

NTPC | Previous Year Placement Paper 2008

NTPC PAPER 2008 :

(NTPC Previous Exam Paper from the Year 2008)

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

- As the grain size is decreased-(Hardness increases,corrosion resistance decreases,both)
- 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)
- 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)
- 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)
- Bearing somerfield number _ with load on bearing? (increases,decreases,no change)
- Critical radius for a sphere is-($2k/h$)
- Critical radius exist for_ (spherical,cylindrical,both,slab)
- Convectional resistance/internal resistance is called (biot number)
- Nusselt no. is? (hl/k)
- EOQ=?
- Which statement is true regarding critical path method? (i only one critical path exists for a network, more than one with same duration,)
- Shipment cost,inspection cost,storage cost comes under_ (carrying cost ,holding cost,)
- Ischronous governors sensitivity is- (zero,infinite)
- 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 ,)
- The ratio of heat capacities for evaporator and condenser is_ (Zero,infinity)
- 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)
- In pulverized burning of coal heat transfer from boiler to water occurs through_(predominant radiation, convection, conduction, conduction+convection)
- Rankine cycle efficiency for same parameters increases mostly with_(reheat, regeneration, super heating)
- Ericson cycle with all reversible processes assume_(carnot cycle,stirling,brayton)
- Air delivery tank at outlet of reciprocating compressor is provided for_ (provide constant pressure, avoid cavitation,)

- High speed centrifugal pump has _? (vanes faces in forward direction side,backward,radial vanes)
 - Thermal efficiency in decreasing order_? (Otto cycle>dual cycle>diesel cycle)
 - 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_
 - When entropy of a system increases_? (unavailable energy increases)
 - Rolling is a process widely used for_?
 - Tool nomenclature_?
 - In francis turbine movement of steam?
 - For low power consumption _? (rake angle should be increased / decreased, nose angle increased/ decreased)
 - Continuous chips occur in_? (High speeds,low speeds,both,none)
 - Primary forces in a reciprocating engine_? (fully balanced, partially balanced, completely unbalanced, none)
 - In proximate analysis pyrogallol is used for analysis of which element_? (nitrogen,oxygen)
 - Sulphur content in fuel greatly affects_? (corrosion)
 - Heat transfer through radiation can be increased by_? (decreasing emissivity and increases temperature of hot body)
 - Which theory of failure clearly explains the failure in case of ductile material? (Maximum shear stress theory or Guest's or Tresca's theory)
- When a material is subjected to continuous cycles which limit is being verified? (Endurance limit)
- Where is stress concentration maximum? (notches, stress reducing through cuts)
- Power transmitted through a belt drive_? $P(T_2 - T_1)$
 - According to Euler's theory crippling or buckling load is ____ ($W_{cr} = C \frac{2EI}{l^2}$)
 - During sensible heating, specific humidity_? (remains constant)
 - COP of a refrigerator is _? (greater than 1)
 - The maximum temperature in a refrigeration cycle is_? (less than/greater than/equal to critical temperature)

- The pressure at the throat of the nozzle_? (maximum,min)
- For a statically determinate set of forces for equilibrium_? ($\sum f(X)$, $\sum f(Y)$, $\sum f(Z)=0$, $\sum M=0$)
- For a statically determinate set of forces- (there r as many equations as the no. of unknowns)
- 1-2-3 analysis is used for_? (1.break even analysis, ??)
- 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?
- A problem n determining time in a queue?
- Energy equation for a laminar flow is _? (Uniform and steady ,non uniform and unsteady)
- Undercuts in welding occurs due to_? (low welding current, high welding current)
- Work holding equipment in shearing?
- At the centre of a nozzle _? (Mach no<1 >=1;=1)