

## Taldeco Maintenance Test Electrical

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1. Clutches on machinery provide for disengaging and sometimes allows for
  - A. Positive drive
  - B. Misalignment
  - C. Slippage
  - D. Variable speed
2. An overload torque limiter will most likely cause
  - A. The motor to kick out
  - B. A bent shaft
  - C. Increased motor torque
  - D. Slippage
3. In what kind of a properly lubricated bearing is there no metal to metal contact while the shaft is rotating?
  - A. Needle bearing
  - B. Ball bearing
  - C. Journal bearing
  - D. Roller bearing
4. The major conditions that determine which lubricant should be used are load, temperature, and
  - A. Speed of moving parts
  - B. The type of motion involved
  - C. How often the machine is used
  - D. What the machine is used for
5. What causes the current to decrease as an induction motor accelerates?
  - A. Internal resistance
  - B. External resistance

## Taldeco Maintenance Test Electrical

C. Stator winding

D. Counter EMF

6. How many main line contractor assemblies are used in the across-the-line reversing motor control?

A. 1

B. 2

C. 3

D. 4

7. The main contacts of a reversing starter are so connected that the two lines wires feeding the motor are

A. Open when forward contacts close

B. Interchanged when reversed contacts close

C. Shorted for plugging

D. Closed for jogging

8. Electrical contacts in a thermostat must be small, and therefore they can't handle the supply of current to a motor. The heavier current would be controlled through a

A. Transformer

B. Relay

C. Shunt

D. Switch

9. ADC motor makes a ticking sound that corresponds with a discolored bar rotating under the brushes, the problem is most likely

A. An open commutator bar connection

B. A bearing ready to fail

C. Poor coupling alignment

## Taldeco Maintenance Test Electrical

D. The brush rigging not on electrical neutral

10. Dynamic braking is used to

A. Regulate the speed of a motor

B. Mechanically slow the motor down

C. Electrically retard or stop a motor

D. De rate a motors horsepower

11. When a transistor is used as an amplifier, increasing base current will cause an increase in

A. Collector current only

B. Emitter current only

C. Leakage current

D. Collector and emitter current

12. If a programmable controller controls the operation of a motor, what connects the motor control to the PC?

A. RS232 cable

B. Line voltage

C. I/O device

D. Modem

13. Logic functions are a means of expressing pre-determined operations by the use of

A. Mechanical relays

B. Direct transmittal

C. Electrical signals

D. Servomechanisms

14. In digital electronics, the input of AND gate will be either logic state 1 or 0. If DC Positive logic is used for the logic states, what voltage would you expect to read on an input that is logic state 1 in a 5 VDC system?

## Taldeco Maintenance Test Electrical

A. 0 VDC

B. +5 VDC

C. -5 VDC

D. 10 VDC

15. Which of the following is a typical analog signal

A. Constant voltage

B. Constant current

C. Tri-state signal

D. Continuously varying signal

16. When a transistor is used in a common emitter configuration as a relay driver, the relay energizes when the

A. Base-emitter is reverse biased

B. collector-emitter is forward biased

C. Base-emitter is forward biased

D. Base-collector is forward biased

17. Zener diodes are used most often in

A. Amplifier circuits

B. Flip-flop circuits

C. Oscillator circuits

D. Voltage regulator circuits

18. Short circuits in any system are always accompanied by a sudden

A. Voltage decrease

B. Current decrease

C. Voltage increase

D. Resistance increase

## Taldeco Maintenance Test Electrical

19. Which of the following input operations requires a conversion to digital form prior to input

- A. Disc
- B. Analog
- C. Contact closures
- D. Limit switches

20. An "infinite" (10 megohms or more) on a solenoid value shows

- A. A good solenoid
- B. A grounded solenoid
- C. An open solenoid
- D. A short circuited solenoid

21. If you had a flow transmitter that had a 4-20 mA mode output and a recorder that only accepted a 1 to 5 VDC input, what size resistor would you use on the input of the recorder to accommodate the mA signal

- A. 25 ohms
- B. 40 ohms
- C. 250 ohms
- D. 400 ohms

22. The primary function of a parity bit in programming a programmable controller or computer is to

- A. Change a group of bits to an even number
- B. Shorten a memory sequence
- C. Check the accuracy of digital signals
- D. Enlarge chip storage space

23. What is the most harmful to the human body?

- A. Current
- B. High Voltage

## Taldeco Maintenance Test Electrical

C. High Resistance

D. Reactance

24. Because of the manner in which a voltmeter is used, it must have

A. Low resistance

B. High resistance

C. A multiplier

D. A movement that indicates plus and minus values

25. To properly turn off an SCR once it is conducting

A. Remove the gate signal to turn it off

B. Use a high speed contractor in series with the anode

C. Reverse bias the anode with respect to the cathode

D. Reverse bias the gate with respect to the cathode

26. To increase the PIV (Peak Inverse Voltage) ability of an SCR circuit (power rectifier)

A. Connect two SCR's in series

B. Increase the snubber capacitor value

C. Decrease the snubber resistor

D. Parallel to anode inductive reactances

27. The frequency of a half-wave rectifier is

A. Half the AC input frequency

B. Twice the AC input frequency

C. The same as the input frequency

D. Not related to the input frequency

28. If the insulation resistance reading shows a sudden drop, it indicates

A. Tests are being made at wrong points

B. Incorrect voltage used for testing

## Taldeco Maintenance Test Electrical

C. Routine inspections are needed

D. Developing trouble

29. The effective value of AC voltage and current is also known as the

A. RMS value

B. IMS value

C. Equivalent value

D. Average value

30. Total opposition to current flow in an AC circuit is expressed as the

A. Amperes

B. Flux density

C. Reaction

D. Impedance

31. If the current is 35 amperes and resistance is 7 ohms, what is the voltage?

A. 20 volts

B. 5 volts

C. 42 volts

D. 245 volts

32. A single-phase transformer circuit feeds a motor and lighting load of 50 kilowatts. At a power factor of .8, the KVA rating of the step down transformer would be

A. 50 KVA

B. 62.5 KVA

C. 40 KVA

D. .016

33. Which of the following can be used to control panel wiring connections between remote and internal controls?

## Taldeco Maintenance Test Electrical

A. CU-AL connectors

B. Spiral lacing

C. Wiring ducts

D. Terminal blocks

34. According to the electron theory, a flow of current is a movement of

A. Protons from atom to atom

B. Electrons from atom to atom

C. The nucleus around the atom

D. Molecules within an atom

35. In power transmission, a transformer is used to raise the voltage on the sending and lower the voltage on the receiving end in order to decrease

A. Corona loss at towers

B. Insulator lengths on units

C. Eddy currents in breakers

D. Wire size of power lines

36. In piping installations, use reducers instead of bushings because they

A. Are stronger than bushings

B. Are cheaper than bushings

C. Offer less resistance to flow than bushings

D. Require less space than bushings

37. What is the objective of troubleshooting a machine?

A. Overhaul the machine

B. Conduct planned maintenance

C. Lubricate the cause of failure

D. Eliminate the cause of failure