



RAN-7030

S Y BSc Semester -IV Examination

March / April - 2019

Electronics Paper - 3

(Old Course)

સૂચના : / Instructions

(1)

નીચે દર્શાવેલ નિશાનીવાળી વિગતો ઉત્તરવહી પર અવશ્ય લખવી.

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.: 7 0 3 0

Seat No.:

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Student's Signature

- (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.

Q.1 Answer in Brief

08

- A) What is the function of oscillator?
- B) Compare Monostable and Bistable multivibrator
- C) Compare voltage and power amplifier
- D) What is push pull amplifier?

- Q.2 A)** Explain circuit and working of Wein bridge oscillators Colpitt's **08**
- B) What are the essential elements of the oscillator ? **03**
- C) Colpitt's oscillator if $L = 120\mu\text{H}$, $C_1 = 300\text{pF}$, $C_2 = 1200\text{pF}$. Find the frequency of oscillation. **03**

OR

- Q.2 A)** Explain circuit and working of Monostable multivibrator. **08**
- B) Compare Oscillator and Amplifier. **03**
- C) Determine the value of capacitors to be used in an astable multivibrator to provide the train of pulse 2 μsec wide at a repetition rate of 100KHz , if $R_1 = R_2 = 20\text{K}\Omega$

- Q.3 A)** Explain transformer coupled Class A amplifier with figure. **08**
- B) Why we need Tuned Amplifier? **03**
- C) For a power amplifier working in class A operation , the zero signal collector current is 100 mA, If the d.c. supply voltage $V_{cc} = 12\text{V}$, Determine the maximum a.c. power output and power rating of the transistor. **03**

OR

- Q.3 A)** Explain Single Input un balanced Output Differential amplifier with figure. **08**
- B) Discuss current mirror and level Translator in brief. **06**

Q. 4 Write Short Notes (Any Two) 14

- A) Hartley Oscillator
- B) Astable Multivibrator
- C) Class AB Push Pull Amplifier
- D) Double Tuned Amplifier