



نام :

نام خانوادگي :

محل امضاء:



دفترچه شماره ۱ عصر پنجشنبه ۹۳/۱۱/۱۶



جمهوری اسلامی ایران وزارت علوم، تحقیقات و فناوری سازمان سنجش آموزش کشور اگر دانشگاه اصلاح شود مملکت اصلاح میشود. امام خمینی (ره)

# **آزمون ورودی دورههای کارشناسی ارشد ناپیوسته داخل ـ سال ۱۳۹۴**

مجموعه مهندسی برق ـ کد 1251

مدت پاسخگویی: ۱۰۵ دقیقه

تعداد سؤال: ۵۴

#### عنوان مواد امتحانی، تعداد و شماره سؤالات

رديف	مواد امتحاني	تعداد سؤال	از شماره	تا شماره
1	زبان عمومی و تخصصی	٧٠	À	۳.
۲	وياضيات(معادلات ديقراتسيل. رياضيات مهندسي، أمار و احتمالات)	17	77	44
۲	مدارهای الکتریکی ۱ و ۲	17	44	Δ۴

این آزمون نمره منفی دارد.

استفاده از ماشین حساب مجاز نیست.

بهمن ماه ـ سال ۱۳۹۳

حق چاپ، تکثیر و انتشار سوالات به هر روش (الکترونیکی و ...) پس از برگزاری آزمون، برای تمامی اشخاص حقیقی و حقوقی تنها با عجوز این سازمان مجاز میباشد و با متخلفین برابر عقررات رفتار میشود.

407C صفحه ۲

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# PART A: Vocabulary

<u>Directions:</u> Choose the word or phrase (1), (2), (3), or (4) that best completes each sentence. Then mark your answer sheet.

speaker's speech.  1) rudimentary 2) superfluous 3) hazardous 4) clandestine are actually	1) rudimentary 2) superfluous 3) hazardous 4) clandestine weapons. 1) inflexible 2) lethal 3) regretful 4) spontaneous 4. The many ————————————————————————————————————	1) admitted	oly bored, but she	e interes	t so as not to hur	t her friend's feelings.
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15-1) those of his competitors

3) what did his competitors

- 2) his competitors
- 4) the one in his competitors

#### PART C: Reading Comprehension

<u>Directions</u>: Read the following three passages and answer the questions by choosing the best choice (1), (2), (3), or (4) and then mark the correct choice on your answer sheet.

#### PASSAGE 1:

Remote sensing refers to obtaining information about objects or areas using electromagnetic radiation without being in direct contact with them. In remote sensing various types of tools and devices are utilized to make electromagnetic radiation outside this range visible to the human eye.

Since the first launch of an earth observation satellite, remote sensing is increasingly used to acquire information about environmental processes such as agricultural crops, land cover, vegetation dynamics, water quality, urban growth, seabed topography, etc. Remote sensing helps us to increase our understanding of the ecological system of the earth. Remote sensing helps us to measure the size of the ozone hole in the atmosphere, to notice the differences of atmospheric ozone concentrations between the southern and northern hemisphere. Remote sensing is playing a key role in our efforts to understand the complex dynamics of ocean circulation: the Northern Atlantic Oscillation and to assess their effects on global and regional climates and extreme events. Long-term remote sensing observations of the Sahel region made us at least partly understand the complex cyclic pattern radar that were developed at that time: SLAR: side-looking airborne radar and SAR: Synthetic Aperture Radar, Either development aimed at the acquisition of images at the highest possible resolution. Crucial to the SAR development was the ability to finely resolve the Doppler frequencies using a frequency analysis algorithm on the returning radar signal by the US Air Force research centre.

