

Question 1:

- A. Explain what is a bit? (7 points)
- B. Complete the following sentences (10 points)
- 1) Ram preventers are classified into **three** types.....,, and.....
 - 2) is directly responsible for the drilling of the hole: supervising the rig crew, controlling what happens on the rig floor, and running the controls which drill the well.
 - 3) is attached to the hook, does not rotate, but supports the kelly which does rotate.
 - 4) used for tightening and loosening drillpipe and drill collars.
 - 5) is a short sub with a box on both ends thereby allowing the drill bit to be connected to the drill collars.

Question 2: Answer the following question

- 1) What are the uses of Drillstring? (7 points)
- 2) What are the aims of separation process? (7 points)
- 3) Mention the basic types of casing strings. (7 points)
- 4) How lost circulation is managed? (7 points)

Question 3:

- A. List the types of bits. Give examples. (5 points)
- B. Consider a single-acting triplex pump, with stroke length of 12 in., rod diameter of 1.5 in., at 100% volumetric efficiency. The pump was operated at 100 spm and 3,428 psi for 4 min. The amount of mud collected at the flowline was 2,040 gal. Determine the liner diameter. (10 points)

Note that:

1 gallon = 231 cubic inches

- Good Luck -