SE/Com/Sem III
Sub-ED &LC

Con. 5676–10. GT–6243

Electronic Devices & Linear Circuits (3 Hours) [Total Marks : 100

N.B. : (1) Question No. 1 is **compulsory**.
(2) Attempt any **four** questions out of remaining **six** questions.
(3) Assume **suitable** data if **necessary**.
(4) **Figures** to **right** indicate **full** marks.

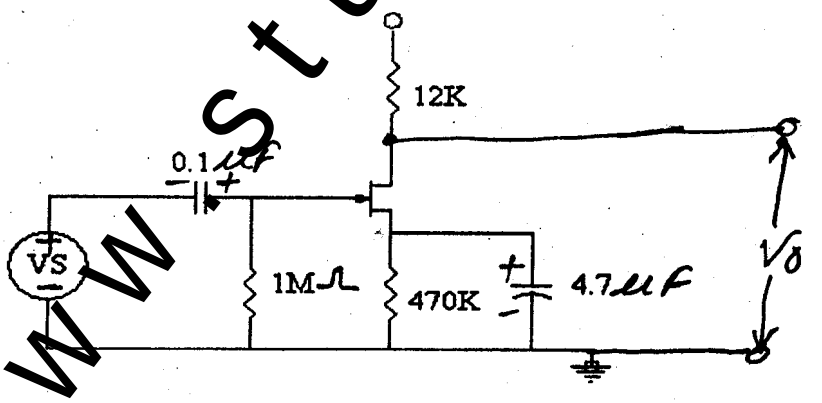
Q .1. Attempt any four of the following: 20

a) Compare BJT & FET.
b) Why Common Emitter Configuration is widely used in amplifier circuits?
c) What do you mean by CMRR? What are the various methodes to improve CMRR?
d) Explain summing amplifier.
e) List features of IC 555.

Q .2. a) Classify & explain feedback amplifiers. 10

b) Explain graphical determination of the h parameters using charecteristic curves of C.E. amplifier. 10

Q .3. a) FET amplifier shown below has following parameters
IDSS = 3mA, V_P = -4V rd >>RD
Determine, V_{GS}, I_D, V_{DS} & A_V (small signal voltage gain) 10
V_{DD} = 30V



b) Explain construction & working of n- channel JFET with the help of charecteristic curves. 10

Q. 4. a) Explain any two applications of Astable multivibrator using IC 555. 10

b) Explain any two applications of IC 565 PLL. 10

Q .5. a) Explain a high voltage low current regulator & low voltage high current regulator. 10

b) Design a regulator using LM 723 for V_O = 9V & I_O = 3Amps. 10

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b) Design a regulator using LM 723 for V_O = 9V & I_O = 3Amps. 10

Q . 6. a) Draw and explain successive Approximation Resister type ADC. 10

b) Explain working of practical Integrator. Also explain its advantages over a simple integrator. 10

Q . 7. Write a short notes on (any four) : 20

a) Switching regulators

b) Differentiator

c) Digital to analog convertor using R - 2Rregisters.

d) Virtual ground of Op-Amp

e) Inverting Schmitt trigger.