

169/2014

Maximum : 100 marks

Time : 1 hour and 15 minutes

1. Which material is not commonly used as a pattern material?
(A) Metal (B) Rubber
(C) Plastic (D) Wood
2. The pattern material used in investment casting is :
(A) Plastics (B) White metal
(C) Plaster (D) Wax
3. Which of the following is a negative allowance?
(A) Shaking allowance (B) Draft allowance
(C) Shrinkage allowance (D) Machining allowance
4. Which pattern material requires maximum shrinkage allowance?
(A) Grey cast iron (B) Copper
(C) Lead (D) Aluminium
5. Name the middle moulding box :
(A) Cheek (B) Cope
(C) Drag (D) Core
6. How do you provide a projection or overhanging part in a pattern?
(A) as a loose piece pattern (B) making as skeleton pattern
(C) by sweeping the pattern (D) making as segments
7. The surface to be left unmachined is marked on the pattern by :
(A) red colour (B) yellow colour
(C) blue colour (D) black colour
8. Cavities and holes can be made in casting by using :
(A) chaplets (B) core
(C) sprue pin (D) runner

9. Which groups are not the sources of foundry sand in India?
 (A) Allahabad, Veeryambakkam, Batala (B) Hardwar, Avadi, Satara
 (C) Bhavanagar, Damodar area, Barkar (D) Baroda Ahammdabad Wayanad
10. The property of sand which permits the steam and other gases to pass through the sand is known as :
 (A) Cohesiveness (B) Adhesiveness
 (C) Porosity (D) Collapsibility
11. A taper provided on the pattern for its easy and clean withdrawal from the mould is known as :
 (A) Shrinkage allowance (B) Draft allowance
 (C) Distortion allowance (D) Machining allowance
12. The draft or taper allowance on casting is generally :
 (A) 10 to 15 mm/m (B) 5 to 10 mm/m
 (C) 3 to 5 mm/m (D) 1 to 2 mm/m
13. A sand employed on the faces of the patterns before moulding is called :
 (A) Facing sand (B) Core sand
 (C) Parting sand (D) Backing sand
14. What kind of grain size is preferable for large casting size?
 (A) Course (B) Fine
 (C) Medium (D) Finest
15. The process of adding water in proper proportion in moulding sand is known as :
 (A) conditioning (B) tempering
 (C) mixing (D) seasoning
16. Metal patterns are used for :
 (A) complicating casting (B) large casting
 (C) large scale production of castings (D) small castings
17. According to the AFS standard, the number of standard set of sieves are :
 (A) 10 (B) 13
 (C) 11 (D) 12

18. Permeability measure with a specimen made of moist moulding sand is known as :
- (A) green permeability (B) dry permeability
(C) baked permeability (D) basic permeability
19. The mould prepared from the natural moulding sand is :
- (A) dry sand mould (B) loam mould
(C) shell mould (D) green sand mould
20. Which moulding method is best suit for extremely large castings?
- (A) machine moulding (B) pit moulding
(C) floor moulding (D) bench moulding
21. What is the purpose of vent holes?
- (A) to add water
(B) to pour molten metal
(C) to rise the molten metal
(D) to escape gases from the molten metal
22. What is the use of a runner?
- (A) pouring the molten metal (B) cool the molten metal
(C) distribute the molten metal (D) escape the gases
23. The main function of a riser is to :
- (A) act as a reservoir (B) act as a cooler
(C) to direct the molten metal (D) to remove excess metal
24. Skim bob is a provision to
- (A) store metal to supply excess metal while contraction
(B) direct the flow of metal
(C) trap impurities
(D) divert the flow
25. Which gating system is most advantageous to prevent splashing?
- (A) top gate (B) bottom gate
(C) branch gate (D) parting gate

