IASC SSC Questions for Calibration Technician (Thermal)

Candidate Name: _____________________________________

Date: _______________ Start Time : _______________End Time : _______________

Post applied for: _____________________________________

Sector: Instrumentation Automation Surveillance & Communication
Sub-Sector: Instrumentation
Occupation: Testing & Calibration
Ref ID: IAS/Q5001

List of NOS involved:
1. IAS/N 0200 Work Place Readiness - Calibration
2. IAS/N 0201 Calibration of Thermocouple
3. IAS/N 0202 Calibration of RTD
4. IAS/N 0203 Calibration of Infrared / Noncontact Temperature Detector
5. IAS/N 0204 Task Reporting-Calibration
6. IAS/N 0205 Preventive Maintenance-Thermal Calibration
7. IAS/N 2105 Work Effectively With Teams

IAS/N 0200 Work Place Readiness - Calibration

Q1. Why we need a cleanliness of work place
A. Clean, dry floors to prevent slips and falls.
B. Green cleaning products are safer for both your employees and the environment.
C. Both
D. None

Q2. If natural light is used as the principal means of illumination at workspace, windows area needs to be equal to ___ percent of floor area.
A. 20
B. 30
C. 40
D. 50

Q3. The working area should be illuminated _______ their surroundings.
A. More than
B. Less than
C. Equal to
D. Depends upon type of job performed
Q3. A hazard is....

A. The likelihood of a substance person, activity or process to cause harm
B. The probability of a substance person, activity or process to cause harm.
C. The potential of a substance person, activity or process to cause harm
D. All of above

Q4. Name three items of person protective equipment required when entering a laboratory?

A. Safety boots, Respirator, Ear plugs
B. Coveralls, welding gloves, face visor
C. Lab coat, safety glasses, enclosed footwear
D. Ear defenders, Chain mail gloves, Hard hat

Q5. Which type of lighting used in calibration laboratory

A. flood light
B. straight light
C. 2X@ panel
D. All

Q6. What is lux level required working place of calibration laboratory

A. 2500k
B. 4500k
C. 5500k
D. All

Q7. Why we used earthing & insulation of electrical panel & other related equipment?

A. safe short circuit
B. only protection human being
C. Both A and B
D. None
Q8. What is correct lifting position?

A. A position  
B. B position  
C. Both  
D. None

Q9. Why do we need a proper working place with standing and sitting positions?

A. Easily up and down without any pain & fast work  
B. Easily protection our body hazardous area  
C. Both  
D. None

Q10. What is proper light needed for hydraulic laboratory work place systems?

A. Strait light  
B. Flood light  
C. Both  
D. None

Q11. What is impossible for gloves to protect against?

A. Cold or heat.  
B. Turning parts.  
C. Hazardous substances.  
D. All

Q12. Which type of fire extinguisher is used for electrical short circuit?

A. Co2  
B. Water fire extinguisher  
C. Both  
D. None
Q13. Power form fire extinguisher which application we used?
C. Both   D. None

Q14. Foam type fire extinguisher which application we used?
A. Wood, paper, straw, Coal   B. Computers, Stereos, Fuse boxes
C. Petrol, Diesel, Oils, Paint Paraffin   D. Both A & C

Q15. Co2 type fire extinguisher which application we used?
A. Petrol, oils, Diesel,Paint   B. Wood, paper, coal
C. Both   D. None

Q16. Water type fire extinguisher which application we used?
A. Wood, paper, Strew, Textiles, Coal   B. Petrol, oils, Diesel,Paint
C. Both   D. None

Q17. Wet chemical type fire extinguisher which application we used?
A. Cooking Oil, Fats, Grease   B. Wood, Paper, Straw, Textiles, Coal
C. Petrol, Diesel, Oils, Paint Paraffin   D. Both A & B

Q18. Electrical burns can be caused by household current, certain batteries, and lightning. What should be done first after a person has an electrical burn?
A. Put ice on the area of contact
B. Cover the burned area with a blanket
C. Be sure the person is not in contact with the electrical source
D. None of the above

Q19. In the case of a chemical burn to the skin, how should the affected area be treated?
A. A. Wash the area with soap
B. Flush the area for at least 20 minutes with cool, running water.
C. Apply an ointment or butter.
D. Cool the area with ice