#### 16- The word "Urban" in the second paragraph means:

- 1) Country
- 2) Rural area
- 3) The area with higher population density
- 4) The area surrounding cities

#### 17- "Cyclic patterns" can be replaced by:

- 1) Periodic schemes
- 2) Plainness diagrams
- Motifs which are complex to understand
- 4) Patterns which should be studied more extensively

#### 18- According to the Passage, the critical point in designing SAR is:

- 1) to be used in remote sensing
- 2) to develop an aperture for the radar
- 3) to combat the effect of Doppler frequency
- 4) to use the Doppler frequency to design a frequency analyzer

#### 19- According to the Passage, what is the purpose of remote sensing?

- 1) A method restricted to use radar systems for sensing
- 2) Making electromagnetic radiations visible to human eyes
- 3) Analysis of dynamics of ozone concentration in the atmosphere using radars.
- The use of aerial sensors to detect and classify objects or their alternations which are mostly on Earth.

#### 20- What does the sentence "Either development aimed at the acquisition of images at the highest possible resolution." mean?

- 1) Radar systems are required to acquire the picture of a target.
- 2) The goal of both SAR and SLAR is to forfeit high resolution pictures.
- 3) The high resolution pictures have an important role in remote sensing.
- The high resolution image of every developed radar system might be captured as a target.

#### PASSAGE 2:

Renewable energy is generally defined as energy that comes from resources which are naturally replenished on a human timescale such as sunlight, wind, rain, tides, waves and geothermal heat. Renewable energy replaces conventional fuels in four distinct areas: electricity generation, hot water/space heating, motor fuels, and rural (off-grid) energy services. Renewable energy resources exist over wide geographical areas, in contrast to other energy sources, which are concentrated in a limited number of countries. Rapid deployment of renewable energy and energy efficiency is resulting in significant energy security, climate change mitigation, and economic benefits. In international public opinion surveys, there is strong support for promoting renewable sources such as solar power and wind power. At the national level, at least 30 nations around the world already have renewable energy contributing more than 20 percent of energy supply. National renewable energy markets are projected to continue to grow strongly in the coming decade and beyond.

21-	The underlined word in the passage can be replaced by:										
	1) Studies		2) storage	10.040 11.20 00.00		3) Sup	plie	es	4)	Standards	
22-			e following	cases	is	NOT	a	reason	for	renewable	energy
	development	tiz .									

- 1) It can be replenished.
- 2) It can lead to undesirable climate change.
- 3) It is more reasonable financially.
- It is distributed more evenly throughout the world compared with other types of recourses.
- 23- The word "conventional" in the third line of the passage can be replaced by?
  1) electrical 2) modern 3) solar 4) traditional
- 24- What is the distinct feature and characteristic of renewable energies?
  - 1) They are not depleted over time.
  - 2) They should be produced synthetically.
  - 3) They cannot be consumed very quickly.
  - 4) They are available only in certain circumstances.

#### آزمون مجموعه مهندسي برة

#### PASSAGE 3:

Vacuum-channel transistor is the result of a marriage between traditional vacuum-tube technology and modern semiconductor-fabrication techniques. This curious hybrid combines the best aspects of vacuum tubes and transistors and can be made as small and as cheap as any solidstate device. Indeed, making them small is what eliminates the well-known <u>drawbacks</u> of vacuum tubes.

In a vacuum tube, an electric filament is used to heat the cathode sufficiently for it to emit electrons. This is why vacuum tubes need time to warm up and consume so much power. It is also the reason they frequently burn out. However, vacuum-channel transistors do not need a filament or hot cathode. If the device is made small enough, the electric field across it is sufficient to draw electrons from the source by a process known as field emission. Eliminating the power-sapping heating element reduces the area each device takes upon a chip and makes this new kind of transistor energy efficient. Another weak point of tubes is that they must maintain a high vacuum to avoid collisions between electrons and gas molecules. Under such low pressure, the electric field causes positive ions generated from the residual gas in a tube to accelerate and bombard the cathode, creating sharp, nanometer-scale protrusions, which degrade and, ultimately, destroy it.

These long-standing problems of vacuum electronics are not <u>insurmountable</u>. If the distance between cathode and anode were less than the average distance an electron travels before hitting a gas molecule, a distance known as the mean free path, and the working voltage is low enough, the device can operate just fine at atmospheric pressure. That is, you do not, in fact, need to maintain any sort of vacuum at all for what is nominally a miniaturized piece of vacuum electronics.

