HAL Sample Test Paper 2008

1) the purpose of feedback transformer & diode in complementary commutated inverters is to-

2) in order to obtain static voltage equalization in series connected SCR's connection r made of- (this question repeated) (i.e. 2 times same question Haaa)

3) in phase controlled rectification PF=

4) Why sector winding is used in synchronous motor?

5) A calculation of making current where MVA & KV was given.

6) The o?p voltage e1 & e2 of 2 full-bridge inverters added using o/p transformer. In order to eliminate 5th harmonic from o/p voltage, the phase angle between e1&e2 will be-

7) A single phase fully controlled line commutated ac-dc converter operates as an inverter when-

8) An SCR has half cycle surge current rating of 3000A for 50Hz. One cycle surge current will be. (double of that)

9) When compared to an symmetrical thyristor, the turn off time & reverse blocking voltage of an asymmetrical thyristor will be-

10) A step-up chopper is feed from an 220v dc source to deliver a load voltage of 66o v. If the non conducting time is 100micro-sec then reqd pulse width will be. (get duty cycle only)

11) There were some 5-6 numerical problems which I could not remember totally but they consist of firing angle & power transfer of inverter, SCR. Go llok for that.

12) Relay current setting & Ct ratio was given you have to find out Relay Pick up Current.

13) One question from Dc shunt motor- like a resistance is added of 4.5 ohm in series with arm where rest of arm is 0.5 ohm. Machine is supplied 220v. find out the null current.

14) In aptitude part see through series completion there was a 5-6 no of that.

15) No aptitude questing like avg, %, proff-loss, prob, etc.

17) Why rotor of SCIM is skewed?

19) Good transformer oil contains how much amount of water in ppm?

20) Lightning over voltage create how much volt?

21) K/s(s+1)(s+5) then find out the value of K so that system become stable.

22) There was a question from definition of Nyquist criteria.

23) Standing done up to the frequency range of? (audio)

24) If a square waveform if given to the supply side of a 2wdg transformer its o/p waveform will be-

25) SC test done on transformer because....

26) If a transformer is operating in .8 PF lag & at efficiency of .9, if now P is .8 lead the efficiency will become.

27) Interpoles are connected for?

28) Dielectric strength of air?

29) A alternator is connected to a grid. Now its prime mover is go slow by ½. Change in its exiting current to held in synchronism.

30) Is the strength of capacitor in LPF is increased the op voltage will-

31) The voltage of a generator and an infinite bus are given 0.92, 10 deg & 1.0, 0 deg resp. the generator acts as a –

32) A wave will not experience any reflection when impedance of line is equal to- surge imp

33) Power transmitted is related to system voltage as-

34) Delay creator ckt name (multivibrator name actually)

35) In tachogenerator adjustment is done by-

36) Surge wave is attended by- (C,L,R)

37) there was 10 question related to measurement-

38) Read all electrostatic instrument related question from any competitive exam book.

39) Lowest reading in moving iron meter is-

40) In galvanometer damping is provided by-

41) In electrodynamic meter a battery & a resistance is provide for-

42) Megger is used for-

43) A question like an ac is applied against a moving coil meter it will reads-

44) Rectifier type instrument measureswhat value - (Rms)

45) Advantage of electrostatic instrument is-

46) Creeping occurs because-

47) Why 2 holes are drilled oppositely in disc of energy meter.

48) Energy meter is a _____ type equipment (recording)

49) There was a question related to selection of a voltmeter based on accuracy-

50) Advantage of hay bridge over anderson bridge-

51) Inductance is measured by – (all the 3 bridge name) .

52) Potentiometer is which type of instrument-

53) Which type of motor is used in refrigerator?

54) Reflection coefficient based problem 1

55) Corona's advantage-