

- 1 An ice block submerged in the water, if the ice melts level of water (increase, decrease, remains same, none)
- 2 Simply supported beam with  $w$  point load at the middle, max. bending moment? ( $wl/4$ )
- 3 Simply supported beam with UDL, max. deflection ( $wl^4/384EI$ )
- 4 Cantilever beam point load at tip, max. bending moment comes at (end)
- 5 When bearing life  $L_{10}$  represents (bearings 10% survive, bearings 10% fails, none)
- 6 For welding high carbon steels which type of flame is used (oxidizing, carburizing, neutral, none)
7. Arrange the following cutting tools in decreasing order of machining hardness... Ceramics
8. When  $P_1$  and  $P_2$  are the loads acting on bearings with life  $L_1$  and  $L_2$  then  $L_1/L_2 = \{P_2/P_1\}^{10/3}$
9. Product simplification does not mean??  
Product characterization
- 10 Which of the following process has the most scope in manufacturing?  
CAD/CAM, CAM, CIM, All the above.
11. Concurrent engineering means?  
(Manufacturing, designing, both, none)
12. Which manufacturing process yields higher output and increases worker productivity-  
(process layout, line+process, functional layout)
13. 18-4-1 represents-, Tungsten-Cr-Vn
- 14 For which material is negative allowance provided- (Graphite, steel, bronze, cast iron)
15. What is the recrystallisation temperature of tin- (60, 300, 1000, none)
16. What is the purpose of borax in soldering-
17. Top gates are provided in which type of casting- (Shallow

casting,simple,complex,none)

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18. Which statement is true regarding simple gear trains-(i/p and o/p shafts r fixed, each shaft has 2 gears, i/p & o/p shafts r moving)
19. What is the purpose of normalizing- (Refining of grain structure)
20. As the grain size is decreased-(Hardness increases,corrosion resistance decreases,both)
21. Isothermal gas is filled in a vessel at a pressure P and temperature T then considering the compressible forces as the height increases pressure ??(linearly increases linearly decreases exponentially increase )
22. A bottle is filled with water and air and is tied to a string and is rotated in horizontal direction. Then in which direction will air bubble travel?  
(bottom,neck,uniformly spread)
23. A empty bottle(in vaccum) filled with a gas at temp T and press P when the pressure of bottle reaches P temperature of the gas is \_? (T,T/K,TK)
24. Bearing somerfield number \_ with load on bearing?  
(increases,decreases,no change)
25. Critical radius for a sphere is-(2k/h)
26. Critical radius exist for\_ (spherical,cylindrical,both,slab)
27. Convectional resistance/internal resistance is called (biot number)
28. Nusselt no. is? (hl/k)
29. EOQ=?
- 30 Which statement is true regarding critical path method? (i only one critical path exists for a network, more than one with same duration,)
31. Shipment cost,inspection cost,storage cost comes under\_ (carrying cost ,holding cost,)
32. Ischronous governors sensitivity is- (zero,infinite)
33. self energized brakes are-(friction moment acts in the direction of application of force,opposite to the direction of force, does not need a force to act ,)

34 The ratio of heat capacities for evaporator and condenser is\_ (Zero,infinity)

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35. when steam and air mixture with partial pressure 0.06 and 0.07 enters a condenser what is the condenser pressure? (0.06,0.07,0.53,0.03)

36. In pulverized burning of coal heat transfer from boiler to water occurs through\_ (predominant radiation, convection, conduction, conduction+convection)

37. Rankine cycle efficiency for same parameters increases mostly with\_ (reheat, regeneration, super heating )

38. Ericson cycle with all reversible processes assume\_ (carnot cycle,stirling,brayton)

39. Air delivery tank at outlet of reciprocating compressor is provided for\_ (provide constant pressure, avoid cavitation, )

40. High speed centrifugal pump has \_?  
(vanes faces in forward direction side,backward,radial vanes)

41. Thermal efficiency in decreasing order\_?  
(Otto cycle>dual cycle>diesel cycle)

42. When a 1000 K body comes in contact with atmosphere at 300K a loss of 9000 KJ heat is transferred. The net available energy transferred is \_

43. When entropy of a system increases\_?  
(unavailable energy increases )

44. Rolling is a process widely used for\_?  
(I section,tubes)

45. Tool nomenclature\_?

46. In francis turbine movement of steam?

47. For low power consumption\_?  
(rake angle should be increased / decreased, nose angle increased/ decreased)

47. Continuous chips occur in\_?  
(High speeds,low speeds,both,none)

48. Primary forces in a reciprocating engine\_?  
(fully balanced, partially balanced, completely unbalanced, none)

49. In proximate analysis pyrogallol is used for analysis of which element\_?

(nitrogen,oxygen)

50. Sulphur content in fuel greatly affects \_?

(corrosion)

51. Heat transfer through radiation can be increased by \_?

(decreasing emissivity and increases temperature of hot body)

52. which theory of failure clearly explains the failure in case of ductile material?

(Maximum shear stress theory or Guest's or Tresca's theory)

53. When a material is subjected to continuous cycles which limit is being verified?

(Endurance limit)

54. where is stress concentration maximum?

(notches, stress reducing throughcuts)

55. Power transmitted through a belt drive \_?

$P(T_2 - T_1)$

56. According to Euler's theory crippling or buckling load is

$(W_{cr} = \frac{C \pi^2 EI}{l^2})$

57. During sensible heating, specific humidity \_?

(remains constant)

58. COP of a refrigerator is \_?

(greater than 1)

59. The maximum temperature in a refrigeration cycle is \_?

(less than/greater than/equal to critical temperature)

60. The pressure at the throat of the nozzle \_?

(maximum,min)

61. for a statically determinate set of forces for equilibrium \_?

( $\sum f(X), \sum f(Y), \sum f(Z) = 0, \sum M = 0$ )

62. For a statically determinate set of forces-

(there are as many equations as the no. of unknowns)

63. 1-2-3 analysis is used for \_?

(1. break even analysis, ??)

64. A problem on mean time of service something like a salesman has a rating of 120.

considering 10% allowance time calculate the time required to serve 120???

65. A problem on determining time in a queue??

66. Energy equation for a laminar flow is \_?  
(Uniform and steady ,non uniform and unsteady)

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67. Undercuts in welding occurs due to \_?  
(low welding current,high welding current)

68. Work holding equipment in shearing??

69. At the centre of a nozzle \_?  
(Mach no<1 >=1;=1)