

EXERCISE COMPLETION OPERATIONS 4

1. Which of the following mechanical barriers can be installed by well intervention?
(TWO ANSWERS)
 - a) Float Valve [for cementing]
 - b) Differential Valve [for production]
 - c) Dump Valve
 - d) Wireline Plug
 - e) Pump Through Plug

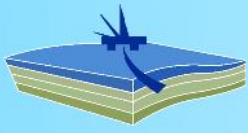
2. To perform a well intervention operation safely, what type of document should be available in which we can find the recommended tasks and precautions to be performed and the responsibilities of personnel on the location or installation?
 - a) Contingency Manual
 - b) Joint Operations Manual
 - c) Regulator HandBook
 - d) Well Interventiona Manual
 - e) Well Control Manual

3. How does a mechanical barrier prevent well flow?
 - a) By closing off the well path
 - b) By closing a Xmas Tree Valve
 - c) By pumping through the Kill Wing
 - d) By creating a small overbalance over well pressure

4. The production well has to be killed by bull heading and this is done before any well intervention operation is taking place. Which of the following can limit the maximum allowable surface pressure? (THREE ANSWERS)
 - a) The existing shut-in WHP
 - b) The burst limit of tubing
 - c) The downhole safety valve operating pressure
 - d) The ID of the tubing string
 - e) The maximum pump speed
 - f) The RATED working pressure of surface equipment
 - g) The fracture or breakdown pressure of the formation

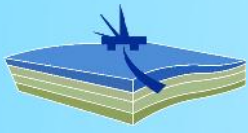
5. While doing well intervention operation, various groups of barriers may be used to control well pressure. What is the common terminology of each barrier group?
 - a) 1st, 2nd and 3rd Generation
 - b) First line, Second line and Third line
 - c) Primary, Secondary and Tertiary
 - d) 1st Class, 2nd Class and 3rd Class





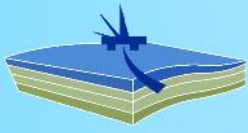
6. Bottom hole pressure is 3,800 psi. Maximum Surface Pressure is 3,050 psi. Select the correct working pressure for well head equipment to be installed.
- a) 3,000 psi
 - b) 5,000 psi
 - c) 2,000 psi
7. Which statements are true regarding Xmas Tree Valves during well intervention operations? (THREE ANSWERS)
- a) The Lower Master Valve is normally not in use
 - b) The Upper Master Valve will seal around wireline
 - c) Valves can get damaged if they are closed on a tool string
 - d) The Upper Master Valve is normally used if there is nothing in the well
 - e) The Kill Wing Valve is normally used as Surface Safety Valve [SSV]
8. A flowing production well is being shut in at Xmas tree. The SITHP quickly builds up to 2,000 psi. During next three hours the SITHP slowly climbs up to 2,350 psi. What is the most likely cause of increment in SITHP?
- a) Gas cap developing
 - b) It is normal. All wells seem to be like that
 - c) Perforation zones are plugged off
 - d) DHSV may be stuck in a closed position
9. When doing the well intervention operation, an emergency situation arises. It becomes evident that the well must be killed first before we can fix the problem. Which method would you prefer if the perforation zone is opened?
- a) Volumetric Method
 - b) Bullheading Method
 - c) Forward Circulation Method
 - d) Wait and Weight Method
 - e) Concurrent Method
 - f) Lubricate and Bleed Method
10. Which killing method is time consuming compared with others and is often applied prior to any well intervention operation?
- a) Volumetric Method
 - b) Bullheading Method
 - c) Forward Circulation Method
 - d) Wait and Weight Method
 - e) Concurrent Method
 - f) Lubricate and Bleed Method





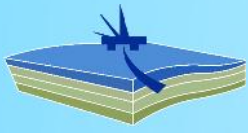
11. It is not possible to perform an inflow test on the installed plug. Should it be pressure tested?
- a) No
 - b) Yes
12. Injecting brine into the flow stream can reduce the formation of hydrates. True or false?
- a) True
 - b) False
13. In an emergency situation, and if it is not possible to bullhead the well, what is the most suitable and/or the most appropriate method to kill the well?
- a) Volumetric Method
 - b) Concurrent Method
 - c) Weight and Weight Method
 - d) Lubricate and Bleed Method
 - e) Reverse Circulation Method
 - f) Forward Circulation Method
14. Which of the following element is a 'Closable' barrier?
- a) Tubing Hanger Plug
 - b) Production Packer
 - c) BOPs & Xmas tree valves
 - d) Pump-Out Plug
 - e) Check Valve
15. Hydrates are most likely formed at downstream of the chokes. True or false?
- a) True
 - b) False
16. From which direction should a barrier be tested to verify integrity?
- a) Above
 - b) Below
 - c) Direction of flow
 - d) Both ways
17. Can a dead well be inflow tested?
- a) Yes
 - b) No