NAMES AND A STATE OF THE PROPERTY OF THE PROPE		_				
What is the main	idea of the above pas	sage?				
C 15						
	17-27		t <sub>e</sub>			
5		200				
1) low longevity.	7	2) long setup time.				
3) high fabrication	n cost.	4) low energy eff	iciency.			
In a vacuum-char	nnel <mark>transi</mark> stor, electi	rons are drawn from	the source by a proces			
called						
1) field emission.		2) power-sapping				
3) mean free path	•	4) nanometer-sca	le protrusions.			
The pronoun "it" in the second paragraph refers to						
1) tube	<ol><li>cathode</li></ol>	<ol><li>residual gas</li></ol>	4) electric field			
The word "insurmountable" in the last paragraph is closest in meaning to						
<ol> <li>unsolvable</li> </ol>	<ol><li>inaccessible</li></ol>	<ol><li>invaluable</li></ol>	<ol><li>unpredictable</li></ol>			
The word "drawb	ack" in the first para	agraph cannot be rep	laced by			
<ol> <li>benefits</li> </ol>	2) problems	<ol><li>impairments</li></ol>	<ol><li>adverse aspects</li></ol>			
	1) main problems 2) solutions for dr 3) vacuum-tube to 4) combination of Which of the follo 1) low longevity. 3) high fabrication In a vacuum-char called 1) field emission. 3) mean free path The pronoun "it" 1) tube The word "insurn 1) unsolvable The word "drawb	1) main problems of vacuum electronic 2) solutions for drawbacks of vacuum 3) vacuum-tube technology and its ap 4) combination of an extinct device w Which of the following is NOT stated in 1) low longevity. 3) high fabrication cost. In a vacuum-channel transistor, electrocalled	1) low longevity. 2) long setup time 3) high fabrication cost. 4) low energy eff In a vacuum-channel transistor, electrons are drawn from called 1) field emission. 2) power-sapping 3) mean free path. 4) nanometer-sca The pronoun "it" in the second paragraph refers to 1) tube 2) cathode 3) residual gas The word "insurmountable" in the last paragraph is closest 1) unsolvable 2) inaccessible 3) invaluable The word "drawback" in the first paragraph cannot be rep			

### رياضيات(معادلات ديفرانسيل، رياضيات مهندسي، آمار و احتمالات):

۳۱− جعبه I شامل ۵ مهره سفید و ۷ مهره سیاه است. جعبه II شامل ۲ مهره سفید و ۲ مهره سیاه است. دو مهره به تصادف و بدون جایگذاری از جعبه I انتخاب و بدون مشاهده رنگ مهرهها در جعبه II قرار میدهیم. سپس دو مهره از جعبه II به تصادف و بدون جایگذاری انتخاب میکنیم. احتمال پیشامد دو مهره سفید از جعبه II كدام است؟

- 150 (1
- 17 (1
- <u>سا</u> (۳
- 108 (4

٣٢- تابع چگالي احتمال يک قطعه الکترونيکي برحسب ساعت به صورت زير است:

$$\mathbf{f}(\mathbf{x}) = \begin{cases} \frac{\mathbf{C}}{\mathbf{x}^{\mathsf{Y}}} & \mathbf{x} > 1 \\ \mathbf{0} & \mathbf{x} \leq 1 \\ \mathbf{0} & \mathbf{x} \end{cases}$$

احتمال آنکه از ۶ قطعهٔ الکترونیکی حداکثر ۲ قطعه برای حداقل ۱۵ ساعت کار کنند (با فرض مستقل بودن پیشامد خراب شدن قطعات)، کدام است؟

- <del>۶</del>٥ (۱
- F∘C F∘C F∘ VT F∘ VT VT VTC F°

g و g برابر g مربوط به توابع g مربوط به توابع g مربوط به توابع gممكن كدام است؟

- (ft+c)eft (1
- $(rt+c)e^{rt}$  (r
- $(\Upsilon t + c)e^{\Upsilon t}$  ( $\Upsilon$ 
  - rt+c (4