Q20. What are the main causes of death among people who initially survive a severe burn?
A. Fever.
B. Bacterial infections
C. Severe dehydration
D. B and C
Q21. An employer is responsible for which of the following persons?
   A. Only for the employer’s own personnel.
   B. For everyone at the construction site and for the local residents.
   C. Only for the employer’s own and hired-in personnel.
   D. None

Q22. What is operating temperature of the work area?
   A. 25 Degree to 30 Degree
   B. 15 Degree to 35 Degree
   C. 0 to 10 Degree
   D. All

Q23. What is the basic principles of Thermocouple?
   A. Seeback effect,
   B. Positive temperature co-efficient resistance and SeeBack effect
   C. Negative temperature co-efficient resistance/ Positive temperature co-efficient resistance.
   D. None

Q24. If the thermocouple does not give correct reading, what could be the possible reason:
   A. Not properly calibrated
   B. Properly calibrated but not touching the the fluid
   C. Both
   D. None

Q25. Response of the meter sluggish. What could be the reason:
   A. Air pocket around sensor
   B. Formation of scale
   C. Improper installation
   D. None of the above

Q26. Which are the material used for thermocouple?
   A. Nickel
   B. Gold
   C. Cobalt
   D. All

Q27. Define the thermocouple
   A. Allow of two material
   B. Single material
   C. Both
   D. None

Q28. The characteristics of thermocouple?
   A. Linear
   B. Non linear
   C. Both
   D. None
Q29. What is the basic principles of RTD?
   A. positive temperature co-efficient resistance
   B. Positive temperature co-efficient resistnace/ SeeBack effect
   C. Negative temperature co-efficient resistance/ Positive temperature co-efficient resistance.
   D. Change in resistance with temperature

Q30. Identify type of instrument?
   A. RTD
   B. Thermocouple
   C. RTD/Thermocouple
   D. None

Q31 RTD range for temperature measure?
   A. Low Range
   B. High Range
   C. Both
   D. None

Q32. What is Pt-100.
   A. Platinum 100-ohm resistance
   B. Potential 100-ohm resistance
   C. Precision 100-ohm resistance
   D. All

Q33. Thermistor is a transducer. Its temperature coefficient is
   A. Negative
   B. Positive
   C. Zero
   D. None of these

Q34. Strain gauge is a
   A. Active device and converts mechanical displacement into a change of resistance
   B. Passive device and converts electrical displacement into a change of resistance
   C. Passive device and converts mechanical displacement into a change of resistance
   D. Active device and converts electrical displacement into a change of resistance
Q35. The transducer used for the measurements is/are

A. Resistance temperature detectors
B. Thermistors
C. Ultrasonic
D. All of these

Q36. If at one end, the two wires made of different metals are joined together then a voltage will get produced between the two wires due to difference of temp between the two ends of wires. This effect is observed in

A. Thermocouples
B. Thermistors
C. RTD
D. Ultrasonics

Q37. The greater the pressure difference in throttling, the lesser is the irreversibility.

(A) Yes          (B) No

Q38. All the commercial liquid fuels are derived from natural petroleum (or crude oil).

(A) True          (B) False

Q38. Which of the following is the lightest and most volatile liquid fuel?

(A) Gasoline
(B) Kerosene
(C) Fuel oil
(D) All of these

Q39. Which of the following statement is incorrect?

(A) The liquid fuels consist of hydrocarbons.
(B) The liquid fuels have higher calorific value than solid fuels.
(C) The solid fuels have higher calorific value than liquid fuels.
(D) A good fuel should have low ignition point

Q40. The efficiency of Diesel cycle increases with___________

(A) Decrease in cut-off          (B) Increase in cut-off
(C) Constant cut-off          (D) None of these
Q41. The absolute zero temperature is taken as__________

(A) -273°C  (B) 273°C  
(C) 237°F  (D) -237°F

IAS/N 0203 Calibration of Infrared / Noncontact Temperature Detector

Q42. identify which type of detector?

A. Temperature measuring pyrometer  
B. Velocity measuring instrument  
C. Lux measuring instrument  
D. None

Q43. types of temperature measuring instrument?

A. RTD, thermocouple, Pyrometer  
B. RTD, Thermocouple, Gauge  
C. Both  
D. None

Q44. which principle water flow meter works?

A. Flow measuring principle  
B. Electro- magnetic induction principle.  
C. Fleming left hand rule.  
D. All.

Q45. What is the standard temperature sensor?

