1. Which casting process involves the use of a rotating mold to create cylindrical parts?

a) Die casting
b) Centrifugal casting
c) Shell molding
d) Lost wax molding

Answer: b) Centrifugal casting
Explanation: Centrifugal casting utilizes centrifugal force to distribute molten metal into a rotating mold, typically producing cylindrical parts such as pipes and tubes.

2. What type of sand is commonly used in foundry cores due to its ability to withstand high temperatures?

a) Green sand
b) Dry sand
c) Shell sand
d) Chromite sand

Answer: c) Shell sand
Explanation: Shell sand, also known as resin-coated sand, is commonly used in foundry core making due to its high thermal stability and ability to produce intricate shapes.

3. Which gating system design is commonly used to feed molten metal into the mold cavity?

a) Sprue
b) Runner
c) Riser

d) Ingate

Answer: a) Sprue
Explanation: A sprue is the main channel through which molten metal enters the mold cavity from the pouring cup or ladle.

4. What is the purpose of a riser in casting?

a) To feed molten metal into the mold
b) To provide support for the core
c) To remove excess gases from the mold
d) To prevent shrinkage defects in the casting

Answer: d) To prevent shrinkage defects in the casting
Explanation: Risers, also known as feeders, are reservoirs of molten metal that supply additional material to compensate for shrinkage as the casting solidifies.

5. Which casting process involves the use of a mold made of wax or similar material that is melted away to leave a cavity?

a) Die casting
b) Centrifugal casting
c) Shell molding
d) Lost wax molding

Answer: d) Lost wax molding
Explanation: Lost wax molding, also known as investment casting, creates complex metal parts by pouring molten metal into a mold created by melting away a pattern made of wax or

similar material.

6. What type of welding involves the use of a flame to generate heat for joining metal pieces?

a) Gas welding
b) Electric arc welding
c) TIG welding
d) MIG welding

Answer: a) Gas welding
Explanation: Gas welding utilizes a flame produced by burning a fuel gas, such as acetylene, mixed with oxygen to generate the heat required for welding.

7. Which welding process uses a consumable electrode and a shielding gas to protect the weld pool from atmospheric contamination?

a) TIG welding
b) MIG welding
c) Gas welding
d) Flux-cored arc welding

Answer: b) MIG welding
Explanation: MIG welding, or Gas Metal Arc Welding (GMAW), uses a continuously fed consumable electrode and a shielding gas to protect the weld area from atmospheric contamination.

8. What is the purpose of flux in welding?

a) To provide strength to the welded joint
b) To clean the metal surface
c) To shield the weld pool from atmospheric contamination
d) To regulate the temperature of the welding arc

Answer: b) To clean the metal surface
Explanation: Flux removes oxides, dirt, and other impurities from the metal surface during welding, ensuring better weld quality and penetration.

9. Which welding defect occurs when the weld metal fails to properly fuse with the base metal?

a) Porosity
b) Lack of penetration
c) Cracking
d) Undercut

Answer: b) Lack of penetration
Explanation: Lack of penetration occurs when the weld metal does not adequately penetrate the base metal, resulting in a weak joint.

10. What is the primary purpose of a pattern in the casting process?

a) To create the mold cavity
b) To support the core
c) To regulate the cooling rate of the casting
d) To provide channels for molten metal flow

Answer: a) To create the mold cavity
Explanation: A pattern is used to create the mold cavity in casting by imparting its shape to the sand or other molding material.

11. Which forging operation involves shaping metal between two dies that move horizontally toward each other?

a) Drop forging
b) Press forging
c) Upsetting
d) Swaging

Answer: a) Drop forging
Explanation: Drop forging involves shaping metal between two dies that move horizontally toward each other, typically with one die stationary and the other moving.

12. In press working, what process involves cutting metal sheets or plates into desired shapes?

a) Shearing
b) Bending
c) Coining
d) Drawing

Answer: a) Shearing
Explanation: Shearing is the process in press working that involves cutting metal sheets or plates into desired shapes using a shearing action.

13. Which rolling operation involves reducing the thickness of a metal slab or plate by compressing it between rotating rolls?

a) Hot rolling
b) Cold rolling
c) Ring rolling
d) Profile rolling

Answer: a) Hot rolling
Explanation: Hot rolling involves reducing the thickness of a metal slab or plate by compressing it between rotating rolls while the metal is heated above its recrystallization temperature.

14. What is the primary function of a lathe machine in metal machining?

a) Drilling
b) Milling
c) Turning
d) Grinding

Answer: c) Turning
Explanation: The primary function of a lathe machine is to perform turning operations, which involve rotating a workpiece against a cutting tool to remove material and create cylindrical shapes.

