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| فصل ربيع 2016 | جامعة مصراته/ كلية الهندسة | القسم/ هندسة النفط |
| الامتحان النهائي لمقرر: استكمال وصيانة ابار (هن413) | الزمن : ساعتان ونصف | أستاذ المادة: د. عبد الحكم الطيب |
| التاريخ: 2016/ 5 / 30 م | اسم الطالب: | رقم القيد: |

اجب عن جميع الاسئلة

Question (1) 10 marks

Put " X " or " √ " between the bracket

- Damage that affect the permeability characteristics of the rock will not affect production ()
- Barites can be used in the completion fluid ()
- Flow efficiency typically is improved with use of tubing ()
- Multi completions require tubing to permit multi zone production and operation ()
- Packing element system is the one of a key feature of packers ()
- Casing collapse may result from excessive sand production ()
- Matrix acidizing the most frequently employed of the mechanical methods for well for well stimulation ()
- The common factor for treatment is that the injected fluids flow radially close to well-bore ()
- Wire line nipples have internal machined profiles which allow special plugs to seat and locate into them
- Depth of penetration is directly influenced by the speed of liner ()

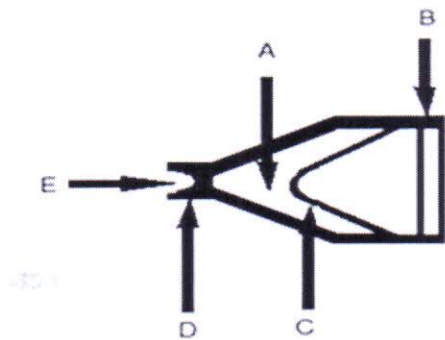
Question (2) 10 marks

Match a suite word from list (A) with list (B)

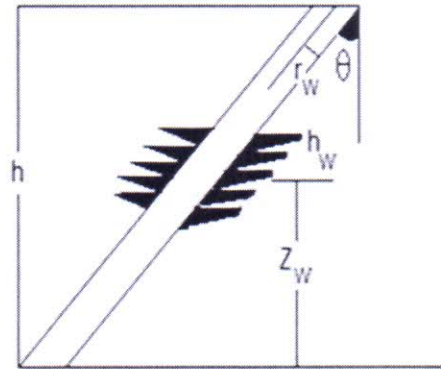
| (A) | (B) | (A) |
|------------------|--------------------|-----|
| Christmas tree | Slug | |
| Slip | Conning | |
| Barium carbonate | Flow line | |
| HCl | Gun component | |
| Mud acid | Packer component | |
| Shaped charges | Density agent | |
| G O C | Clear water fluid | |
| O W C | Carbonate minerals | |
| Detonating card | Cushing | |
| NaCl | Quartz minerals | |

Question (2) 10 marks

Referred to diagram shown below, write each part name indicated by the letters A, B, C, and D for fig. (1) and symbols θ , r_w , h_w , Z_w , and h fig. (2)



Shaped Charges
Fig (1)



Slanted well
Fig. (2)

Question (2) 20 marks

1. A well with a radius of 0.328 ft is completed in a 33ft reservoir. Only 8ft are completed and the midpoint of the perforations is 29ft above the base of reservoir. Calculate the skin effect due to partial completion for a vertical well? What would be the composite skin effect if $\theta = 60^\circ$?

Use the following radius

$$h_D = h/r_w \quad \text{elavation ratio} = z_w/h \quad \text{completion ratio} = h_w/h$$

2. A well has a radius of r_w 0.328 ft is perorated with 2 SPF, perforation radius is $r_{perf} = 0.25$ in. (0.0208 ft), and perforation length is $L_{perf} = 8$ in. (0. 667 ft), and $\theta = 180^\circ$. Calculate the total S_p perforation skin effect if $k_H/K_V = 10$

انتهت الاسئلة