EXERCISE COMPLETION EQUIPMENT 4

1. The BOP stack has rated working pressure of 5,000 psi. The well head pressure is 4,860 psi. The well is planned to be killed with the bullheading method. With the provided information above, is the BOP stack working pressure adequate for this operation?

   a) The BOP stack is only OK with a 10% safety pressure margin
   b) The BOP stack is OK, but bull heading should not be performed
   c) The BOP stack is OK, because it has a 5,000 psi working pressure
   d) The BOP stack working pressure is irrelevant

2. Why do we install Down Hole Safety Valves?

   a) To close in the well to allow maintenance of topside equipment to take place.
   b) To close in the well when production is to be shut down.
   c) To close in the well in an emergency.
   d) To control the rate of flow from the well.
   e) To stop production if a topside valve is opened accidentally

3. Which barriers should be in place when completing a well and running the completion string? (THREE ANSWERS)

   a) Overbalance fluid
   b) Sliding Side Door
   c) Rig BOP
   d) SCSSSV
   e) Casing

4. Which of the following should be mentioned in a barrier test verification document? (THREE ANSWERS)

   a) The casing wall thickness
   b) The kick off depth
   c) The pressure rating of equipment
   d) Official signature from authorized personnel
   e) The deviation survey
   f) The maximum BOP hydraulic pressure
   g) The test fluid weight

5. What statements are true regarding the Tubing Hanger? (TWO ANSWERS)

a) It allows communication between completion string and annulus through control line ports
b) It supports the weight of the completion
c) It supports the weight of the completion and casing string.
d) It accommodates a Back Pressure Valve or Two-Way Check Valve
e) It allows communication with the completion string through control line ports.

6. What is a good practice when running a completion?

a) To have a check valve fitted in the cement unit line, so that the well can be 'topped up' without fluids flowing back to the tanks.
b) When the TR-SSV is well below drilling BOP, the Pipe Rams can be closed on the tubing string to ensure we can maintain well control at all times
c) Ensure appropriate crossovers on the rig floor, so that a Drill Pipe Safety Valve can be made up to the completion regardless of size or type of thread being run
d) It will be easier to run the completion if there is no pressure in the TR-SSV control line. This makes it easier to monitor the displaced fluid flows with the TR-SSV run in closed position

7. To what barrier group does completion fluid belong if it can be checked, weighted up and monitored?

a) Multiple Barrier
b) Tertiary Barrier
c) Secondary Barrier
d) Primary Barrier

8. What is the active barrier when running the Completion String?

a) Casing
b) Over balanced fluid
c) Wellhead
d) Drilling Rig BOP

9. What are good practices when running a bridge plug with E-line? (TWO ANSWERS)

a) The shear stud will weaken or part if there is too high an impact or too much pulling force generated on the releasing tool and the packer
b) The running speed should be restricted to ensure the bridge plug will not expand on the way down.
c) The running speed should be as high as practically possible to avoid pressure build up while running in the hole.
d) We must ensure that the pulling tool is appripriate for the bridge plug.

10. Can a Tee-Gate Valve be a primary barrier?

a) No
b) Yes

11. If a Deep-Set Downhole Plug does not hold pressure, what action can be taken? (TWO ANSWERS)

a) Retrieve the failed plug and replace with a new one
b) Place cement on top of the plug
c) Set another plug on top of the failed one
d) Mill out the plug

12. Who will approve the final outcome of any barrier testing on location?

a) Production Manager
b) Well Service Supervisor
c) Chief Engineer in charge
d) Production Superintendent

13. How to keep the TR-SSV in an open position whilst running the completion? (TWO ANSWERS)

a) By applying pressure on the control line
b) By using brine pressure in the casing annulus
c) By using the Lock Open Tool or Prong
d) By using a Hold Open Tool or Straddle Sleeve

14. How many types and/or methods are available to equalize pressure above and below the DSV allowing the DHSV to be opened?

a) Two types, Non Equalizing and Self Equalizing
b) Two types, Non Equalizing and Self-Equalizing plus one method, Intervention
c) Two types, Non Equalizing and Self-Equalizing and two methods, Intervention and Bullheading

15. How can mechanical plugs be installed in the well? (TWO ANSWERS)

a) By well intervention operations
b) By hydraulic pressure from the control line
c) By well velocity across the plug
d) By the freeze method

