

BHEL PAPER - 07 AUG 2008

BHEL paper consists of two parts.

A) Technical

B) Aptitude

Both parts consists 120 marks each. There is negative marking which 0.2.

Technical paper

- 1) How many links in slider crank mechanism?
- 2) Deflection of cantilever beam subjected to end point load?
- 3) Stress concentration factor $K_f = ?$
- 4) What is the unit of BHN?
- 5) What is efficiency of riveted joint?
- 6) Composition of Munz metal?
- 7) One shaft is subjected to torque 1700 N-m having shear strength of 40Mpa. Determine the diameter?
- 8) A reversible engine is working between the 600F and 60F. Carnot efficiency is equal to = 9) Coefficient of restitution lies between =
- 10) Pectlet number is equal to = a) $Re \cdot Nu$ b) $Re \cdot Pr$ c) $Re \cdot Gr$
- 11) Formula of effectiveness of heat transfer =
- 12) Emissivity depends on 13) Reynolds number formula
- 14) Production process for Al? 1
- 5) Thick metals welded by following processes...
- 18) Cutting forces decreases by = a) increasing rake angle b) decreasing rake angle c) increasing relief rake angle
- 19) Some problem on Mohr's circle radius...
- 20) Volumetric strain =

- 21) Pendulum problem Time is given length = ?
- 23) Which is not related to CI engine = ans) spark plug
- 24) Cotter joint generally fail by 25) Which coupling is used for intersecting shafts?
- 26) No of teeth on gear and pinion is given, center distance is given, module = ?
- 27) Coefficient of friction and angle is given, what is ration of tension in belt?
- 28) What is lamis theorem?
- 29) Condition for self locking
- 30) Discontinuous chips can be produced by....
- 31) For critical speed should be a) $>v^2$ b) $>v^3$
- 32) Air at 20C blows over a hot plate 50 by 75 cm maintained at 250C. The convective heat transfer coefficient is 25W/m². Cal the heat transfer.
- 33) Metacenter always lies
- 34) Rotometer is used to measure....
- 35) Formula for effort of a governor...
- 36) Stroboscope is used to measure.....
- 37) What is size of A4 paper?
- 38) Some problem on riveted joint....
- 39) Modulus of rigidity G is given by...
- 40) Wave properties in solids is depends on elasticity.
- 41) Radiation heat transfer is directly proportional to....
- 42) Escape velocity is given by v^2gR 43) Kinetic energy formula....
- 44) Corolis component.... 45) Potent ial Energy theory is given by....

46) Perpendicular axis theorem...

47) Pappus theorem....

48) Center of gravity of a spherical shell..

49) Angle and linear dimension is given by chamfer.

50) For thick cylinders.....

51) $N = 10$ to $N = 10^5$ cycles then it is a) finite life b) infinite life

52) Value of steel young's modulus ...

53) Endurance strength of steel equal to ...

54) Three problems on strain gauges

55) Three problems on vectors some related to work done....

56) Straight line mechanism...

57) Some problem springs..

58) Design on thermal stresses can be considered for a) concrete b) steel rolls c) blast furnace

59) Velocity problem it is in the vector form to find displacement?

60) Hardness is a property.