



Set-04

(2013-14)

ANJUMAN-I-ISLAM'S
KALSEKAR TECHNICAL CAMPUS, NEW PANVEL
School of Engineering & Technology

Subject: Electrical Network (EN)

Date: /10/2013

Marks: 20

Duration: 1-Hr/s

Class: SE (III)

Test - II

Branch: Electrical Engineering

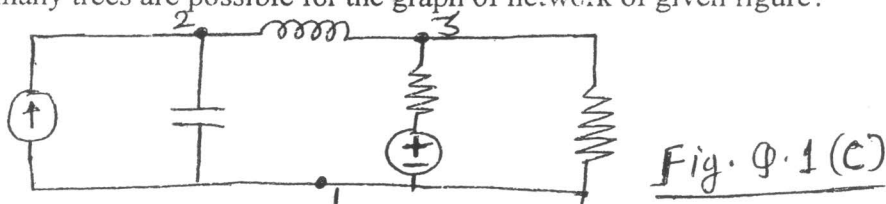
Instructions: 1) Assume the data if it is necessary.

2) Figures to the right indicate full marks.

Q.1) Solve any two out of three. (04-Marks each)

08 M

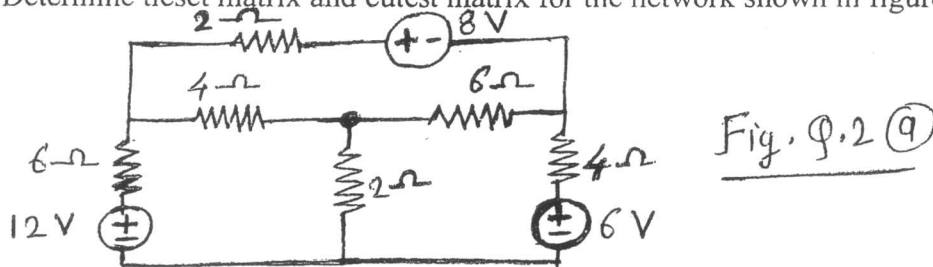
- (a) Write short note on Cut set matrix.
- (b) Explain the principle of Duality with suitable examples.
- (c) How many trees are possible for the graph of network of given figure?



Q.2) Solve any two out of three. (06-Marks each)

12 M

- (a) Determine tieset matrix and cutset matrix for the network shown in figure.



- (b) Find $i(0^+)$, $\frac{di(0^+)}{dt}$, and $\frac{d^2i(0^+)}{dt^2}$ for the circuit shown. Assuming all initial conditions as zero.

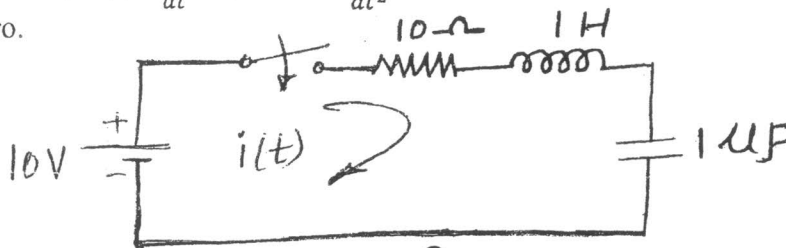


Fig. Q.2 (b)

- (c) Find $V(0^+)$, $\frac{dV(0^+)}{dt}$, and $\frac{d^2V(0^+)}{dt^2}$ at $t = 0^+$ for a given circuit.

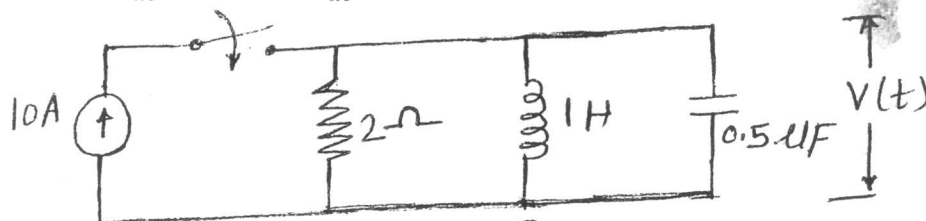


Fig. Q.2 (c)



(2013-14)

ANJUMAN-I-ISLAM'S
KALSEKAR TECHNICAL CAMPUS, NEW PANVEL
School of Engineering & Technology

Subject: ELECTRICAL AND ELECTRONICS MEASUREMENT

Date: 09-13

Marks: 20

Duration: 1 Hr/s

Class: SE ELECTRICAL (III)

Branch: ELECTRICAL

Test II

Instructions: All questions(Q1 and Q2) are compulsory.

