Seat No.

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MAR_APR 2026 SUMMER EXAMINATION

1154 B.Tech. CBCS

Sub. Name: Electronics Circuit Design-II

Sub. Code: 79181/79469

Day and Date: Thursday ,21-05-2026 **Total Marks: 70**

Time: 10:30 AM To 01:00 PM

Instructions:
1. **All questions are compulsory**
2. **Assume suitable data wherever necessary and mention it boldly**
3. **Draw neat labelled diagrams wherever necessary**
4. **Figures to the right indicate full marks**
5. **Use of Scientific calculator is allowed**

Special Inst.: **Use of datasheet is allowed**

Q1) Solve following MCQ. **[14]**

i. RC coupling is used for_____amplification.
- A. Voltage
- B. Current
- C. Power
- D. None of the above

ii. Types of negative voltage feedback----------
- A. Voltage-series & Shunt feedback
- B. Current-series & Shunt feedback
- C. Voltage-series & Current Shunt Feedback
- D. Current-series & Voltage shunt Feedback

iii. Power amplifiers handle ……. signals compared to voltage amplifiers.
- A. Small
- B. Very small
- C. Large
- D. None of the above

iv. Which of the following oscillator can used in low frequency oscillations?
- A. Crystal oscillator
- B. RC phase shift oscillators
- C. Colpitts oscillators
- D. Hartley oscillators

v. What are the types of Multivibrator?
- A. Astable Multivibrator
- B. Monostable Multivibrator
- C. Bistable Multivibrator
- D. All the above

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vi. The change in output voltage for the corresponding change in load current in a 7805 IC regulator is defined as
   A. All of the mentioned
   B. Line regulation
   C. Load regulation
   D. Input regulation

vii. Oscillators must use_____feedback.
   A. Positive
   B. Negative
   C. Both a & b
   D. none of the above

Q2) Attempt any TWO of the following. **[14]**

a. Explain need of multistage amplifier. **[7]**

b. Design two stage voltage series feedback amplifier with overall gain at 200 and cover 3db frequency not more than 10Hz the output should be of 10Vpp consider Rs=250Ω. **[7]**

c. Design a transformer coupled class A power amplifier to meet the following requirements Po=2W across 4Ω load resistance,use Vcc=12V. **[7]**

Q3) Attempt any TWO of the following. **[14]**

a. Design a two stage RC coupled amplifier to give voltage gain of 180 ,o/p voltage=2.5Vrms, Vcc=9V,frequency of operation is 20Hz to 20KHz. **[7]**

b. Explain types of negative feedback. **[7]**

c. Give the classification of Power Amplifiers and write in brief about Power considerations. **[7]**

Q4) Attempt any TWO of the following. **[14]**

a. Derive the equation of frequency of oscillations for Wein bridge oscillator. **[7]**

b. Design Schmitt trigger circuit with Vcc=12V & UTP=5V,LTP=3V,Ic=2mA using two silicon npn transistor. **[7]**

c. Write short note on Voltage Regulator (IC LM723) **[7]**

Q5) Attempt any TWO of the following. **[14]**

a. Design RC phase Shift Oscillator for given data frequency=100kHz,operating **[7]**

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point 5mA,5V ,Vcc=15V,hfe=100,hie=1KΩ,VBE=0.7V.

b. Explain self bias bistable multivibrator along with Waveform. **[7]**

c. Design Power supply using LM317 for following data Vo = 8 to 12V at 80mA, Vi = 15 to 25V. **[7]**

End Of Question Paper

Important Note for Chief Exam Officer / SRPD Coordinator / Sr Supervisor/ Student -
This Question Paper may be distributed for following Subjects as common code.
सदरची प्रश्नपत्रिका खालील विषयांकरिता वितरित करता येईल.

1] (101) Bachelor of Engineering (79469) Electronics Circuit Design-II Part 2 SEM 4
2] (1154) B.Tech. CBCS (79181) Electronics Circuit Design-II Part 2 SEM 4

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