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JAYPEE UNIVERSITY OF INFORMATRION TECHNOLOGY, WAKNAGHAT

SUMMER SEMESTER EXAMINATIONS-T2- July, 2016

B. Tech (CSE, IT, ECE), II Semester

COURSE CODE: 10B11EC211 MAX. MARKS: 50

COURSE NAME: Basic Electronics Devices and Circuits

COURSE CREDITS: 03 MAX. TIME: 2 HRs

Note: All questions are compulsory. Carrying of mobile phone during examinations will be treated as case of unfair means.

Q.1.	Determine the following for the network of Fig1. (a) V_{GSQ}. (b) I_{DQ}. (c) V_{DS}. (d) V_D. (e) V_G. (f) V_S.	**09**
Q.2.	Determine the following for the network of Fig2 (a) V_{GSQ}. (b) I_{DQ}. (c) V_{DS}. (d) V_D. (e) V_G. (f) V_S.	**09**
Q.3.	For the *n*-channel depletion-type MOSFET of Fig. determine: (a) I_{DQ} and V_{GSQ}. (b) V_{DS}.	**08**

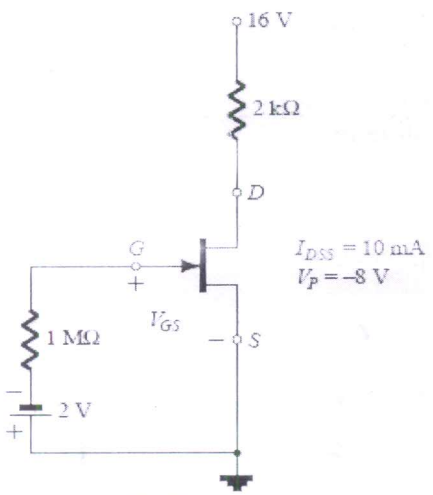


Fig.1

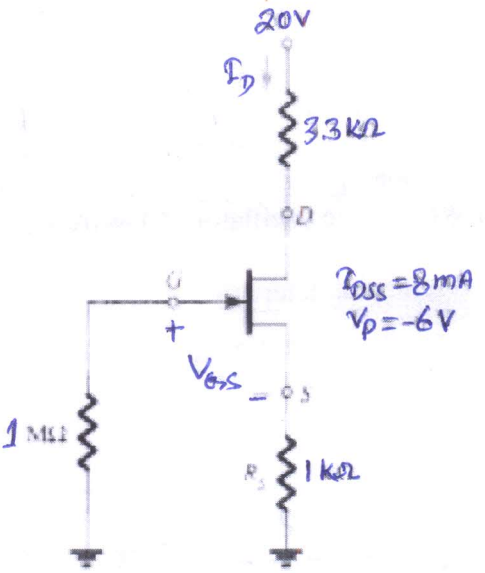
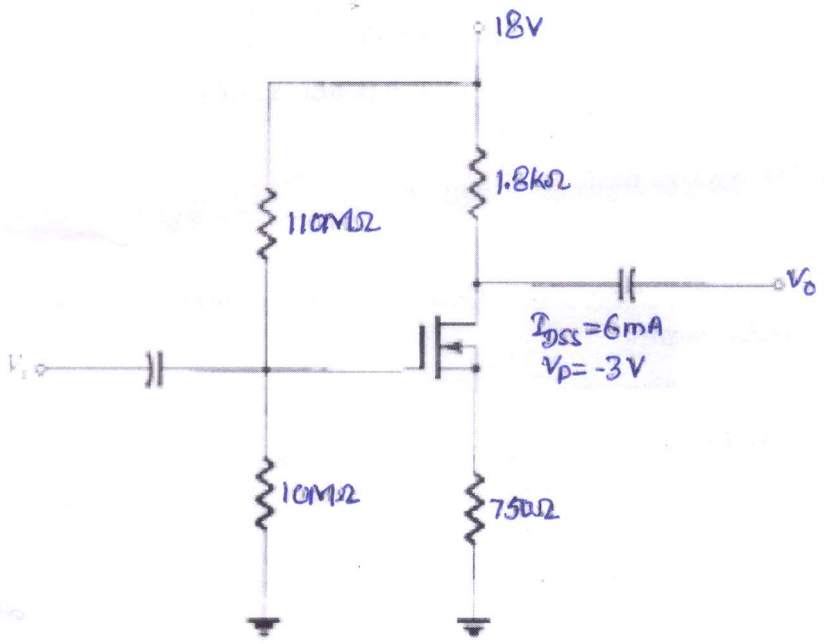
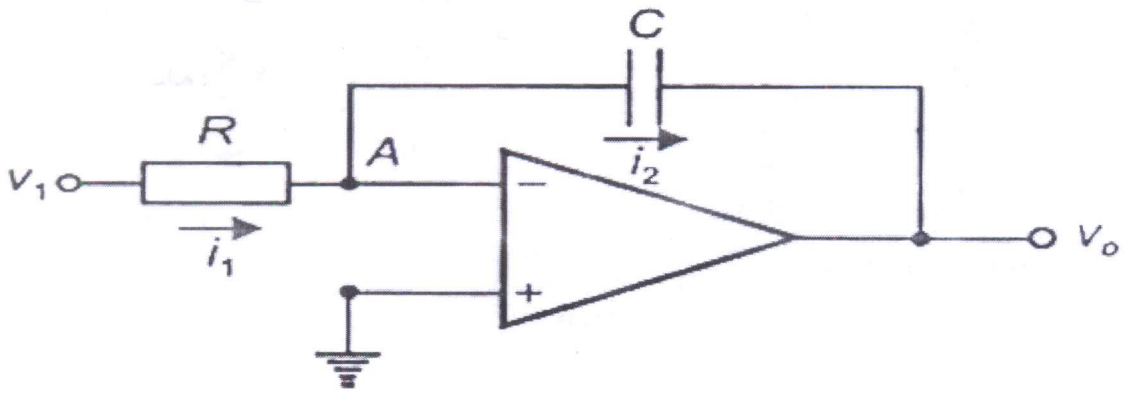


Fig.2



Q.4	(a) Compute the voltage gain of the Voltage Series Feedback amplifier. (b) The open loop gain of the amplifier is 100 and feedback factor is 0.1 for negative feedback amplifier. Find the gain of the feedback amplifier.	04 04
Q.5	(a) What is the oscillator? Classify the oscillators in brief. Also, write some application of oscillators. (b) Write characteristics of ideal operational amplifiers.	06 04
Q.6	(a) Find the output voltage Vo for the following circuit:	03



(b)Design an NAND gate circuit using combination of NMOS and PMOS. **03**