



RAN - 1903000202030092

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FYBSc (Electronics) (Sem.-II) Examination

March / April - 2019

Paper - 2 Network Analysis and Filters

સૂચના : / Instructions

નીચે દર્શાવેલ નિશાનીવાળી વિગતો ઉત્તરવહી પર અવશ્ય લખવી.
Fill up strictly the details of signs on your answer book

Name of the Examination:

FYBSc (Electronics) (Sem.-II)

Name of the Subject :

Paper - 2 Network Analysis and Filters

Subject Code No.: **1903000202030092**

Seat No.:

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Student's Signature

Attempt all the questions. Figure to the right indicates full marks.

Q - 1 Answer briefly. (8)

- (A) Write Final value theorem.
- (B) Draw phasor diagram in case of pure inductor.
- (C) Define attenuation band.
- (D) What is power factor.

Q - 2 (A) Find Laplace transform of an integral. (8)

(B) Find Laplace transform of a sinwt. (6)

OR

Solve the following differential equation using Laplace t Transform. **(14)**

$$\frac{d^2x}{dt^2} + 16 \frac{dx}{dt} + 60x = 6$$

Given $\frac{dx}{dt} = 2$. $X(0) = 1$
at $t = 0$.

- Q - 3** (A) Discuss Sinusoidal response of series R-L circuit. (8)
(B) Find expression for r m s value of AC. (6)

OR

- (A) State Fourier series and evaluate Fourier Constants. (7)
(B) Discuss series resonance and find resonance Frequency. (7)

- Q - 4** **Write short notes (any two).** (14)

- (A) Average power.
(B) Sinusoidal response of a pure capacitor.
(C) Low pass filter.
(D) Inverse Laplace transform.
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