NTPC | Previous Year Placement Paper 6 Feb 2008

NTPC PAPER

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 (wl4/384EI)

4 Cantilevel beam point load at tip,max.bending momemt comes at (end)

5 When bearing life L10 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 P1 and P2 are the loads acting on bearings with life L1 and L2 then L1/L2=?
L1/L2={P2/P1}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)
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 governers 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)

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?
(Maximun shear stress theory or Guests or trescas 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(T2-T1)

56. According to Eulers theory crippling or buckling load is
(Wcr = C?2EI/l2)

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_?
(? f(X),f(Y),f(Z)=0,?M=0)

62. For a statically determinate set of forces-
(there r 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 n determining time in a queue??

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