

ملاحظة: تسلم الأسئلة مع كراسة الإجابة

Q1) 1) What is the Advantages of Gas Lift ? (3 Marks)

2) Given: $D=7115$ ft ; $P_{th}=250$ Psi
required assuming $\Delta P_{friction}=30$ Psi

Calculate: a) P_{wf} if the well is making 100% salt water
b) P_{wf} if the well is making 100% 45° API oil
d) P_{wf} if sufficient amount of gas might be injection to
reduce $\gamma_g = 0.75$ (9 Marks)

Q2) 1) When ESP's Are Used ? (5 mark)

2) Oil well Produced 5 BLL/Cycle ; Gas volume = 4600 scf
Tubing Size = 2 in ; API° = 35
 $P_{wh} = 100$ Psi ; R = 0.10
Separator Pressure = 100 Psi ; Pt = 700 Psi
Using Horner Method.

Calculate a) Opening Valve Pressure (Pvo).
b) Dome Pressure Pd.
c) Total Volume of Gas per Day. (10 Marks)

Q3) 1) What is the Advantages of Electric Submersible Pump (ESP). (5 mark)

2) Given: $D_v = 8000$ ft $P_{so} = 800$ psi $\gamma_g = 0.7$
 $T_{wh} = 100^\circ F$ $T_v = 180^\circ F$ $P_t = 655$ psi
 $R = 0.2562$ $St = 600$ psi

Required. Pvo Pvc Psc Ptro (10 Marks)

Q4) I) What is the Advantage and Dis-advantage of sucker rod pump (5 Marks)

II) How can we change the flow rate in Sucker Rod Pump? (3 Marks)

III) A well is equipped with a (1.76) in², plunger. the total pump displacement
 288 bbl/day and the effective plunger stroke length is 55 in.

a) What is Pump Speed (SPM) ? (5 Marks)

b) $IFEV=0.54$, and $\beta_0=1.0$ BBL/STB, Calculate the Production rate
@surface? (5 Marks)