Taldeco Maintenance Technician Test (100 questions)

1. Shutting the fluid discharge of an air operated reciprocating pump will cause the pump to

    A. Reverse direction

    B. Stall

    C. Lift the relief valve

    D. Overstroke

2. Pressure on a confined fluid is

    A. Higher at the inlet

    B. Distributed equally in the fluid

    C. Lower than inlet pressure

    D. Higher than inlet pressure

3. Which best describes the piston surface area of a single rod, double acting piston

    A. Spring loaded

    B. Unequal

    C. Equal

    D. Balanced

4. The speed of a piston is determined by the

    A. Amount of metered outlet air

    B. Size of piston

    C. Size of the solenoid valve

    D. Limit switch

5. Peak hydraulic system demands may be met by the use of

    A. An Accumulator

    B. A dual system

    C. A large reservoir

D. An oversize pump

6. A 40% pressure drop across an oil filter screen indicates that the

A. Screen is broken

B. Line pressure is to low

C. Screen is dirty

D. Line pressure is too high

7. Install an air lubricator in a pneumatic system

A. Before the separator

B. After the regulator

C. Before the regulator

D. After the separator but before the regulator

8. Post heating welded metals

A. Eliminates adhesions

B. Prevents oxidation

C. Provides more ductility

D. Avoid stresses from quick cooling

9. Before opening the tank valve on an oxygen cylinder which is connected to an oxy-fuel cutting torch, you should turn the diaphragm screw

A. All the way out

B. 1/2 way out

C. 2/3 way out

D. All the way in

10. The primary purpose of peening is

A. Condition the surface for further welding

B. Relieve stresses

C. Clean the scale from the weld

D. Eliminate pores

11. The first pass in a bevel pipe weld is called the

A. Root pass

B. Included pass

C. Lap pass

D. Tack pass

12. An advantage of brazing over welding is that with brazing

A. Dissimilar metals can be attached

B. A hotter flame may be used

C. No flux is used

D. The fusion is better

13. To lift a heavy load without tipping, fasten the hoist

A. Above the center of gravity

B. In the middle

C. At one end

D. Under its center of gravity

14. Warpage due to welding can be reduced by

A. Increasing the amperage

B. Welding with reverse polarity

C. Increasing the size of the electrode

D. Skip or step welding

15. To arc weld on the structural steel frame of an overhead crane equipped with anti-fraction bearings, clamp the ground to

A. The rail pf the crane runway

B. The structural member on which you are welding

C. Any nearby steel part of the truck assembly that will carry the ground

16. The point at which a pry bar pivots are called it's

    A. Lever

    B. Fulcrum

    C. Pinch point

    D. Hinge Point

17. Fluid clutches are used on equipment that is subjected to

    A. Shock loading

    B. Misalignment

    C. Frequent stopping

    D. Continuous running

18. Clutches on machinery provide for disengaging and sometimes allows for

    A. Positive drive

    B. Misalignment

    C. Slippage

    D. Variable speed

19. An overload torque limiter will most likely cause

    A. The motor to kick out

    B. A bent shaft

    C. Increased motor toque

    D. Slippage

20. 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

21. What is the most important use of oil film lubrication?

A. Separate moving surfaces

B. Prevent corrosion

C. Increase pressure

D. Increase friction

22. An EP grease would be best suited for which of the following

A. High speed, low pressure

B. High speed, low temperature

C. Low speed, low pressure

D. Low speed, high pressure

23. If a 20-tooth sprocket turns at a speed of 10 RPM, how many RPM will a 10-tooth sprocket turn when driven by the same chain?

