

Essar Placement Papers

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ESSAR PAPER ON 16th OCTOBER AT BHUBANESWAR

HELLO FRIENDS. This is RAVI GUPTA ORISSA ENGINEERING COLLEGE ,
BHUBANESWAR I am providing you selection procedure and question papers of ESSAR.

Eligibility for 2009 passing out batch 60% in B.Tech and Date of Birth after 1-05-1986.

1st Company's PPT.
2nd online writtten test.
3rd technical .
4th PI.

Online written Test - This is the main round u have to clear it with good marks ,it will help u in the technical round so try to clear written technical with good marks.

Written paper has 4 sections- mathematical aptitude, reasoning, english, technical .
All questions are very easy but you have to concentrate on time running on each page.

For mathematical aptitude : just remember the formulas of R.S AGGARWAL and solve or concentrate on Examples. This is more than enough.
If you are good in calculations just concentrate at the time of test.

English: Passages are very easy and scoring ,Fill in the blanks all from barron's gre 12th edition try to remember the answers of model test papers,
synonyms antonyms are very difficult, if u are good in english then only u can be confident otherwise hit any options as i did.

Technical questions As this was my 3rd attempt for a core company i realized that all companys are asking mechanical questions from the book Mechanical Engineering (conventional and Objective Type)

S.CHAND writer R.S. KHURMI and J.K.GUPTA so try to remember objective as more as u can, it will help u for all campus selections.

In essar if u will perform in written technical section then they will ask 1-2 question only in next technical round. Some of them are

Technical written:

1. Work done is Zero for which process?
2. Which cycle has high efficiency?

3. The power of 2 –stroke engine varies from 4 – stroke engine by_____.
4. Sudden reduction in barometer leads to _____.
5. Composition of Stainless steel _____.
6. Gears are produced in mass production by _____.
7. Pick out the wrong statements:
 - a) The good fuel should have high calorific value
 - b) Ease in storing
 - c) High ignition point
 - d) Low smoke and gases
8. Composition of Gun metal _____.
9. Gears are commonly called with _____
10. A good fuel should have _____ ignition point.
11. If heat supplied into the system is 30000 J/S and the power output is 9KW. What is the efficiency of system?
12. A square rod of 2cm x 2cm of which a force of 8800Kg is acting on it. What is the stress developed in it?
13. GNATT chart shows_____
14. Which is the high efficiency freezing agent?
15. Property of the freezing agent is:
16. A diesel engine, that is, slow speed engine follows which cycle?
17. Hardness is the property of _____.
18. A Rotary compressor depends on _____.
19. The potential energy raised upwards _____ the kinetic energy downwards.
20. Centipoise is the unit of _____.
21. For a thermodynamic system, the COP is 5 and the heat supplied to the system is 1 KW.
22. Composition of gunmetal?.
23. Specific heat capacity of air?.
24. Melting point of Aluminum?.
25. If a ball is kept at a height of x(m), from that position it is dropped. Does the p.e is equal to the K.e if the ball goes inside the earth as same distance where it is relieved?.
26. Viscosity of the lubricant ----- with increase in temperature?.
27. What amount of power required to make the 2-stroke petrol engine to 4-stroke diesel engine?.
28. Which engine is the most efficient in terms of compression ratio?.
29. for the same compression ratio heat removed in each cycle is efficient in otto or diesel cycle?.
30. Use of draft tube in turbine ? a) to increase work o/p of runner b) To increase turbine output.
31. Percentage of carbon in toolsteel?.
32. Introduction of sulphur in mild steel increases or decreases the machinability?.
33. Is Bernoulli's theorem applicable for steady or unsteady flow?.
34. Axial turbine is of which type? a) high head b) low head.
35. Corrosion is inhibited due to oxidation or reduction?.
36. Binary power cycle uses ----- as working fluid?.
37. The purpose of runner in casting -----
38. Shape of a u.d.l. of cantilever beam is?.
39. Which has high coefficient of friction ? disc or band brakes
40. Engine valve seat is cooled at ----- temperature in liquid nitrogen (-180C)

41. Bending is high in bar which is greater or smaller in length?
42. Formula for deflection of beam? Ans; $PL^3/48EI$
43. Which law says that pressure can be transferred from one point to another in an undiminished form?
44. Is Vane pump is Positive or non-positive displacement pump?
45. As the altitude why density of the decreases?
46. In the reversible adiabatic process entropy is constant or not?
47. In which process the temperature of the system changes but there is no heat transfer to the surroundings?

