Foundation Course on Oil and Gas Exploration and Production and Promoting Sound Environmental Management

Assessment

Name of Participant (please print in block letters):

_____

Circle the correct answer/s, as instructed:

1. Which following activity does not belong to the Oil and Gas Exploration and Production Life Cycle? (hint: only 1 activity does not belong)
    a. Seismic evaluation
    b. Drilling
    c. Well completion
    d. Field management
    e. Communications and public outreach
2. The majority of global energy consumption comes from:
    a. Fossil fuels
    b. Renewable energy
    c. Nuclear energy
3. Which the Sustainable Development Goals are considered relevant for ensuring sustainable development in the oil and gas sector?
    a. Ensure access to water and sanitation for sll (SDG6)
    b. Promote inclusive and sustainable economic growth, employment, and decent work for all (SDG8)
    c. Gender Equality (SDG5)

   d. All of the above

4. Future oil activities are shifting from light oil to heavy oil fields
   a. True
   b. False
5. Fossil fuels are formed from decayed plants and animals that have been converted to crude oil, natural gas, or heavy oils by exposure to heat and pressure in the earth's crust over hundreds of millions of years
   a. True
   b. False
6. For commercial oil/gas production, which four geological elements must be present (hint: there are only 4 correct answers):
   a. Sufficient heat and pressure
   b. Source rock
   c. Reservoir rock
   d. Reservoir trap
   e. Good reservoir quality
7. The quality of reservoir rocks is determined by porosity and permeability
   a. True
   b. False
8. Air surveillance to define prospects/drilling locations can replace seismic surveys
   a. True
   b. False
9. The potential environmental impacts from seismic surveys include noise, damage to habitats, and changes in movement of water (hydrology)
   a. True
   b. False
10. Water-wet rock is more favorable than oil-wet rock

a. True
b. False

11. Natural gas containing H2S is toxic
    a. True
    b. False
12. A blowout preventer (BOP) is used to:
    a. Control the well and prevent a blowout
    b. Control production rates from a well
13. The most common type of drilling fluid used are water-based muds
    a. True
    b. False
14. Discharge of oil-based mud into the marine environment is forbidden under all circumstances
    a. True
    b. False
15. Which key factors drive decisions about what type of drilling fluid is used for a specific well (circle all possible correct answers):
    a. Cost
    b. Technical performance
    c. Environmental impact
16. Barite is added to the drilling mud to add weight to the drilling mud
    a. True
    b. False
17. A gas kick during the drilling operation should be controlled immediately as it could lead to a blowout
    a. True
    b. False

18. In offshore drilling, the riser pipe is used to circulate drill mud and cuttings
    a. True
    b. False
19. In offshore drilling, it is allowed to dispose of the drill cuttings before running the first casing on the seabed
    a. True
    b. False
20. For offshore drilling, oil-based mud is preferred to water-based mud
    a. True
    b. False
21. In offshore operations, under sea/ocean pipelines for fluids transportation is always the most favourable method
    a. True
    b. False
22. Safety for offshore operations is more critical than for on-shore operations
    a. True
    b. False
23. Which is not considered a direct environmental impact from drilling:
    a. Removal of vegetation and topsoil
    b. Changes in surface hydrology
    c. Air pollution from gas flaring
    d. Disturbance to local population and wildlife
24. It is normal to expect production problems in oil and gas wells. Which is the most common well production problem (hint: only 1 answer is correct):
    a. Water production
    b. Scaling
    c. Corrosion

d. Wax build up

25. Production water sometimes contains NORM (Natural Occurring Radioactive Material)
    a. True
    b. False
26. Carbon dioxide, nitrogen oxide, and sulfur dioxide are often emitted (circle all possible correct answers):
    a. From energy production in gas turbines, generators, and diesel engines
    b. From flaring
    c. From well testing
    d. From transport of crude oil and gas
27. Circle which statement is true
    a. Flaring is the practice of burning gas that is deemed uneconomical to collect and sell and is also used to burn gases that would otherwise present a safety problem
    b. During well testing, unlimited gas flaring is allowed
28. Oil and gas storage uses only surface facilities not underground
    a. True
    b. False
29. Which of the following is <u>not</u> used for the transportation of oil and gas:
    a. Pipeline
    b. Air transport
    c. Rail
    d. Trucks
    e. Ship
30. Which of the following must be considered when laying pipelines (circle all possible correct answers):
    a. Benefits for communities living along the pipeline when completed
    b. Establishing a leak detection system

c. Economic cost

31. The Government is responsible for dealing with all oil spills based on the 3-tiered response system
    a. True
    b. False
32. What are 3 key considerations when assessing site contamination? (circle all possible correct answers)
    a. Source of pollution
    b. Pathways or trajectory of pollutants
    c. Receptors of pollution
    d. Cost of clean up efforts