A. 100

B. 20

C. 10

D. 5

24. When air is compressed, it's temperature

A. Increases

B. Decreases

C. And volume decrease

D. And volume increase

25. What information is needed to calculate the force that a hydraulic cylinder can exert?

A. Diameter of inlet pipe

B. Piston stroke

C. Flow rate

D. Hydraulic pressure (PSI)

26. Safe operating speed for a grinding wheel is

    A. Material being ground

    B. Ambient temperature

    C. Maximum RPM of the grinder

    D. Size of the grinding wheel

27. 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

28. Which of the following tools should be used to check shaft or coupling alignment?

    A. Transit

    B. Calipers

    C. Micrometers

    D. Straightedge and thickness gauge

29. A positive displacement pump is a pump that

    A. Has positive, unlimited suction capabilities

    B. Discharges an equal amount of fluid each cycle

    C. Permits positive control over discharge pressures

    D. Is suitable only for pumping hydraulic fluids

30. In a centrifugal pump, "cavitation" can result in

    A. A slight increase in discharge pressure

    B. A general improvement in pump performance

    C. A reduction in pump net positive suction head requirements

    D. Pitting of the impeller

31. The frequency of operation of a steam trap is governed by

A. An automatic timing device

B. The amount of condensate formed in the line

C. The steam pressure in the line

D. The size of the steam line

32. A pipe fitting which has both internal and external threads is the

A. Union

B. Bushing

C. Reducer

D. Coupling

33. Which pipe below would have the thickest wall?

A. Schedule 20

B. Schedule 40

C. Schedule 80

D. Schedule 120

34. Which is a quick opening value?

A. Needle

B. Ball

C. Globe

D. Gate

35. A pilot flame detector can be a

A. Solenoid

B. Flame rod

C. Regulator

D. Pressure gauge

36. If a burner were functioning properly and set "rich" which one of the following would not be present in an exhaust analysis?

    A. H2

    B. C02

    C. 02

    D. N2

37. The quantity of heat necessary to raise one pound of water one degree Fahrenheit is

    A. A calorie

    B. A BTU

    C. A Therm

    D. Celsius

38. What causes the current to decrease as an induction motor accelerates?

    A. Internal resistance

    B. External resistance

    C. Stator winding

    D. Counter EMF

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

    A. 1

    B. 2

    C. 3

    D. 4

40. 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

41. 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

42. 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

D. The brush rigging not on electrical neutral

43. 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

44. The core material in a DC relay consists of

A. A coil of copper wire

B. A permanent magnet

C. Soft iron

D. Laminated plastic

45. What is the purpose of connecting a diode across a DC-operated relay coil?

A. To eliminate relay chatter

B. To increase relay magnetic pull

C. To maintain constant Dc drop across the relay

D. To soak up inductive kick

46. If the primary coil of a transformer has more turns than the secondary, it is a

A. Step-down transformer

B. Step-up transformer

C. Variable transformer

D. Fixed transformer

47. 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

48. 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/0 device

D. Modem

49. 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

50. 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?

A. 0 VDC

B. +5 VDC

C. -5 VDC

D. 10 VDC

51. Which of the following is a typical analog signal

A. Constant voltage

B. Constant current

C. Tri-state signal

D. Continuously varying signal

52. 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

53. Zener diodes are used most often in

A. Amplifier circuits

B. Flip-flop circuits

C. Oscillator circuits

D. Voltage regulator circuits

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

A. Voltage decrease

B. Current decrease

C. Voltage increase

D. Resistance increase

55. 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

56. 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

57. 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

58. The type of electronic stage that isolates the stages inside a microprocessor from the outside the microprocessor is the

A. Buffer

B. Bus

C. Ram

D. Rom

59. 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

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

A. Current

B. High Voltage

C. High Resistance

D. Reactance

61. 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

62. 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

63. 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 reactance

64. 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

65. 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

C. Routine inspections are needed

D. Developing trouble

66. 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

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

A. Amperes

B. Flux density

C. Reaction

D. Impedance

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

A. 20 colts

B. 5 volts

C. 42 volts

D. 245 volts

69. 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

70. What is the purpose of offsets in conduit?

A. Increase conduit strength

B. Reduce weight of conduit

C. Relive stress in conduit

D. Shift the position of the run

71. A transducer will

A. Open an oil circuit breaker when a trip signal is present

B. Remove voltage spikes on a transmission line

C. Provide lightning protection

D. Provide feedback

72. The purpose of an arc chute over a contactor on a panel board is to

A. Keep the dirt away from the contactor

B. Keep the contactor aligned

C. Protect your eyes

D. Help extinguish the electric arc

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

A. CU-AL connectors

B. Spiral lacing

C. Wiring ducts

D. Terminal blocks

74. 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

75. To prevent injury while working on a current transformer, the secondary winding must be

A. Open

B. Connected

C. Short-circuited

D. Insulated

76. 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

77. The start button in a motor control circuit is released. The motor starter contacts open or the coil does not remain energized. The trouble is likely to be in the