A. RTD, thermocouple  
B. RTD, Pyrometer  
C. Thermocouple, Pyrometer  
D. None

Q46. Full From AFR?

A. Air Filter regulator  
B. Air filter regulation  
C. Air force regulator  
D. None

Q47. which instrument Accuracy very high?

A. RTD  
B. Thermocouple  
C. Pyrometer
D. All

Q48. Identify symbol?

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Description</th>
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<tbody>
<tr>
<td>[Diagram]</td>
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A. On-off, control valve  
B. Control valve. On-off valve  
C. Butterfly valve  
D. None

Q49. The radiation pyrometers work on the principle of _____

A. Newton's law  
B. Stefan Boltzmann's law  
C. Zeroth law  
D. None of the above

Q50. Function of transducer is to convert

A. Electrical signal into non electrical quantity  
B. Non electrical quantity into electrical signal  
C. Electrical signal into mechanical quantity  
D. All of these

Q51. Dead weight gauge is used for the measurement of pressure of

A. About 1000 bar  
B. About 2000 bar  
C. About 5000 bar  
D. About 7000 bar

Q52. What is the unit of heat energy?

A. Joules  
B. Watt  
C. Kw  
D. All

Q53. Define heat transfer?

A. Transmission of energy from one region to another due to temperature difference.  
B. Convert one form of energy into another form  
C. Both  
D. None

Q54. The radiation pyrometers work on the principle of _____

A. Newton's law  
B. Stefan Boltzmann's law  
C. Zeroth law  
D. None of the above
Q55. Thermal energy can be transferred by?
   A. conduction only
   B. convection only
   C. conduction and convection
   D. conduction, convection and radiation

Q56. The thermocouple circuit which is used to measure temperature works on ____.
   A. Seebeck effect
   B. Peltier effect
   C. Thomson effect
   D. none of the above

Q57. The most suitable device for measuring very small temperature changes is a
   A. thermopile
   B. thermocouple
   C. thermistor
   D. ALL

Q58. The atomic mass of oxygen is___________
   (A) 12
   (B) 14
   (C) 16
   (D) 32

Q59. There is no change in internal energy in an isothermal process.
   (A) Correct           (B) Incorrect

Q60. Responsiveness of a thermometer refers to
   A. how quickly thermometer can register change in temperature
   B. amount of change in thermometric property for a unit change in temperature
   C. minimum and maximum temperatures that thermometer can measure
   D. None of above

Q61. What device is similar to an RTD but has a negative temperature coefficient?
   A. Strain gauge
   B. Thermistor
   C. Negative-type RTD
   D. Thermocouple

Q62. The output voltage of a typical thermocouple is
   A. less than 100 mV
   B. greater than 1 V
   C. Thermocouples vary resistance, not voltage.
   D. None of the above

Q63. The connections to a thermocouple
   A. Can produce an unwanted thermocouple effect, which must be compensated for
   B. produce an extra desirable thermocouple effect
   C. must be protected, since high voltages are present
Q74. Temperature sensing can be achieved by the use of
   A. thermocouples
   B. RTDs
   C. thermistors
   D. All of the above

IAS/N204 Task reporting-calibration

Q65. How can we work effectively as a team with different stakeholders?
   a. By interaction with team of clients.
   b. By non-cooperative with other members.
   c. By not supporting and guiding team activities.
   d. None of these.

Q66. To work effectively as a team, the team members should have to follow:
   A. Be true to your words.
   B. Built trust and respect
   C. Don’t organize a meeting for all employees.
   D. Only a and b

Q67. Which of the following tool should a team leader use to work effectively in a team?
   A. Team Surveys
   B. Interviews with team members
   C. 360 degree evaluations
   D. All of these

Q68 Effective teams can:
   A. Play politics better than the other teams.
   B. Have more power.
   C. Never need to ask for help.
   D. None of the above

Q69. Innovation in teams is largely dependent on:
   A. The IQ’s of team members.
   B. Personality types in the team.
   C. The team culture.
   D. Having clear rules.
Q70. To motivate team you need to:
A . Know the theories of motivation.
B . Show unconditional trust
C . Challenge the team.
D . Only b and c

Q71. In team decision making, help team members with facts and figures to arrive at workable decisions
A . True
B . False

Q72. ________ is a process by which one person attempts to influence another to accomplish some goal or goals.
A . Motivation
B . Leadership
C . Decision-making
D . E-Training

Q73. A team can only be a team when:
A . People know each other and willingly form a group.
B . The principle of consultative decision-making is applied.
C . They have a leader.
D . Team members are non dependent.