16. Can a Xmas Tree Valve be a primary barrier?

a) Yes
b) No

17. What is/are the first action[s] to take to re-instate production in a well with a failed Tubing Retrievable Down-Hole Safety Valve?

a) Perform work over operations
b) Lock the valve mechanism open
c) Lock the valve mechanism open and install a wireline insert valve

18. Which type of Down-Hole Safety Valves are sub-surface controlled? (TWO ANSWERS)

a) Flapper Valve
b) Differential Pressure Valve
c) Ball Valve
d) Wireline Retrievable Valves
e) Ambient Pressure Valve

19. How do we run the surface controlled Wireline Retrievable DHSV in an open position in the well?

a) With a Lock-Open Sleeve
b) By applying hydraulic pressure to keep it locked open
c) With an automatic "J-slot" device
d) With a Prong on the Lock Mandrel Running Tool

20. If the SSD could not be opened, what would you do next to ensure communication can be established?

a) Unseat the Production Packer
b) Connect the tubing and 'A' annulus at surface instead
c) Make 1 or more holes in the tubing with a tubing punch
d) Retrieve the Wireline Retrievable Down Hole Safety Valve

21. Which one of the following statements is correct regarding a barrier element?

a) A barrier element is the same as a barrier envelope
b) A barrier element is the same as what we call primary barrier
c) A barrier element is the same as what we call secondary barrier
d) A barrier element is part of a series of barriers which together form a barrier envelope

22. What is the main cause that results in the surface-controlled DHSV to be closing?

a) A significant drop in annulus pressure
b) A significant rise in annulus pressure
c) A significant rise in well pressure
d) A significant drop in tubing head pressure
e) A small drop in hydraulic control line pressure
f) A small rise in hydraulic control line pressure

23. While cementing a production casing, severe losses have been observed. What would be a good practice to perform after this cement job?

a) Abandon well
b) Run 'cement bond log' to check for any potential porrly cemented interval
c) It okay because the casing itself has high integrity
d) Drill out cement shoe and set another casing inside

24. A tubing string will be run into the well during completion operation. What are correct practices? (TWO ANSWERS)

a) Since drilling BOP is in place and the well has not been perforated yet, there is no need to kill the well first
b) Need a cross over sub to stab the FOSV to whatever completion string connections
c) We will use a string 'closed end displacement' to monitor trip tank volume
d) We will use a string 'open end displacement' to monitor trip tank volume

25. Which of the following are reasons to monitor annulus pressure at all times? (TWO ANSWERS)

a) To ensure we are able to control the DHSV function.
b) To ensure we will be able to maintain barrier integrity status.
c) To check for any leaks of completion string, production packer, casing or wellhead seals
d) To check for the forming of hydrates below surface.

26. Which of the following are the most likely reasons for Annulus Pressure Build-Up? (TWO ANSWERS)

a) The heating up of produced fluids inside the tubing, when starting up the production of a well.
b) A leak across the production packer, completion tubing connection or any [other] completion component
c) A leaking BPV or TWCV in the Tubing Hanger.
d) The gas cap effect after stopping the production for a long period of time.

27. An Annulus Pressure on a producing well is monitored and from one day to another observed to be much higher than expectation. What should now be done and for what reason?

a) Nothing should be done. Pressures usually fluctuate because of day and night temperature changes.
b) This requires a well intervention in order to run a downhole memory gauge which measures changes in reservoir pressure.
c) The Annulus Pressure should be kept below a pre-determined maximum pressure, so that we do not have a risk of losing barrier containment.
d) The well should be closed in immediately. We may have cross flow across multiple zones from which we produce.

EXERCISE COMPLETION EQUIPMENT-3	
1.	b
2.	c
3.	c
4.	a
5.	a, b
6.	c
7.	a
8.	c
9.	b, d
10.	c
11.	a, b
12.	b

EXERCISE COMPLETION EQUIPMENT-4	
1.	b
2.	c
3.	a, c, e
4.	c, d, g
5.	b, d
6.	c
7.	d
8.	b
9.	a, b
10.	b
11.	a, c
12.	b
13.	a, d
14.	a
15.	a, d
16.	a
17.	c

18.	b, e
19.	d
20.	c
21.	d
22.	e
23.	b
24.	b, d
25.	b, c
26.	a, b
27.	c