In an ideal gas compared to a real gas at very high pressure occupies?

Kinetic theory of gases assumes that collisions between the molecules are?

The condition of perfect vacuum that is at absolute zero pressure can be attained at?

Specific heat of air?

Which law states that internal energy is function of Temperature?

Minimum work done for an adiabatic process the value of n ?

Air Refrigerator works on?

1 watt = 1Nm/S

1 h.p = ?kw

When crude oil heated Which Hydro carbon comes first?

What is the purpose of Supercharger?

1Kg of carbon to CO, Amount oxygen required?

Horse power per tones of refrigeration?

Scale formation on the surface of the boiler tubes due to ?

Axial shift in steam turbine occurs due to?

Latent heat of vapourization at low pressure and temperature?

Shaft revolving in a bearing which pair?

Difference between dedendum and addendum?

The fatigue life of a part can be improved by ?

Rotational tendency of force?

Acetylene dissolved in ?

The frequency of transverse vibration is 3hz then critical speed?

More viscous lub oil?

Example for Non destructive test?

Advantage of V belt?

In gear boxes Which type of key is used

A structural member subjected to an axial compressive force is called?

Pig iron is produced in which furnace?

Heat generation of arc welding is due to ?

In what angle does an object thrown height will travel the longest distance?

Angle of contact between the journal and bearing?

The coupling is required to connect two parallel shaft distance between the shaft is small and variable?

Carbon is added to steel to increase its hardness-True/False

Wings of airplane are made by---

To protect from thrust which type of follower is used?

With increase in temperature--- Viscosity of liquid---

Heavy machine beds are made of CI for-----

For shock resistance and vibrations we use ----

Rupture strength===== ?

Washer is used for-----

Surface endurance limit depends on (toughness/surface tension/yield strength/surface finish)

In a uniformly distributed load of 6n/m over a 5 meter length simply supported beam, the value of B.M at the point where shear force is zero (17.5/22.5/55/75)

Cam size depends on (base circle/pitch circle/prime circle/none)

Poisson's ratio is higher in (rubber/steel/wood)

In drill tool carbon % is (<0.4 %, 0.8% -1.6%, 1-2.5%)

finishing operation in lathe is done at(low speed/high speed)

degree of freedom in super structure (1/positive/negative/zero)

axial compressors follow the process in ideal conditions (adiabatic/isotropic/isothermal)

forced draft has negative pressure drop(true or false)

advantage of v-belt?

The key used in the gears for transmitting power(flat/saddle/spline/square)

dye penetration test is (pouring/surface tension/capillary/none)

poisson ratio?

endurance limit is depend upon—1.toughness 2.elasticity 3.britleness?

in which furnace ,pig iron is made?

corrosion resistant material?

centipoise is unit of ?

broaching is made to produce?

steady rest is used for?

drill angle?

In parson's turbine ,relation between angles?

v-belt angle?

Refrigerant used in refrigerator?

Composition of babbitt metal?

Cantilever beam failure of surface finish is represented by?

At what angle in the valve timing, Diesel engine injection occurs?

Name any one non destructive test?

Clutch is located between?

What is the Melting pt of iron?

Name any one Gear material?

Drill material composition?

Which mechanism is used to hold the gear ?

Reynolds number range for laminar flow -?

Nusselt (for natural) number is function of which number?

Angle of contact between journal and bearing?

What is the function of cutting fluid?

Dual cycle combination of which two cycles?

In screw jack -----which thread is used?—

ACME thread angle?

Frequency of a system is 3 Hz then find the speed in rpm?

For which gear shafts are co-axial?

say true/false:

in simple gear train every shaft is attached with one simple gear only

Radiation heat transfer is varied with T to the power of 4.