DMM-3061
Second Year B. Sc. (Sem. IV) Examination
March / April - 2016
Electronics : Paper - III

Time : Hours] [Total Marks : 50
Instructions :

(1) Fill up strictly the details of signs on your answer book.
Name of the Examination :
SECOND YEAR B. SC. (SEM. 4)
Name of the Subject :
ELECTRONICS : PAPER - III

(2) Q. 1 is compulsory.
(3) Figures at extreme right indicate full marks.
(4) Draw figures/diagrams to support your answer.
(5) Assume data, if required.

1 Answer in Brief :
(A) Classify the oscillator
(B) What do you mean by harmonic distortion in amplifier?
(C) What is tuned amplifier?
(D) What is cross over distortion?

2 (A) Explain circuit and working of phase shift Oscillator
(B) What are the basic conditions for the oscillation ?
(C) Colpitt's oscillator if \( L = 120 \mu H \) \( C_1 = 300 pF \) \( C_2 = 1200 pF \).
Find the frequency of oscillation

OR

2 (A) Explain circuit and working of Bistable multivibrator
(B) Explain general concept of transistor as switch
(C) In Astable multivibrator \( R_1 = R_2 = 10 K \Omega \) \( C_1 = C_2 = 0.01 \mu F \)
and \( R_{L1} = R_{L2} = 1 K \Omega \) find the minimum value of transistor \( \beta \).

DMM-3061] 1 [Contd...
3. (A) Explain Class B push pull amplifier with figure.
(B) What are the basic differences between the voltage and power amplifier.
(C) A Class B push pull amplifier must deliver 10 W of audio - power to the output load if the output transformer is 80% efficient. What is the max. power drain on the power supply under optimum conditions?

OR

3. (A) Explain Single Input unbalanced Output Differential Amplifier with figure.
(B) Explain the basic concept of differential amplifier in detail.

4. Write Short Notes: (Any Two)
(A) Wein Bridge Oscillator
(B) Astable Multivibrator
(C) Class AB Push Pull Amplifier
(D) Double Tuned Amplifier.