Q74. Which of the following is not the key aspects of any dynamic team are:
A . Personalities of team members.
B . Power games.
C . Leadership.
D . The climate in the team.
IAS/N 0205 Preventive Maintenance-Thermal Calibration

Q75. Maintenance consist of the following action(s)
   A. Replace of component
   B. Repair of component
   C. Service of component
   D. All of the above

Q76. The following is not a classification of maintenance
   A. Corrective maintenance
   B. Timely maintenance
   C. Scheduled maintenance
   D. Preventive maintenance

Q77. Advantage of Preventive maintenance?
   A. Reduction in Breakdown frequency.
   B. Reduction in Wear & Tear of Machines and increase in their life.
   C. Both
   D. None

Q78. What is Preventive maintenance?
   A. Regular maintenance to avoid Breakdown
   B. Repair after Breakdown
   C. Both
   D. None

Q79. What are the preventive checks for RTD.
   A. Wiring connection, RTD probe, and its range
   B. RTD body, place area
   C. Both
   D. None

Q80. What are the preventive checks for thermocouple?
   A. Wiring connection, thermocouple probe, and its range
   B. RTD body, place area
   C. Both
   D. None

Q81. Preventive maintenance schedules should be based on the age and condition of equipment.
   A. True
   B. False

Q82. Preventive maintenance is intended to avoid equipment breakdowns.
   A. True
   B. False
   C. 

Q83. Total productive maintenance involves workers performing preventive maintenance on the equipment they operate.
   A. True
   B. False

Q84. Breakdown maintenance can be a reasonable alternative in certain instances.
   A. True
   B. False
Q85. Breakdown cost and preventive maintenance costs are inversely related.

A. True
B. False

Q86. Which type of maintenance is not directly included in the total maintenance cost, but might be a component of total cost?

A. Preventive
B. Breakdown
C. Predictive
D. None

IAS/N 2105 Work Effectively With Teams

Q87. What pair are method for making team decision?

A. Lack of Response & Unanimity
B. Lack of Response & Minority Rule
C. All Votes are Equal & Recruitment
D. All

Q88. The process of making an expectation a reality.

A. Brainstroming.
B. Problem solving
C. Criteria
D. Goal

Q89. All of the following increase team effectiveness except...

A. Understanding team timing
B. Ignoring ineffective team processes
C. Paying attention to team tasks
D. Developing, using and reinforcing effective group norms

Q90. The type of communication network which is most efficient for simple tasks is the:

A. Wheel
B. Y-chain
C. Circle
D. All Channel

Q91. The Roles and Responsibilities of a team includes:

A. Reinforcing Individualism
B. Taking one’s time
C. Quality Management
D. Assimilating Diversity

Q92. Which of the Following is not a Type of Team?

A. Cross Functional
B. Virtual
C. Problem Solving
D. Individual
Q93. Which of these is a Disadvantage of Teamwork?
A. More ideas may be generated
B. More resources are available
C. More time is taken to perform the tasks
D. More networking opportunities

Q94. Identify 4 of the Five Steps in Team Formation and Development.
A. Storming, Warming, Norming and Performing
B. Forming, Storming, Norming and Performing
C. Storming, Norming, Practicing and Adjourning
D. Starting, Norming, Performing and Adjourning

Q95. What Individual or Group Behaviours might lead to an effective Team?
A. Self Interest verses Group Interest
B. Lack of boundaries
C. ill-defined roles
D. Able to listen to feedback

Q96. To be an effective communicator in a team.
A. Never Praise your team mates
B. Never Judge your team mates
C. Never Listen by yourself
D. Never Respond to your team mates

Q97. It is more effective to focus on task and interpersonal sides of a conflict at the same time.
A. True  B. False

Q98. Which of the following is a way to increase participation?
A. Plan the meetings and share meeting agendas with people beforehand
B. Ask the leader of the group to run the meeting and talk the most.
C. Encourage everyone to talk whenever they have something to say, even if another person is talking
D. Point out dominating behavior to everyone.

Q99. All of the following increase team effectiveness except…
A. Understanding team timing
B. Ignoring ineffective team processes
C. Paying attention to team tasks
D. Developing, using and reinforcing effective group norms
Q100. The number of people exercising minority influence doesn't matter, as long as they are in the minority.

A. True  B. False