A. Stop switch contacts

B. Overload resets

C. Holding contact circuit

D. Motor starter coil

78. Before using your multimeter you should always

A. Turn to lowest setting for voltage

B. Turn to mid-range setting for voltage

C. Turn to highest setting for voltage

D. Put next higher amp fuse in meter

79. A section of PVC pipe and a section of stainless-steel pipe should be joined by

A. Nylon fittings

B. Electrical welding

C. Glued couplings

D. Flanging

80. The term for a metal that contains iron is

A. Nonferrous

B. Ferrous

C. Wrought

D. Alloy

81. The purpose for supports for piping is to

A. Maintain line pressure

B. Prevent sagging

C. Prevent corrosion

D. Allow cleaning

82. What type of value should be used for a shut-off on a main steam line?

A. Check

B. Reducing

C. Globe

D. Gate

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

A. Are stronger than bushings

B. Are cheaper then bushings

C. Offer less resistance to flow than bushings

D. Require less space than bushings

84. What type of valve would be used to shut off a line?

A. Stop value

B. Relief value

C. safety value

D. Back-pressure value

85. When working on frozen water pipes one should

A. Work from an open faucet towards the frozen area

B. Work from the frozen area towards a closed faucet

C. Heat pipes until they begin to turn red

D. Heat pipes as quickly as possible

86. Which of the following types of plastic pipe is suitable for both hot and cold water piping?

A. PVC

B. CPVC

C. ABS

D. MVL

87. Air supplied to a burner for combustion reaction is

A. Combustion Air

B. Tertiary air

C. Pilot air

D. Compressed air

88. What are the four parts of a simple mechanical refrigeration system?

A. Compressor, condenser, expansion valve, evaporator

B. Compressor, receiver, expansion valve, high side float

C. Compressor, condenser, expansion valve, purge valve

D. Compressor, low side float, high side float, expansion valve

89. What is sensible heat?

A. Heat above 212 degrees F

B. Heat that can be felt

C. Heat just above freezing

D. Heat measurements taken in a sensible manner

90. When working with an ammonia system, you should NOT use

A. Schedule 80 pipe

B. Steel pipe

C. High pressure seamless pipe

D. Copper or brass fittings

91. The best material for soldering refrigeration tubing is

A. 50-50 solder

B. 60-40 solder

C. Silver solder

D. 100% tin solder

92. In a refrigerant system, the refrigerant leaves the compressor through the

A. Discharge line

B. Liquid line

C. Suction line

D. Supply line

93. Slugging is caused by what substance in a compressor?

A. Dirt

B. Liquid

C. Vapor

D. Coolant

94. In a refrigeration system, the purpose of the evaporator is to

A. Pump refrigerant

B. Absorb heat

C. Reject heat

D. Control refrigerant

95. How is the efficiency of refrigeration equipment affected by humidity?

A. Improved dramatically

B. Improved lightly

C. Unchanged

D. Adversely affected

96. 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

97. What is the first thing to do when there is a breakdown?

A. Find the reason for the breakdown

B. Repair the breakdown

C. Locate the breakdown

D. Eliminate the reason for the breakdown

98. Most portable electric power tools

A. Should be grounded

B. Do not have to be grounded

C. Must be operated from a 100 volt supply

D. Must be operated from a 250 volt supply

99. When cutting tubing with a hacksaw, use a blade with

A. Different size teeth

B. Coarse teeth

C. Fine teeth

D. Reversed teeth

100. what should be done with a steel hammer with a chipped head?

A. Repair it by welding and grinding to shape

B. Discard it and replace it with a new tool

C. Continue to use it

D. Replace the handle