EX General Knowledge Quiz

1. What is the ideal application for an EX rated forklift?

    a. EX-rated lift trucks are designed and built to be utilized for any indoor applications to meet their stringent and constant performance requirements.
    b. EX-rated lift trucks are designed and built to be utilized for any indoor or outdoor applications but may see some performance deterioration when used outdoors.
    c. EX-rated lift trucks are designed and built to be utilized for specialized indoor applications, performance will be dictated by adherence to the specialized application the lift-truck was obtained for.
    d. EX-rated lift trucks are designed and built to be utilized for specialized indoor and outdoor applications, performance will be dictated by adherence to the specialized application the lift-truck was obtained for.

2. RICO builds all EX-lift trucks to codes and standards laid out by OSHA 1910.178 (a)(c) as well as ANSI B56.1 & B56.9, but what other recognized standards does RICO use when designing and building an EX rated lift truck?

    a. NFPA 505, UL 583
    b. ASTM, IPC
    c. IMC, UL 583
    d. NFPA 505, NSPC

3. RICO Manufactured EX-lift trucks are tested and approved for use in hazardous environments by a 3rd party nationally recognized testing laboratory named.

    A. Underwriters Laboratories (UL)
    B. Factory Mutual (FM)
    C. NSF International (NSF)
    D. Intertek Testing Services NA, Inc (ITSNA)

4. EX-Lift trucks built by RICO are tested, approved, and recognized by Factory Mutual (FM) as a complete _____.

    a. Component
    b. Device
    c. System

d. Element

5. Requested changes to an EX-rated lift trucks design must be approved by:

    a. Authority Having Jurisdiction (AHJ)
    b. Factory Mutual
    c. Factory Mutual & RICO Manufacturing Inc.
    d. OSHA

6. Customers, Dealers, and OEM's do not have the authority to rate a hazardous environment. This authority belongs to:

    a. Factory Mutual (FM)
    b. OSHA
    c. Customers Safety Team
    d. Authority Having Jurisdiction (AHJ)

7. RICO manufactured EX trucks are built to operate in Class 1, Divisions 1 & 2, Group D and Class 2, Divisions 1 & 2, Group G. Which of these divisions is considered more hazardous?

    a. Division 1
    b. Division 2
    c. Both are equally hazardous
    d. Neither are considered hazardous

8. _____ are used to house components that have a high energy potential such as contactors, controllers, motors, and others to prevent any arcing or sparks from reaching the hazardous environment.

    a. Conduits
    b. Operator Cabin
    c. Enclosures
    d. Battery Compartment

9. Static discharge is crucial to prevent an EX-rated lift truck from being a potential source of ignition when operating in a hazardous environment. What components does RICO use to allow static discharge from the chassis to ground?

a. Static Straps and Chains
b. Static Conductive Fenders
c. Static Conductive Forks and Carriage
d. Static Conductive Wheels and Belts

10. All EX-rated lift trucks come with spark protection components made from materials such as aluminum, brass, and bronze. Where are these protections typically placed?

    a. Undercarriage
    b. Exposed Metal Perimeter
    c. Axles, Linkages, Pins
    d. Enclousres

11. Enclosures and conduits utilize flame paths to help prevent ignition of hazardous atmospheres during the event of an internal explosion. There are two types of flame paths: Joint Surface Flame Paths and Threaded Flame Paths. What is a flame path?

    a. Piping from enclosure routed through the truck to allow a path for gases and pressure to cool and escape during an internal explosion.
    b. Distance between the components housed in an enclosure and the enclosure wall.
    c. Clearance between two surfaces creates a path for gases or pressure to cool and escape during an internal explosion.
    d. A small hole in top of the enclosure to allow flames or internal explosions to be immediately expelled from enclosure to help prevent component damage.

12. How should batteries for EX-rated forklifts batteries be charged?

    a. Should be placed on designated EX battery charger at correct settings within designated area in which the truck typically operates in.
    b. Should be placed on designated battery charger at correct settings within designated area in which the truck typically operates in.
    c. Should be placed on designated EX battery charger at correct settings in designated area outside of area in which truck normally operates.
    d. Should be placed on designated standard battery charger at correct settings in designated area outside of area in which truck normally operates.

13. _____ is an electrical design approach that prevents explosions from occurring by ensuring that the energy is transferred to a hazardous area is well below the energy required to initiate an explosion.

    a. Dielectric Safety
    b. Non-Incendive Safety
    c. Functional Safety
    d. Intrinsic Safety

14. Which of the devices below would be considered an intrinsically safe device?

    a. Contactor
    b. Key Switch
    c. Motor
    d. Relay

15. What are intrinsically safe signals designed to control?

    a. Sends intrinsically safe signals to typically considered hazardous components to power them with ease of mind there will be no arcing or other potential hazards presented.
    b. Controls switching of high potential signals and power running throughout the electrical system that must be contained to enclosures and is non-suitable for exposed routing to controls.
    c. Controls switching of high potential signals and power that is exposed throughout the truck going to various components such as relays and motors.
    d. Controls switching of low potential signals and power running throughout the electrical system that must be contained to enclosures and is non-suitable for exposed routing to controls.

16. Which one of the below scenarios negatively impacts the EX-rating of an EX-rated lift truck?
    a. Using the Same Static Conductive Tires for 6 Months.
    b. Failed Contactor within Enclosure.
    c. Brass Damaged/Missing from Bottom of Forks
    d. Loose Bolt on Aluminum Rub Rail.

17. Some components on a EX-rated forklift cannot be repaired, and if a failure should occur the component or assembly itself must be replaced to ensure that the replacement is EX-rating compliant. Identify the components below that must be replaced in its entirety if it fails or is damaged.

    a. Conduits / Wireways
    b. Brass Coated Forks
    c. Enclosures
    d. All of the above.