

Demo PDF file. This file includes questions: 10 from 160. Full version of file looks the same as demo, but full version includes all questions. You may download file with all questions by link on bottom of this page

Q432 - OIM: Surface Units Underway

1. Why is electrical power preferred over mechanical power for driving heavy machinery on drilling rigs?

- Less maintenance
- Lighter
- **More flexible**
- More fuel efficient

Note:

Electrical power is preferred on drilling rigs due to its greater flexibility in equipment placement and control compared to mechanical power transmission.

2. Between the side frames on a MODU, support for the deck beams is provided by _____.

- brackets
- web frames
- deck stringers
- **stanchions**

Note:

Stanchions provide vertical support for deck beams between side frames on a MODU. Deck beams are transverse members requiring vertical support to prevent deflection under heavy loads, and stanchions fulfill this role by acting as upright pillars between the side frames.

3. On a MODU, the keel is the primary strength member of the lower hull form in which direction?

- vertical
- diagonal
- transverse
- **longitudinal**

Note:

The keel's longitudinal orientation provides primary hull strength, running along the hull's length from bow to stern.

4. Compared to internal structural plating, the exterior hull plating on a MODU is usually _____.

- **stronger**
- thinner
- more corrosion resistant
- a lower grade steel

Note:

Exterior hull plating on a MODU is stronger than internal structural plating to resist sea pressure, wave impact, collision, and abrasion.

5. What class of bulkhead is required around the galley on a MODU?

- **Class A**
- Class B
- Class C
- Class D

Note:

Class A bulkheads are required around galleys on MODUs due to the galley's designation as a high fire-risk service space. Class A bulkheads provide the necessary fire resistance to contain a fire and protect adjacent areas, exceeding the standards of Class B, C, and D divisions.

6. If you observe any situation which presents a safety or pollution hazard during fuel transfer operations on a MODU, what action should you take FIRST?

- Sound the fire alarm.
- **Shut down the transfer operation.**
- Notify the ballast control operator.
- Wait for the person in charge to act.

Note:

Immediately stop the fuel transfer operation if a safety or pollution hazard is observed. This action directly addresses the source of the risk, minimizing potential spills and fire hazards, and aligns with regulatory requirements.

7. Repair of structures on a MODU in the vicinity of liquid mud handling areas presents what possible hazard?

- Liquid muds may flood adjoining spaces.
- Toxic gasses may be present.
- **Flammable gasses may be present.**
- An oxygen-deficient atmosphere may be present.

Note:

Liquid mud systems can release flammable gases that, if ignited by repair work, pose a fire or explosion hazard. Formation hydrocarbons entering the mud stream create gas-cut mud, which can accumulate in mud tanks and pits, especially with inadequate ventilation. Repair activities often involve ignition sources, making flammable gas presence the primary concern in these areas.

8. For H₂S detection, sensitized tapes indicate H₂S presence by means of discoloration of an exposed spot on the tape. The shade of the color on the spot depends upon the concentration of H₂S and which of the following factors?

- **duration of the exposure**
- air pressure at the time of the exposure
- air temperature at the time of the exposure
- humidity at the time of exposure

Note:

The discoloration of sensitized tapes, indicating H₂S presence, is determined by the duration of exposure because the chemical reaction is cumulative over time. This reaction produces a darker spot proportional to the dose of H₂S, which is the product of concentration and exposure time. Air pressure, temperature, and humidity are not primary factors influencing the discoloration.

9. The airborne concentrations of substances (such as hydrogen sulfide) under which nearly all workers may be repeatedly exposed without adverse effects are called _____.

- exposure limits
- concentration limits
- **threshold limit values**
- substance limit values

Note:

Threshold limit values (TLVs) are defined as airborne concentrations to which nearly all workers can be repeatedly exposed without adverse health effects.

TLVs are guidelines established by ACGIH and represent standardized occupational exposure limits, unlike the generic terms 'exposure limits' or 'concentration limits'.

10. Requirements for H2S preparation and equipment usage aboard MODU's in U.S. offshore waters are administered by which of the following organizations?

- **Minerals Management Service**
- American National Standards Institute
- U.S. Coast Guard
- U.S. Corps of Engineers

Note:

The Minerals Management Service (MMS) administered requirements for H2S preparation and equipment usage aboard MODUs on the U.S. Outer Continental Shelf, as it was the Department of the Interior agency responsible for offshore drilling safety.
