

## Reliance Placement Paper

Chemical Engg.

1. Absorption Factor in counter current operation?
2. Mach No. is?
3. Schedule No. is?
4. Optimum reflux ratio is  
a)  $1.2 R_m \sim 1.5 R_m$  b)  $2 R_m$  c)  $3 R_m$
5. Volute in Centrifugal pump is for?
6. Virial state Eqn.?  
a)  $PV = RT$  b)  $PV = aT + bT^2 + cT^3$  c)  $(P - a) (V - b) = RT$
7. Which pump is used against a pres of  $1500 \text{ Kg/cm}^2$ ?

Ans. Plunger

8. For which case Thiele Gedde model is used?
9. In Orsat analysis  $N_2$  is absorbed using?
10. Carnot Cycle Definition
11. Transformation of solid to gas?
12. Eqn. for relative volatility?
13. Equivalent weight of  $Na_2 CO_3$ ?
14. Which has higher B.P. Solution or Solvent?
15. Effect of temperature on sp. Heat.
16. Effect of temperature on exothermic reaction conversion.
17. Adiabatic compression for 1st cycle.
18. In which reactor exit and reactor composition is same
19. WHSV one ques. (Weight Hourly Surface Volume) Catalysis
20. Equivalent Diameter for non spherical particals
21. Poissoulle Eqn.?
22. Pump efficiency, Head curve?
23. Gas liquid separator Equation?
24. Why high air flow rates r not allowed in furnaces

25. Incomplete combustion is indicated by  
a) CO emission b) Co<sub>2</sub> emission
26. Units for H T Coeff.
27. Proportionality constant in Fourier law?
28. Corrossive Fluids r generally passed through tube side or shell side?
29. Floating head in H E is used for?
30. Catalyst weight one ques.
31. jH factor (Reynold analogy)
32. Over all H T Coefficient is influenced by  
a) hi b) ho
33. Feed forward controller setting parameters  
a) load
34. Which controller is used for stability in settings? Ans. PID
35. Condenser/ Subcooler Eqn.
36. Extensive property  
a) pressure b)viscosity c)density d) volume
37. LPG composition
38. Permanent hardness is due to salts of  
a) carbonates b) sulphates c)bi carbonates
39. Weeping, Flooding one question
40. Random packing regular packing: pres. vs surface area relation
41. Relation b/n head vs dia
42. 1 ton of refrigeration gives  
a) 1200KW b) 12000 KW c) none
43. Area meter is:  
a) Pitot tube b) Orifice meter c) Venturi meter d) Rotameter
44. Pitot tube measures  
a) Pressure head b) Velocity head c) Liquid head

APTITUDE

1. Fox belongs to family of?  
a) Wolf b) tiger c) Cat
2. Accident : Carefulness : : Disease : ?  
a) Doctor b) medicine c) Sanitation
3. In one party there are wife and husband and their two sons with their wives and each son have 4 children. How many are there in the party?
4. 4 ½ yard cloth costs 90 cents; what is the cost of 2 ½ yard cloth?
5. Ans. for one proverb: Dont do that is impossible.
6. 10 boxes of apple weigh 400 pounds. Each empty box weighs 4 pounds. What is the weight of total apples?
7. Husbands are ----- shorter than wives.  
a) Never b) Usually c) Rarely d) Always e) Frequently f)Seldom
8. Fathers are ----- wiser than sons.  
a) Never b) Usually c) Rarely d) Always e) Frequently f)Seldom
9. Mothers are -----older than their daughters.  
a) Never b) Usually c) Rarely d) Always e) Frequently f) Seldom
10. Which number is odd one the series.  
0 1 3 6 10 15 21 28 34
11. CONSTITUTIONAL write the word by inter changing 1st with 2nd , 3rd with 4th and 5th with 6th etc.
12. Opposite of Love ----- Hate.
13. Opposite of Hope ----- Despair.
14. Opposite of Honour ----- Disgrace.
15. Opposite of Love ----- Extravagant
16. Circle : Sphere : : Square : ?  
a) cube b) hexagone c) triangle
17. Light : Candela : : Temp : Thermometer
18. Quite : Noise : : Sunlight : Darkness
19. Find out the odd word.  
a) Shear b) Bend c) Shave d) Chop