Q1) Solve any two out of three

- A) Derive the condition of balance for Anderson's bridge with proper circuit diagram and phasor diagram. [6 MARKS]
- B) Write a note on Maxwell bridge(inductance and capacitance bridge). [6 MARKS]
- C) Derive the balance equation for Schering bridge with diagram and phasor diagram [6 MARKS]

Q2) Solve any two out of three

- A) What is the difference between active and passive transducers? [4 MARKS]
- B) what are the basic requirements of a transducer. [4 MARKS]
- C) Give classification of a transducers. Differentiate between electrical and mechanical transducer. [4 MARKS]



22/10/13

(2013-14)

ANJUMAN-I-ISLAM'S
KALSEKAR TECHNICAL CAMPUS, NEW PANVEL
School of Engineering & Technology

Subject: CNC PG

Date:

Class : SE (III)

Test - II

09.13
Marks: 20

Duration: 1hrs

Branch: Electrical Engg

NOTE: Q1 is compulsory

Q1)

- A) State advantages & disadvantages of Nuclear power plant. [3M]
B) State advantages & disadvantages of Diesel electric power plant. [4M]
C) State advantages & disadvantages of Thermal power plant [3M]

Q2) Solve any two

- A) Draw the layout of Nuclear plant. [5 M]
B) Draw the layout of Diesel electric power plant [5 M]
C) Explain Power generation by Geo thermal energy [5 M]
D) Explain power generation by Tidal energy [5 M]



Symbol of Secularism
& National Integration

ANJUMAN-I-ISLAM'S

(2013-14)

KALSEKAR TECHNICAL CAMPUS, NEW PANVEL

School of Engineering & Technology

Subject: EDC

Date: 09-13

Class: Second Year (III)

Test - II

Marks: 20

Duration: 1Hr

Branch: Electrical

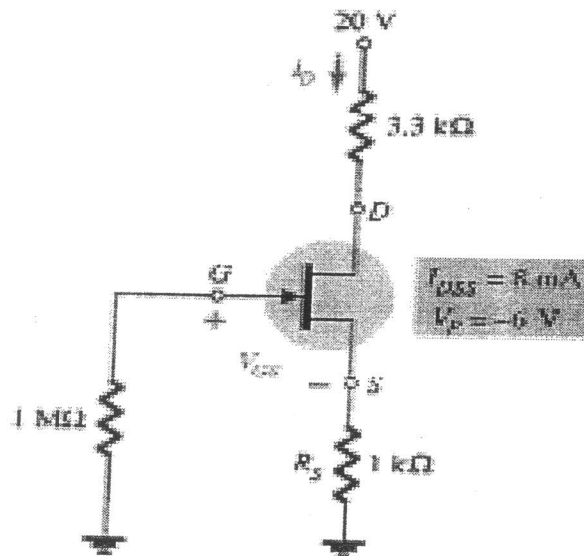
Q.1 Solve any two out of three (4 marks each)

- Draw and Explain Drain & Transfer Characteristics of n-channel JFET.
- State and Explain Barkhausen's Criteria for sustained Oscillations.
- Write a short note on Darlington Amplifier.

Q.2 Solve any two out of three (6 marks each)

(a) Determine the following for the network of Fig. shown below.

- V_{GSQ} .
- I_{DQ} .
- V_{DS} .
- V_S .
- V_G .
- V_D .



$$I_{DSS} = 8\text{ mA}$$

$$V_p = -6\text{ V}$$



(2013-14)

ANJUMAN-I-ISLAM'S
KALSEKAR TECHNICAL CAMPUS, NEW PANVEL

School of Engineering & Technology

Subject: ELECTRICAL AND ELECTRONICS MEASUREMENT

Date: 04.13

Marks: 20

Duration: 1 Hr/s

Class: SE ELECTRICAL (II)

Branch: ELECTRICAL

Test - II

Instructions: All questions(Q1 and Q2) are compulsory.

Q1) Solve any two out of three

- A) Derive the condition of balance for Anderson's bridge with proper circuit diagram and phasor diagram. [6 MARKS]
- B) Write a note on Maxwell bridge (inductance and capacitance bridge). [6 MARKS]
- C) Derive the balance equation for Schering bridge with diagram and phasor diagram [6 MARKS]

Q2) Solve any two out of three

- A) What is the difference between active and passive transducers? [4 MARKS]
- B) What are the basic requirements of a transducer. [4 MARKS]
- C) Give classification of a transducer. Differentiate between electrical and mechanical transducer. [4 MARKS]

UT - II
2nd yr

(2)

(2013-14)



UNIT TEST II

OCT 2013 Marks - 20

S.E. SEM III

ELECTRICAL / EXTC

Applied Mathematics III

Q. 1 Solve any two problems.

(08)

i) Find the Fourier series for $f(x) = 1 - x^2$ in $[-1, 1]$

ii) Find Half range sine series for $f(x) = x^2$ in $[0, \pi]$

iii) Find the angle between two surfaces $x^2 + y^2 + az^2 = 6$ and
 $z = 4 - y^2 + bxy$ at point $(1, 1, -2)$.

iv) If $\vec{F} = (x + 2y + az)\mathbf{i} + (bx - 3y - z)\mathbf{j} + (4x + cy + 2z)\mathbf{k}$

Prove that F is solenoidal and find a, b, c if F is Irrotational.

Q. 2 Solve any two problems.

(12)

i) Find the directional derivative of $\phi = xyz$ at point $(2, 1, -1)$ in the direction of normal to the surface $x^2y + y^2x + z^2y = 3$ at $(1, 1, 1)$

ii) Find the Fourier Series for $f(x) = \frac{1}{4}(\pi - x)^2$ in $[0, \pi]$

iii) Find the Fourier Series for $f(x) = 2x - x^2$ in $[0, 3]$
