

HAL MANAGEMENT TRAINEE 02

HAL Placement Technical Question Papers with answers 2009

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Which type of power plant is more easier to produce electrical power at economical condition?

WHAT HAPPENS IF FUSE IS CONNECTED TO NEUTRAL WIRE.....

why the backwheel of tractor is bigger than frontwheel?

Where is the maximum temperature in refrigeration cycle? a. Between evaporator & compressor. b. At Compressor c. Between compressor and condensor. d. At condensor

Kinetic friction when compared to Static friction is?

The ratio of Emissive to absorption power of heat by a body is equal to heat emitted by a perfect black body. Who said the statement

What is colour of flame if the of Halide Torch detects a refrigerant leakage?

The effect of reheating is

The property of a metal that is determined by the indentation on a metal surface

The amount of thickness of the metal sheet that can be welded by ultrasonic welding is

The amount of carbon present in Cast Iron

Numeric control is used for

The ability to draw wires is called

HOW IMPURITIES IN A METAL CRYSTAL AFFECT THE PROPERTIES OF METAL PARTICULARLY ELECTRICAL ONES? GIVE BASIC REASON?

The boiling point of carbondioxide is?

The pattern material used in Investment casting Process is?

what is the distance b/w EHV lines? 1. 8m 2. 11m 3. 4m 4. 14m

What is the composition of Cast Iron ?

What is the reasonable voltage between Neutral & Earth of an electrical system for good earthing?

what is the difference between UPS & Inverter

What is the min. & max distance between two earth spikes is required for measuring earth resistance of an earth pit? Is the manufacturer of Earth tester decides this? Pls

explain.

What are the solutions for avoiding sulfide formation at bimetallic (Copper & Aluminium) overhead joints?

Why the generating station rating is in KW though the rating of generators in KVA?

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-

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 e_1 & e_2 of 2 full-bridge inverters added using o/p transformer. In

order to eliminate 5th harmonic from o/p voltage, the phase angle between e_1 & e_2 will be-

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- 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 660 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 Ilok 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.
- 16) Sentence correction 2-3.
- 17) Why rotor of SCIM is skewed?
- 18) Magnetostriction increases
- 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 $\frac{1}{2}$. 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 measures what 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-
 1. Air Fuel ratio in a jet engine will be of the order of:
 - (a) 10:1 (b) 15:1
 - (c) 20:1 (d) 60:1
 2. Fighter bombers use following type of engine:
 - (a) Turbo-jet (b) Turbo-propeller
 - (c) Rocket (d) Ram-jet
 3. Least shrinkage allowance is provided in the case of following:
 - (a) Brass (b) Aluminum
 - (c) Cast Iron (d) Steel
 4. If V is the volume of metal in a casting and A its surface area, the time of solidification will be proportional to:
 - (a) V, 1/A (b) V, 1/A²
 - (c) V², 1/A (d) V², 1/A²
 5. Fire tube boilers are limited to a maximum design working pressure of :
 - (a) 1 kg/cm² (b) 6 kg/cm²
 - (c) 17 kg/cm² (d) 100 kg/cm²
 6. A dislocation represented by T is called:
 - (a) Positive edge dislocation
 - (b) Negative edge dislocation
 - (c) Positive screw dislocation
 - (d) Negative screw dislocation
 7. The recrystallisation temperature of a cold worked material decreases with:
 - (a) Increase in the degree of deformation
 - (b) Increase in the initial grain size
 - (c) Increase in the temperature of cold working
 - (d) The presence of impurity
 8. In a thyristor full converter feeding a continuous load current, what is the duration each thyristor conducts in a cycle?
 - (a) 60° (b) 90°

(c) 120 0 (d) 180 0

9. In a three-phase induction motor, the rotor field runs at the following speed with

Respect to the stator structure:

- (a) At synchronous speed in the direction of stator field
- (b) At a slip speed in the direction of stator speed
- (c) At synchronous speed in a direction opposite to that of stator field
- (d) At zero speed

10. In the hybrid parameter model of a transistor reverse transfer voltage ratio and forward transfer

current ratio are respectively given by:

- (a) h_{11} and h_{21} (b) h_{12} and h_{11}
- (c) h_{21} and h_{11} (d) None of these

11. A Signal $x(t)$ has the Fourier transform

$X(\omega) = \begin{cases} 1 & \text{for } |\omega| < W \\ 0 & \text{otherwise} \end{cases}$. Its first zero-crossing in time domain occurs at: 0

otherwise (a) $1/pW$ (b) W (c) p/W (d) None of these 12. Magnetic tapes are suitable to applications: (a) When only a few records are to be accessed (b) When most of the records are to be accessed (c) Only when all the records are to be processed (d)

None of the above 13. A system in which 2 or more cpu's are interconnected and share a common Main memory is called: (a) Pipeline machine (b) Multifunctional system (c) Multiprocessor (d) None of these