26. The purpose of a gating system is :
- (A) Deliver the molten metal into the molten cavity
 - (B) Set as reservoir for the molten metal
 - (C) Direct pouring metal from the pouring base
 - (D) Feed the molten metal to compensate shrinkage
27. Core is used to :
- (A) provide external projections
 - (B) form internal cavities
 - (C) remove foreign particles
 - (D) to support the pattern
28. Green sand is a mixture of :
- (A) 70% sand and 30% clay
 - (B) 30% sand and 70% clay
 - (C) 90% sand and 10% clay
 - (D) 60% sand and 40% clay
29. The element which prevent the vertical core shifting is known as :
- (A) chills
 - (B) sprue pin
 - (C) chaplets
 - (D) vent rod
30. The core used for making holes below or above of the parting line is :
- (A) cover core
 - (B) vertical core
 - (C) drop core
 - (D) none
31. The element which provides reinforcement of the mould is known as :
- (A) Bars
 - (B) Vent rod
 - (C) Soldiers
 - (D) Gaggers
32. What will happen if the sand is over rammed?
- (A) mould will fall apart
 - (B) weight of the mould will increase
 - (C) removal of pattern will be difficult
 - (D) gases from the molten metal will not able to leave
33. What kind of moulding machine is used when the size of the mould is too large to be turned over by hand?
- (A) Jolt squeeze machine
 - (B) Jolt squeeze roll over machine
 - (C) Jolt squeeze strip
 - (D) Jolt machine

34. Which one is not the part of the gating system?
 (A) Core (B) Choke
 (C) Runner (D) Riser
35. Chills are used for :
 (A) Improving the finish (B) Directional solidification
 (C) Collapsibility (D) Permeability
36. Name the tool used for repairing and finishing the mould surface after removing the pattern :
 (A) Lifter (B) Swab
 (C) Gagers (D) Slick
37. The sand used for making core is :
 (A) dry sand (B) green sand
 (C) loam sand (D) oil sand
38. Which statement is not required for a good gating system?
 (A) metal should flow with minimum turbulence
 (B) the metal must be rapidly poured into the mould cavity before it solidify
 (C) metal should reserved and supply when it solidifies
 (D) Loose sand, slag or oxides should be prevented from entering the mould cavity
39. Which one is not a foundry hand tool?
 (A) snips (B) swab
 (C) trowels (D) rammer
40. In order to produce uniform packing of sand in the mould :
 (A) a squeezing machine is used (B) sand slinger is used
 (C) a stripper machine is used (D) a jolt machine is used
41. If the individual parts of a casting shifts with respect to each other, the defect is known as :
 (A) flashes (B) misrun
 (C) cold shut (D) mismatch
42. Which one is not the reason for blow holes?
 (A) excessive moisture content in moulding sand
 (B) inadequate permeability of moulding sand
 (C) high pouring temperature
 (D) high gas content in the molten metal

43. What is hot tears?
- (A) depression or an internal void in a casting
 - (B) irregular cavities with a dark oxidised feature surface
 - (C) small gas holes either at the surface or just below the surface
 - (D) long vee depression that occurs in the flat surface of flat casings
44. Name the defects occurs only in grey cast iron with insufficient silicon :
- (A) hard spot
 - (B) scars
 - (C) scab
 - (D) hot tears
45. Name the casting defect which occurs due to the wearing or warping of moulding box :
- (A) flashes
 - (B) misrun
 - (C) drop
 - (D) cut
46. The major consideration for the casting design is :
- (A) the material to be melted
 - (B) the shape should allow directional solidification
 - (C) the selection of pattern material
 - (D) the permeability of moulding sand
47. Which material is good for casting?
- (A) aluminium
 - (B) steel
 - (C) magnesium
 - (D) grey iron
48. Die casting is suitable for :
- (A) Grey cast iron
 - (B) Zinc
 - (C) Steel
 - (D) Bronze
49. Name the product which is not manufactured by die casting :
- (A) toys
 - (B) instrument panel
 - (C) machine bed
 - (D) bathroom fixtures
50. Which one is not the limitation of die casting?
- (A) economical only for mass production
 - (B) only small parts can be made
 - (C) reduce mechanical property of the cast material
 - (D) only ferrous metal can cast

