging steels**
- D. Stainless steels

ANSWER: (C)

18. What is the maximum allowable temperature at which High-Speed Steels retain good cutting ability?

- A. 100°C
- B. 200°C
- C. 350°C
- D. **540°C**

ANSWER: (D)

19. Ultra high-speed steels are made of which of the following elements?

- A. Tungsten and molybdenum
- B. Chromium and molybdenum
- C. **Vanadium and cobalt**
- D. Molybdenum and cobalt

ANSWER: (C)

20. What is the microstructure of Hadfield's manganese steels (Mangalloy)?

- A. **Austenite**
- B. Ferrite
- C. Martensite
- D. Cementite

ANSWER: (A)

21. How much carbon is present in cast irons?

- A. Less than 0.05%
- B. Up to 1.5%
- C. 1.5% to 2%
- D. **More than 2%**

ANSWER: (D)

22. Iron obtained from broken _____ is known as white iron.

- A. **Cementite**
- B. Graphite
- C. Pearlite
- D. Bainite

ANSWER: (A)

23. If the iron surface contains graphite, it is known as _____

- A. Alloy cast iron
- B. White iron
- C. **Grey iron**
- D. Spheroidal graphite

ANSWER: (C)

24. Which element causes cementite to behave in a stable manner?

- A. Silicon
- B. **Sulphur**
- C. Manganese
- D. Carbon

ANSWER: (B)

25. Which of the following cast irons cannot be machined?

- A. **White cast iron**
- B. Grey cast iron
- C. Malleable cast iron
- D. Spheroidal graphite cast iron

ANSWER: (A)