ABB Placement Technical Paper - VADODARA

1. In a ckt. We are giving voltage of 50 Hz as well as 60. then what will be  the resultant frequency.
  less than 50 more than 60 in between 50 & 60 none
according to our conclusion answer will be none because if we apply two  frequency component resultant frequency we can not say with such an ease. U  should confirm the answer

2. In a ckt a single resistor is connected across a d.c. source, what will be  the effect on current in first resistor if we connect one more resistance in  parallel with earlier one.

Answer.. no change since it is a parallel combination.

3. why we don,t like flashover in transmission line (t-line)-
(a ) it may create earth fault(b )it reduces the life of insulator..

4.total no of strands in a acsr conductor is 81, then what is the no. of  conductor in its outer layer..(a)36 (b)18 (c)24..Also read some more on acsr.

5.Two questions based on p.u. calculation like , p.u. calculation is given with  respect to some old base and u have to calculate it with reference to new base.

(new resistance/old)=(mva new /mva old)\*(old voltage/new voltage)2.

Other question is based upon transfer of p.u calculation in transformer i.e. how  base changes when we we move from primary to secondary or like wise.read some  more on p.u calculation.

6.which table is referred for sag calculation-
(a)stringing chart..answer

7.in a R-L ckt a ac voltage is applied , such that instantaneous power is  negative for 2ms, then what will be the power factor.
a) 9 deg, (b) 18 deg, (c) 36 Deg.

8. In an incandescent lamp
(a) luminous intensity is more than non-luminous intensity

Ans: Since efficiency is less than 100%, hence ans is (b), u should confirm it  further.

9. In which motor no-load to full-load diff. is lowest
(a) series motor, (b) shunt motor, (c) Compound motor
Ans: (b)

10. In a 60Hz induction motor full load speed is 850 rpm then what is the  Synchronous speed. (a) 900 rpm, (b) 950 rpm, (c) 1600 rpm
Ans: (a)

11. A sync. Motor is running at synch. Speed, if al of sudden D.C. excitation is  removed, then
(a) it will rotate at slip speed, (b) it will stop, (c) it will continue to  rotate at sync. Speed

Ans: (a), because actually it will acts as Induction motor.

12. A transmission line is designed for 50Hz, 440KV. If we want to transfer  power at 60Hz, 440 KV, then the power transfer capability will
(a) decrease, (b) Increase, (c)None

Ans: (a) ..as P=( |Vt| |Ef| sin (delta) ) / X, where (delta) is torque angle.

13. Increased rotor resistance in rotor ckt of induction motor is related with
(a) high starting torque, (b) more speed variation,
Ans: (a)

14. In the formulae E = 4.44 f N ?, ? is
(a) Avg value, (b) Rms value, (c) Maximum value
Ans: (a)

15. Voltage & current in a ckt is given by V= V1+j V2 and I= I1 +j I2, then rms  power is (refer book by Edministrator on NETWORK ..)

16. Input impedence of MOSFET is
(a) more than BJT..(Ans)

17, 18. Remember truth table of AND, NOR, NAND, OR, EX-OR ETC

19. Conversion of Binary number into Equivalent decimal No.

20. Megger is used for the measurement of (a) Insulation resistance, (b)  Conductor resistance
Ans: (a)

21. Form factor for sinusoidal as well as DC

22. Formulae of Regulation (Vs- Vr)\* 100/ Vr, then transmission line is
(a) short transmission line, (b) long, (c) medium
Ans: (a)

23. Improvement in power factor reduces
(a) power consumed by consumer, (b) power generation, (c) both a & b
Ans: (c)

24. Read about field test of Series Motor

25. No-load test for Synchronous motor, the graph is drawn
(a) stator open ckt emf Vs field current (Ans: a)

26. An AC voltage of 50Hz is impressed in a resistive ckt, the oscillating power  has a frequency (a) 50 Hz, (b) 100, (c) no oscillating power is there in  resistive ckt
Ans: (a)

27. Insulation used in transformer \_\_\_\_\_\_\_\_\_\_\_leakage flux.

(a) increases, (b) decreases Ans: (b)

28.After rain what happens to Insulator (a) break-down strength of Insulator  decreases, (b)Arch length reduces,
Ans: (b)

29.Diversity factor helps to . . . .(what ?)
[Read diversity factor, load factor, Reserve capacity factor in depth, with  calculation]

30. Why capacitance is shown as a Shunt element in analysis of transmission line
(a) it is between Conductor & earth, (b) because Admittance is used for  calculation of capacitive reactance
Ans: (a)

31. B-R-Y sequence is followed in three phase system, if phase voltage in  B-phase is Vm sin 100, then the phase voltage in R-phase would be (a) Vm sin  (-20)
Ans:(a)

32. In a particular ckt I = Im Sin (wt -270) and V = Vm Sin wt, then type of ckt  is (a) pure resistive ckt [Ans]

33. In a L-R ckt energy lost = 2000 W, energy conserved = 500W, then what is the  time constant
Ans: time constant = L/R = 0.5

34. In electro-dynamometer A'meter & wattmeter the type of scale is Ans:Non-uniform

35. For the same current carrying capacity corona loss of ACSR will be  \_\_\_\_\_\_\_\_than copper conductor. (a) more, (b) less, (c) equal
Ans:(b)

36. A R-C ckt , supplied with DC, a bulb is connected across the Capacitor, then  what happens to the illumination, if we change the capacitance.
Ans: No change at all

37. Read about surge impendence of over-head and under-ground cable, Surge  impedence formula = sqrt(L/C)

We are not mentioning the options in sequence, and do not think that ans for the  most questions is option (a). Read all options very carefully as all are very  close to each other.

QUANTITATIVE PAPER + PCM paper

1. About 10 quanti questions ( based on Mixture, Work etc. of very easy type)

2. What is GDP ?

3. Vector algebra, codition for Co-planer vector etc.

4. Gravitation, geo-synchronous satellite( it's hight, orbit , radius etc.),  escape velocity, how g (gravitational accln) varies, about gravitational  potential.

5. Basic electricity and Magnetism----Biot-savart law, current carrying  conductor properties.

6. Nuclear physics, Bohr's constant, and Other theories related .

7. Problem based on VIBGYOR , how wave length and frequency is varying.

8. Questions based on Plank's Theory, E =hv

9. V=u + at , V2=u2 + 2as and W = mgh questions based on above theory

10. Faraday's laws of electrolysis, m = Zit

11. Heat conduction problem.

12. Co lour-coding of resistor (BBROYGBVGW)

13. How velocity of light changes in different medium while frequency remain  unchanged.

14. statistics , calculation of mode, co-efficient regression (3-4 Questions)

15. f(x) = Sin x + Cos x, find the maximum value of the function

16. Formulae for parallel plate capacitor and force between plates.