18. When the hydrostatic pressure of fluid in the well overbalances the formation pressure (without fracturing the formation), it becomes a Primary Barrier. True or false?
- True
 - False
19. When well control equipment has to be repaired, who is in charge for re-certification and final approval before using it again for well service operations?
- Chief Operator
 - Production Manager
 - Offshore Installation Manager (OIM)
 - Completion and Well Services Supervisor (CWI)
 - Original Equipment Manufacturer (OEM)
20. During completion well service operations, who is in charge for providing clear procedures, written agreements, responsible for well control duty and to act as a stand-in for supervising well service operations?
- Chief Operator
 - Production Manager
 - Offshore Installation Manager (OIM)
 - Completion and Well Services Supervisor (CWI)
 - Original Equipment Manufacturer (OEM)
21. A Xmas tree is to be changed out on a production well. A deep set positive plug has been set at the tailpipe below packer. A second plug is to be set in the tubing hanger before the tree can be removed. After confirming that the bottom plug is set, what is the correct action to take before setting the second barrier in the tubing hanger?
- Apply pressure on the annulus to test the deep set positive plug from below
 - Apply pressure on the tubing to test the deep set positive plug
 - Inflow test the deep set positive plug
 - If the well head pressure is not rising, the second plug can be run immediately
22. After shutting in the well at the Xmas tree, the tubing head pressure increases rapidly, then increases slowly with about the same rate. What is the main reason for this to happen?
- There is an additional influx in the well
 - There is gas migration
 - It is a pressure build up from the reservoir
 - It is because we're bullheading back into the formation





23. What is the best description of the Formation Breakdown Pressure?

- a) The maximum surface pressure, which will break down the formation at the casing shoe (drilling well)
- b) The maximum pressure that is applied in a well before any fracture/rupture takes place of the exposed formation

24. The principle of the Lubricate and Bleed Method can be defined?

- a) First pumping kill fluid into the well and then bleeding off gas thereafter.
- b) Pumping kill fluid into the well and bleeding off gas simultaneously.

25. Is the following statement TRUE or FALSE?

- a) Hydrates can only be formed if there is a free water in the well fluid content (TRUE or FALSE) _____
- b) Hydrate can be formed if there is only free water in the well fluid content (TRUE or FALSE) _____

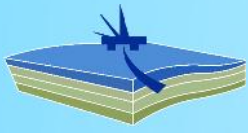
26. Which testing method for pressure control equipment (PCE) is acceptable and in agreement with the integrity of pressure control principles?

- a) Perform all testing before installation on the wellhead or Xmas Tree
- b) Perform all testing at a shore location before shipping it to offshore facilities
- c) No need to test because all PCE are tested at manufacturing facilities before use
- d) All PCE should be tested on the well head after installing and prior to operations

27. Any well control accident taking place during well intervention operations, and which is a result of not following sound well control procedures, can have various negative impacts. Which of the following are examples of these negative impacts (FOUR ANSWERS)?

- a) Financial loss
- b) More opportunities to get promoted
- c) Equipment damage
- d) Better maintained equipment
- e) Additional government regulations
- f) Better trained personnel
- g) Effect on environment
- h) More opportunities to gain experience





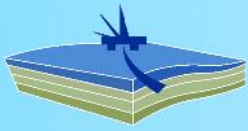
28. What is an advantage of the Reverse Circulation Kill Method?

- a) It creates lower surface pressures at all times
- b) It creates lower downhole pressure at all times
- c) It created lower friction pressure for the same pump rate
- d) It helps to clean up the deep-set plug in the tail pipe of the completion

29. Why do we need train personnel in well control? (THREE ANSWERS)

- a) So they can earn more money
- b) So they know what to do in case of emergency
- c) So they can have faster promotion
- d) So colleagues can rely on them
- e) So the shift handover can be done more efficiently
- f) So the client well can be drilled without any kick at all





EXERCISE COMPLETION OPERATIONS-4

1.	d, e
2.	b
3.	a
4.	b, f, g
5.	c
6.	b
7.	a, c, d
8.	a
9.	b
10.	f
11.	b
12.	a
13.	d
14.	c
15.	a
16.	c
17.	b
18.	a
19.	e
20.	d
21.	c
22.	b
23.	a
24.	a
25a.	TRUE
25b.	FALSE
26.	d
27.	a, c, e, g
28.	a
29.	b, d, f

