



# RAN-0918

## S.Y.BSc Semester - IV Examination

March / April - 2019

Electronics Paper - 3

(New Course)

### सूचना : / Instructions

नीचे दृशविले निशानीवाणी विगतो उत्तरवही पर अवश्य लभवी.  
Fill up strictly the details of signs on your answer book

Name of the Examination:

S.Y.BSc Semester - IV

Name of the Subject :

Electronics Paper - 3

Subject Code No.: 0 9 1 8

Seat No.:

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Student's Signature

### Instruction:

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

### Q. 1 Answer in Brief

08

- A) Explain negative feedback
- B) Compare amplifier and oscillator
- C) Compare Monostable and Bistable multivibrator
- D) List the advantages of negative feed back

### Q. 2

- A) Discuss the effect of negative feedback on gain and output impedance 07
- B) Explain general theory of feedback 04
- C) An amplifier with  $Z_i=2k\Omega$  has a voltage gain  $A=2000$ . If a negative feedback of  $\beta=0.01$  is applied to it, what shall be the input impedance of the feedback amplifier? 03

OR

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[ 1 ]

[ P.T.O. ]

**Q. 2**

- A) Draw the circuit diagram of Colpitt's oscillator and explain its action. **07**
- B) Discuss the Schmitt trigger circuit **04**
- C) Find the operating frequency of a transistor Hartley oscillator if **03**  
 $L_1=100\mu\text{ H}$ ,  $L_2=1\text{mH}$  mutual inductance between the coils  $M=20\mu\text{H}$   
and  $C=20\text{pF}$

**Q. 3**

- A) Draw the Circuit of the Monostable multivibrator and explain it in detail **08**
- B) Explain need of a tuned amplifier. **03**
- C) In Astable multivibrator  $R_1=R_2=10\text{K}\Omega$   $C_1=C_2=0.01\mu\text{F}$  and **03**  
 $R_{L1}=R_{L2}=1\text{K}\Omega$  find the frequency of oscillation

**OR**

**O. 3**

- A) Explain double tuned amplifier in detail. **08**
- B) Discuss Class A power amplifier in detail. **06**

**Q. 4 Write Short Notes (ANY TWO) 14**

- A) Voltage series and voltage shunt feedback
- B) Wein Bridge Oscillator
- C) Astable multivibrator
- D) Class AB push pull amplifier
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