AC-3061
Second Year B. Sc. (Sem. - IV) Examination
April / May – 2015
Electronics : Paper - III
(Amplifier & Linear Integrated Circuits)

Time : 2 Hours] [Total Marks : 50
Instructions : (1)

(2) Figure on the right indicates full marks.
(3) All symbols and abbreviations have their usual meaning.
(4) Non-programmable calculators are allowed.
(5) Q.I is compulsory.
(6) Assume data if necessary.

I Answer in short (4 X 2) [08]
a. What is the basic and necessary condition for oscillation?
b. Write the uses of Astable multivibrator
c. What is power Amplifier ?
d. What is harmonic distortion ?

II a. Explain operation of Wein bridge Oscillator in detail 07
   b. Explain the types and requirement of Oscillation 04
   C. The R C network of Wein bridge oscillator consists of resistors and
      capacitors of values $R=220 \, \Omega$ and $C=250 \, \mu F$ . Determine the frequency of
      Oscillation

   OR
   II a. Draw the circuit diagram of Bistable multivibrator and explain it 08
      b. Why an Astable multivibrator also called square wave generator 03
      c. In Astable multivibrator $R_1=R_2=10K \, \Omega, C_1=C_2=0.01 \, \mu F$ and $RL_1=RL_2=1 \, K \, \Omega$
         find the minimum values of transistor $\beta$

III a. Explain Class B power amplifier in detail with circuit diagram 06
   b. Explain the circuit operation of Class AB push-pull amplifier in brief 05
   c. For Power Amplifier working in class A operation, the zero signal collector
      current is $100 \, mA$ . If d.c supply voltage is $12 \, V$ determine the power rating of
      the transformer

   OR

AC-3061] 1 [Contd...
III  a  Explain Dual input Unbalanced output differential amplifier in detail  08
   b  Explain following terms (1) Constant current bias (2) Differential amplifier  06
IV   Write Short Notes (ANY TWO)  14

1  Phase shift Oscillator
2  MonoStable Multivibrator
3  Circuit configuration of Differential amplifier
4  Single Tuned Amplifier