Electrical / III CBSGS / EDC

28

31.5.14

**QP Code : NP-18613**

**(3 Hours)** **[Total Marks : 80**

N.B. : 1. Q.1 is compulsory.

2. Attempt any 03 questions from remaining questions.

3. Assumed suitable data when necessary.

Q. 1. A) What is Zener diode? 05

B) What is Thermal Stabilization? 05

C) Explain need of biasing in BJT 05

D) What is coupling? Name different types. 05

Q.2 A) What is feedback amplifier? Name different types and explain any one of them. 10

B) Draw and explain N-channel Enhancement MOSFET with the help of suitable diagram and equation. 10

Q.3. A) Draw and explain double ended and balanced output differential amplifier with the help of suitable equations. 10

B) Explain the effects of coupling on performance of BJT. 10

Q.4 A) Explain RC phase shift oscillator with the help of suitable diagram and equations. 10

B) Explain UJT relaxation oscillator with the help of suitable diagram and equations. 10

Q.5. A) Draw and explain N-channel FET with the help of suitable diagram and equation s 10

B) Derive the expression for voltage gain, current gain, input impedance and output impedance of CE amplifier. 10

Q.6. A) Write a short note on any TWO. 20

i) Full wave bridge rectifier with CLC filter.

ii) FET differential amplifier

iii) h- parameter model.

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