

# SAIL Placement Paper

1.) Terminal colors of Rainbow?

a: Violet&Red

2.) First lady in "Indian National Congress"?

a: Indira Gandhi

b: Sarogini Naidu etc

3.) First Nuclear plant in INDIA is situated in

a : Trombay

b: Nellore etc

4.) 2 capacitances are in parallel gives 6 micro farad & in series gives 25 what will be the value of individual capacitance.

5.) Who invented "THERMOMETER"?

Ans: Fahrenheit

6.) Electrostatic potential is a Scalar Quantity or Vector Quantity?

7.) Among values 1 to 100 Probability of occurrence of numbers ending with 9 is?

a: 1/10

b: 9/10

c: 1

d: 0

8.) Si, Ge lie in .....block of periodic table

a: III

b: V

c: IVA(ANS)

d: IV B

9.) Some equation was given  $x=20 \sin 157t$  then calculate frequency

10.) Which Filter is used for passing only high frequency

a: Ladder

b: Crystal

11.) In Zener breakdown is proportional to

Ans Negative coefficient of temperature

12.) If water is heated from 0 degree to 10 degree effect on volume

a: increase steadily

b: remain same

c: decrease steadily

13.) If we dig EARTH FROM North to South pole and a stone is dropped in it then effect on its velocity

a : increase continuously

b: First increase and become Zero in center

c. It Will Start Oscillate

14.) Dandi march was related to .....

- a: Salt
- b: sugar etc

15.) Radiation pattern of loop antenna

- a: cardioids
- b. semicircular
- c. circle
- d. none

16.) "DENMARK" lie in which continent

17.) Cooks island is situated in which continent?

18.) Range of AM Signal?

19.) In an Electrolyte if rod is immersed then mass on rod will be proportional to  
Ans: current passed in it

20.) Largest unit in energy

21.) Spelling check of SATELLITE

22.) Plural of "DIBIYA" IN HINDI

23.) Find out Sarvnam

24.) RADDISH is a

- a: modified root
- b: bulb
- c; stem

25.) X Rays are .....Rays

Ans emw

26.) ass:bray::sheep:bleat

### **SAIL Latest Job Interview Placement Paper (Technical, Reasoning, English & Aptitude)**

#### **Questions:**

1. where does a body have least weight?

- a) at the equator
- b) at the poles
- c) at earth's center
- d) none of these

2. what is the millman's theorem?
3. what happens if a dc motor is fed an ac signal?
4. calculate electron mobility.
5. power MOSFET is voltage controlled or current controlled?
6. if u want a 640 k RAM, what specification should u specify in the drive?
7. max efficiency of a class a amplifier?
8. what r resistors in IC made of?
9. 6 girls and 6 bos sitting randomly in a line. what probability of girls being together?
10. what is the prob. of two friends having birthdays in same month?
11.  $(D^2 + 4)y = kx$  what if PI?
12.  $\lim_{x \rightarrow \infty} \sin x / x$
13. express  $x/(x+1)$  as taylor's series
14. principle of jet engine
15. why hydraulic systems used in aircrafts instead of electrical?
16. steel + ? = corrosion-resistant material?
17. what happens to speed of em wave as frequency increases?
18. which char. of em wave does not change when it travels from one medium to another?
19. circuit given. find attenuation in db.
20. circuit given. how much feedback?
21.  $(s-1)/(s+1)$  is high pass filter/ low pass filter?
22. fastest logic family among rtl, dtl, ttl?
23. in common emitter config. change in  $i_C$  on changing  $v_{BE}$ ?
24. what happens if gate voltage of an ON scr is decreased?
25. fermi level change with temperature in n type semiconductor?

26. mosfet has threshold voltage 1v when n+ polysilicon is used in gate. what is threshold voltage when polysilicon used is of n+ type?

27. simple ckts using zener diode.

28. what is the p+ substrate in an isolated pn junction ic connected to?

29. opamp circuit given. open loop gain=100. closed loop gain=?

30. which type of parameters( h/y/z) suitable in particular application?

31. given parallel LC ckt. find angle between currents in branches at resonance.

32. what is Q of series RLC ckt? (voltage gain/ admittance etc.)

33. resonant freq of parallel RLC ckt. ?

34. thin metal foil inserted between capacitor plates. foil connected to one plate. change in capacitance?

35. ques on reflection of em wave at air= dielectric interface. dlc const=9

36. what is brewster's angle?

37. why microwave freq not used for ionospheric propagation?

38. uhf range?

39. freq range used in satellite communication?

40. which ionospheric bands used for commercial purposes?

41. question on transmission line impedance matching?

42. flip- flop d, t 43. convert 32 k pulses to 1 hz pulses using decade counters etc.

44. ques on sets and relations

45. integration

46. rank of matrix

100 technical questions in 1 hr. +1/- .25

**(Section 2): section 2 consists of:**

- a. general awareness (history, geography, civics, economics- basic on india)
- b. english (passage, synonym, antonym, grammatical error detection etc)

c. reasoning

d. apti all sections' and all parts of sec 2's cut-off should be cleared.

**Sample Paper:**

1) A 2 digit number is formed by either subtracting 16 from 8 times the sum of the digits or by adding 20 to 22 times the difference between difference of digits.find the number?

2) It takes 16 days for 24 men to plough 15 acres of land,the how many days would be required for 32 men to plough 30 acres of land?

3) A Work can be done by 8 men and 10 women in 25 days, the same work can be done by 10 children and 5 women . In how many days 2 children and 3 men can do the same work?

4) One man or two women or three boys can do a work in 44 days then one man, one women and one boy together can finish the same work in -days?

5) 4 years from now ,prakash's age will be 4 times his son's age.12 years from now,he will be 2.5 times his son's age.find their present ages?

6) In how many ways can a lock be opened if that lock has three digit number lock if

i) the last digit is 9

ii) and sum of the first two digits is less than or equal to the last digit.

7) If the numerator and denomenator of a certain fraction are increased by 2,the fraction becomes  $\frac{3}{5}$ .If numerator and denomenator are increased by 1,it becomes  $\frac{1}{2}$ .find the fraction?

There are 76 persons. 53 can read hindu,46 can read times,39 can read deccan and 15 can read all.If 22 can rea

d hindu and deccan and 23 can read deccan and times then what is the number of persons who read only times and hindu ?

9) In pure milk if 20% replaced by water and in this again 20% is replaced by water and again 20% is replaced by water then what is the proportion of milk in that mixture?

10) After 10 years A will be twice the age of B before 10 years.and now if the difference is 9 years between them then what is the age of B after 10 years?

11) Praveen's present age is twice that of Mahesh's age 4 yrs ago.Praveen would be twice as old as Mahesh today.Find sum of their present ages?

12) The cost of 2 balls,3 bats and 8 pair of gloves is 2500.While cost of 4 balls,5 bats and 10 pair of gloves is 4000.Find cost of each bat?

13) From a 20 l mixutre conatining milk and water in the ratio 3:5, 4 litres of mixture is replaced with 4 litres of water .Then what is the final ratio of milk and water?

14) The cost of 4 apples is equal to the selling price of 6 apples.find the profit/loss percentage?

15) Nikhil bought 12 kg of cashew for Rs.360.He was forced to sell them at a loss of as much money as the selling price of 3kg.find his selling price?