20. Find out the odd word.

a) Good b) Red c) Walk d) Thick

21. Meaning of proverb : 1st bird catches warm fire.

22. All birds have -----

a) Nest b) Wings c) Bill

23. All club members r republicans. Smith is not republican.

He is a club member is :

a) True b) False c) Un defined

24. 20 pipe is cut into 2 pieces .  $\frac{2}{3}$ rd of its more than the other. Then what is the length of smaller one?

25. Ans. For one proverb: Subordinates enjoy when their bosses r not present.

26. Meaning of: Dinner is judged by desserts.

27. Moon :Earth : : Earth : ?

a) Sun b) Universe c) Star d) Jupiter

28. Trees always have

a) Leaves b) Branches c) Roots

29. Dinner always contains

a) Table b)Plates c)Food d) Hunger

30. 31` . 32. 3 Proverbs

33. 34. 35. Two statements true or false

36. 37. 38. Alphabets game

39. 40. 41. 42. 43. Simple calculations like 3 pencils cost is 30paise 10 pencils cost ?

1. love----- hate (opposite)

2. graceful-----awkward(opp)

3. honour-----disgrace

4. 1,4,9,25,36-----ans 108 (which is not perfect square)

5. 5 cents-----3 pencils,then 50 cents-----30 pencils

6. hypothetical means not firm meaning of sentences.

7. 14, 25, 36, 47, 59, 69 ans 59

8. temperature is measured -----thermometer
9. quit: sound::darkness:sunlight
10. square:sphere ::cicle:sphere
11. plane:line:: line:point
12. 4.5 yard----90 cents then 2.5----- 50cents
13. all birds donot have----- nest
14. one qu is related to cloth shrinkage ans 33 inch
15. series: l,m, n,o,p,q,r,s,t ans- n
16. a phrase child burnts by milk-----
17. one related to bridge prop-----ans until u obstacle
18. pudding (ans food related)
19. phares mice plays when cat is away(find its ans by its meaning)
20. phares---early birds catches warms(its meaning is its ans)
21. one ques is related to family members whose ans is 12
22. 24 inches srinks to 20, then 36inches-----30
23. 1/4 sec run 6 feet, then in 10 sec what ans 240
24. mother is always older than daughter
25. father is usually wiser than son
26. men are rarely shorter than wife
27. carefulness:accident::desease: doctor
28. meal should always involve ans food
29. how people recognize person ans characterstic
30. rotation: whirlpool::flying:wings
31. moon:earth:: earth :sun
32. never ----always(opp)
33. fox-----wolf
34. economical-----extravagent(opp)
35. electicity :candle::automobile :carriage
36. one ques how many no followed by n ans is 4

37. compromise-----
38. good,wall, red, thick ans is red
39. constitutional change the position of first letter to sec, similarly third to fourth ,u will get ocsnitutitnola what is the twelthe letter ans is o
40. ordinary:exellent::few:many
41. there are two ques which demands ans in cents ans is 120and 50 cents
42. why silver is more costlier than iron ans is rare
43. loyal :::: treacherous(opp)
44. 1,3,6,10,15,21,28,----- ans 36(series)
45. 2 parts of cream is made from 3 parts of milk then how much cream is made by 15 parts of milk ans-10
46. one ques demands ans in pounds ans is 360pounds
47. person away thinking -----conservative
48. A B Q PR S T -----A Q S Q L M ans A
49. 2 , 5, 4, 3, 9, 0, 5, 9 WHICH LETTER COMES 2ND TIME FIRST ans 5
50. series (two series are there) missing term  
4,2,5,3,6,4,7,5,--,6,9. ans---8