51. Advantage of sand moulding :
- (A) it can cast ferrous and non ferrous metals
 - (B) it can reuse again and again
 - (C) it can maintain good tolerance
 - (D) it will give smooth surface finish
52. Name the method of casting in which the molten metal fed by gravity into the mould :
- (A) slush casting
 - (B) permanent mould casting
 - (C) die casting
 - (D) centrifugal casting
53. A casting defect which results in general enlargement of casting is known as :
- (A) blow hole
 - (B) shift
 - (C) sand wash
 - (D) swell
54. Cast iron and steel pipes are produced by :
- (A) true centrifugal casting
 - (B) investment casting
 - (C) die casting
 - (D) slush casting
55. A slurry coated pattern is used in :
- (A) semi centrifugal casting
 - (B) die casting
 - (C) investment casting
 - (D) continuous casting
56. In which casting method the core is avoided to make hollow?
- (A) hot chamber die casting
 - (B) permanent mould casting
 - (C) slush casting
 - (D) cold chamber die casting
57. What is the difference between the cold chambers over the hot chamber die casting?
- (A) separate melting unit
 - (B) casting without melting
 - (C) plunger used
 - (D) permanent mould is used
58. In centrifugal casting method :
- (A) core is made of sand
 - (B) core is made of ferrous metal
 - (C) core is made of nonferrous metal
 - (D) no core is used
59. Ornaments and toys of nonferrous metal alloys are made by :
- (A) die casting
 - (B) slush casting
 - (C) centrifugal casting
 - (D) continuous casting

60. Thermosetting resin bond sand is used in :
- (A) investment casting (B) shell moulding
(C) continuous casting (D) centrifuging
61. Which casting method is not the function of centrifugal action?
- (A) Semi centrifugal casting (B) Centrifuge casting
(C) Continuous casting (D) True centrifugal casting
62. Tumbling is the process for :
- (A) cleaning light casting
(B) moulding with sand
(C) making pattern with wood
(D) pouring the molten metal into the mould
63. Which one is not a surface cleaning method of casting?
- (A) shot blasting (B) hydro blasting
(C) tumbling (D) tempering
64. Internal casting defects are tested by :
- (A) pressure testing (B) radio graphical testing
(C) visual inspection (D) dimensional inspection
65. Developer is used in :
- (A) liquid penetrant test (B) ultrasonic testing
(C) magnetic particle testing (D) eddy current inspection
66. Name the metal that cannot cast :
- (A) iron (B) aluminium
(C) tungsten (D) magnesium
67. Name the place where melting the metal for casting :
- (A) oven (B) furnace
(C) chamber (D) hearth
68. Ladles are used for :
- (A) cleaning the casting (B) making the pattern
(C) pouring the molten metal (D) finishing the mould

69. Which statement is correct regarding investment casting?
- (A) intricate details cannot cast
 - (B) unmachinable alloys cannot cast
 - (C) more than one casting cannot cast at a time
 - (D) limitation in use of core and location of holes
70. What is shake out operation?
- (A) freeing the casting from the mould
 - (B) removing the core from the mould
 - (C) removal of gates from mould
 - (D) removal of riser from mould
71. Which furnace is not used for casting?
- (A) cupola furnace
 - (B) blast furnace
 - (C) crucible furnace
 - (D) electric arc furnace
72. Which one is not a factor for selecting the furnace?
- (A) capacity of molten metal
 - (B) method of pouring
 - (C) economics of melting
 - (D) shape of mould
73. Riddle is used for :
- (A) moistening the sand around the edge before removing pattern
 - (B) repairing and finishing the mould
 - (C) cleaning the moulding sand
 - (D) reinforcement of sand in the top part of moulding box
74. The property of sand due to which the sand particles stick together is called :
- (A) adhesiveness
 - (B) cohesiveness
 - (C) collapsibility
 - (D) permeability
75. In a three piece pattern the top box named as :
- (A) drag
 - (B) cheek
 - (C) cope
 - (D) none of the above
76. Which one is an inorganic binder?
- (A) fire clay
 - (B) wood flour
 - (C) resins
 - (D) plastics