15. Which machining process involves removing material from a workpiece using a rotating multipoint cutting tool?

a) Drilling
b) Grinding
c) Milling
d) Boring

Answer: c) Milling
Explanation: Milling is a machining process that involves removing material from a workpiece using a rotating multipoint cutting tool called a milling cutter.

16. What is the function of a shaper machine in metal machining?

a) To perform turning operations
b) To perform milling operations
c) To produce flat surfaces by linearly reciprocating the cutting tool
d) To perform drilling operations

Answer: c) To produce flat surfaces by linearly reciprocating the cutting tool
Explanation: A shaper machine is used to produce flat surfaces on a workpiece by linearly reciprocating a single-point cutting tool against the workpiece.

17. In welding, what term describes the process of joining two metal pieces by melting and fusing them together?

a) Soldering
b) Brazing
c) Welding
d) Fusing

Answer: c) Welding
Explanation: Welding is the process of joining two or more metal pieces together by melting and fusing them, typically using heat and/or pressure.

18. Which welding method uses a consumable electrode and a flux coating to protect the weld pool from atmospheric contamination?

a) TIG welding
b) MIG welding
c) Stick welding
d) Gas welding

Answer: c) Stick welding
Explanation: Stick welding, also known as Shielded Metal Arc Welding (SMAW), uses a consumable electrode coated with flux to protect the weld pool from atmospheric contamination.

19. What type of defect occurs in welding when the weld metal solidifies with voids or gas pockets trapped within it?

a) Cracking
b) Undercutting
c) Porosity
d) Incomplete fusion

Answer: c) Porosity
Explanation: Porosity is a welding defect characterized by the presence of voids or gas pockets trapped within the solidified weld metal.

20. Which forging operation involves compressing metal between flat or shaped dies to reduce its cross-sectional area?

a) Upsetting
b) Swaging
c) Extrusion
d) Coining

Answer: a) Upsetting
Explanation: Upsetting is a forging operation that involves compressing metal between flat or shaped dies to reduce its cross-sectional area and increase its length.

Related posts:

1. Steam generators and boilers MCQs
2. Vapour Cycles MCQs
3. Gas Dynamics MCQs
4. Air Compressors MCQs
5. Nozzles and Condensers MCQs
6. Introduction to stress in machine component MCQs
7. Shafts MCQS
8. Springs MCQs
9. Brakes & Clutches MCQs
10. Journal Bearing MCQs
11. Energy transfer in turbo machines MCQs
12. Steam turbines MCQs
13. Water turbines MCQs
14. Rotary Fans, Blowers and Compressors MCQs

15. Power transmitting turbo machines MCQs
16. Energy transfer in turbo machines MCQs
17. Steam turbines MCQs
18. Water turbines MCQS
19. Rotary Fans, Blowers and Compressors MCQs
20. Power transmitting turbo machines MCQs
21. Introduction to Computer Engineering MCQs
22. Types of Analysis MCQS
23. Heat Transfer and Conduction MCQs
24. Extended Surfaces (fins) MCQs
25. Convection MCQs
26. Thermal and Mass Transfer MCQs
27. Thermal Radiation & Boiling/Condensation MCQs
28. Mechanical processes MCQs
29. Electrochemical and chemical metal removal processes MCQs
30. Thermal metal removal processes MCQs
31. Rapid prototyping fabrication methods MCQs
32. Technologies of micro fabrication MCQs
33. Power Plant Engineering MCQs
34. Fossil fuel steam stations MCQs
35. Nuclear Power Station MCQs
36. Hydro-Power Station MCQs
37. Power Station Economics MCQs
38. Design of Belt, Rope and Chain Drives MCQS
39. Spur and Helical Gears MCQs
40. Bevel Gears MCQs
41. Design of I.C. Engine Components MCQs

42. Linear system and distribution models MCQs
43. Supply chain (SCM) MCQs
44. Inventory models MCQs
45. Queueing Theory & Game Theory MCQs
46. Project Management & Meta-heuristics MCQs
47. Overview of Systems Engineering MCQS
48. Structure of Complex Systems MCQs
49. Concept Development and Exploration MCQs
50. Engineering Development MCQs
51. Basic Concepts & Laws of Thermodynamics MCQs
52. Properties of Steam MCQs
53. Air standard cycles MCQS
54. Fuels & combustion MCQs
55. Materials Science MCQs
56. Alloys and Materials MCQs
57. Metal Heat Treatment MCQs
58. Material Testing and Properties MCQs
59. Chemical Analysis of Metal Alloys MCQs
60. Stress and strain MCQs
61. Bending MCQs
62. Torsion in shafts MCQs
63. Theories of failures MCQs
64. Columns & struts MCQs