HAL Sample Test Paper 2

1. When length of a wire increases its resistance

a. doubles   b. half   c. remains same

Ans: (a)

2. When a 50 Hz ,6-pole Induction Motor runs at 975rpm,the rotor emf frequency is

     a. 12.5Hz   b. 1.25Hz   c. 4Hz

     Ans: (b)

3. When a 6 pole 50Hz Induction Motor runs at 1450 rpm , it's working mode is

     a. motoring   b. braking   c. generating

     Ans: (a)

4. Slips for Different modes of operation of Induction Motor are

     answer: motoring -$0<S<1$,generating- $S<0$,braking - $S>1$

    5. Damping ratio (ξ) is 0.75, natural frequency is 12 rad/s are given & asked to find peak time

    6. In electrodynamo-meter type wattmeter

a.   pressure coil is made fixed

b.   current coil is made fixed

c.   both the coils are made fixed

Ans: (a)

    7. In flux meter control torque is produced by

a.   weights attached to it.

b.   Springs

c.   No control torque is there

Ans: (c)

    8. One question regarding hot wire instrument

    9. In MI meters deflecting torque is proportional to

a.   square of the current

b.   square of the voltage

Ans: (a)

    10.In 3-Φ system total power is given by

a.   √3VLILcos Φ

b.   3VLILcos Φ

c.   VLILcos Φ

Ans: (a)

11. From supply one 3-Φ step-down transformer is drawing 10 A, the secondary current will be minimum when the transformer is

a.   star-delta

b.   delta-star

c.   delta-delta

d.   star-star

Ans: (b)

12. Transformer rating is expressed in

a.   KVA

b.   KVAR

c.   KW

Ans: (a)

13. Manganin is a

a.   Insulator

b.   Semi-conductor

c.   Alloy

14. Dual scope oscilloscope has

a.   two separate horizontal and two separate vertical plates

b.   one horizontal and two separate vertical plates

c.   two separate horizontal and one vertical plates

d.   one horizontal and one vertical plates

15. Standard Cell voltage is measured by

a.   MI meter

b.   MC meter

c.   Potentiometer

16. The input resistance of the CRO is of the order of

a.   tens of ohm

b.   mega ohm

c.   kilo ohm

d.   fraction of an ohm

Ans: (b)

17. Errors are introduced in Wheatstone bridge due to

a.   lead resistance
b.   contact resistance
c.   some thing is given
d.   all of the above

18. HRC fuse and circuit-breaker combination is used CB operates for

a.   low over-load currents
b.   high over-load currents
c.   combination is never used

19. $G(s) = K / s(s+5)(s+1)$ is given to find the value of K for stable operation

20. By increasing gain of the system root locus will

a.   moves away from poles
b.   moves away from zeros
c.   crosses imaginary axis

Ans: (a)

21. When the load current is high while measuring power using wattmeter

a.   current coil is connected near load
b.   pressure coil is connected near load

22. $C = 0.01 \mu F$ and $L = 1$ mH and current is 10 A and asked to find the voltage drop

23. Transmission line is terminated by R and no reflection is there , then the value of R is
     _____

Ans: 400 ohm

24. One question regarding shunt ohm-meter and seriea ohm-meter

25. Inverted V curves are drawn between _____

Ans: field current   Vs   power factor