باشد، جواب  $n \in \mathbb{N}$  یک جواب معادله دیفرانسیل  $y_1(x) = e^x$  ، xy'' - (x+n)y' + ny = 0 باشد، جواب مستقل دیگر کدام گزینه می تواند باشد؟

$$\sum_{k=0}^{n} \frac{1}{k!} x^{k}$$
 (1

$$\sum_{k=0}^{n-1} \frac{1}{k!} x^k$$
 (7

$$\sum_{k=1}^{n} \frac{1}{k!} x^{k} \ ($$

$$\sum_{k=1}^{n+1} \frac{1}{k!} x^k \quad (*$$

9 کدام است  $y'(\circ) = 7$  ,  $y(\circ) = 1$  ,  $(x+1)^7 y'' + (x+1) y' + y = 0$  کدام است -70

$$(x+1)^{\dagger}$$
 (1

$$\cos(\ln(x+1)^{\tau}) + \sin(\ln(x+1)^{\tau})$$
 (7

$$cos(ln(x+1)) + r sin(ln(x+1))$$
 (\*

$$\cos^{\mathsf{T}}(\ln(x+1)^{\mathsf{T}}) + \sin(\ln(x+1)^{\mathsf{T}})$$
 (§

۳۶ معادله دیفرانسیل  $\mathbf{x} = \mathbf{x}' + \mathbf{x}' + \mathbf{x}' + \mathbf{x}' + \mathbf{x}' + \mathbf{x}' + \mathbf{x}'$  داده شده است. معادله شاخص سری فروبنیوس،  $\mathbf{a}_{n-1}$ ,  $\mathbf{a}_n$  نن فرایب آن،  $\mathbf{a}_{n-1}$ ,  $\mathbf{a}_n$  کدام است؟  $\mathbf{a}_n$ 

$$a_n = \frac{-a_{n-1}}{n(\tau n - 1)}, a_n = \frac{-a_{n-1}}{n(\tau n + 1)}, \tau r^{\tau} - \tau r + 1 = 0$$
 (1)

$$a_n = \frac{-a_{n-1}}{(\tau n - 1)n}$$
,  $a_n = \frac{-a_{n-1}}{(\tau n + 1)(n+1)}$ ,  $\tau r^{\tau} - \tau r + 1 = 0$  ( $\tau$ 

$$a_n = \frac{-a_{n-1}}{(r_{n-1})(n+1)}$$
,  $a_n = \frac{-a_{n-1}}{(r_{n+1})n}$ ,  $rr^r - rr + 1 = 0$  (r

$$a_n = \frac{-a_{n-1}}{n(rn-1)}$$
,  $a_n = \frac{-a_{n-1}}{(rn+1)n}$ ,  $rr^r - rr + 1 = 0$  (4)

g(x) در این صورت  $g(x)=\int_{0}^{+\infty}\omega \frac{dA(\omega)}{d\omega}\cos(\omega x)d\omega$  ,  $f(x)=\int_{0}^{+\infty}A(\omega)\cos(\omega x)d\omega$  -۳۷

كدام است؟

$$-f(x) - xf'(x)$$
 ()

$$f(x) - xf'(x)$$
 (7

$$f(x) - xf''(x)$$
 (\*

$$f(x) + xf''(x)$$
 (\*

۳۸ - در مسأله مقدار اوليه مرزي

$$\begin{cases} u_{tt} - u_{xx} = \sin^{7}(\pi x) \ , & \circ < x < 1 \ , t > \circ \\ u(\circ, t) = \circ = u(1, t) \ , & t > \circ & \\ u(x, \circ) = \circ \ , u_{t}(x, \circ) = \circ & \\ & \text{indicated to } \end{cases}$$

جوابی مستقل از زمان از معادله دیفرانسیل که در شرایط مرزی نیز صدق کند، کدام است؟

$$\frac{r}{r\pi^r}\sin(\pi x) + \frac{1}{9\pi^r}\sin^r(\pi x)$$
 (1)

$$\frac{r}{\pi^r}\sin(\pi x) + \frac{1}{r\pi^r}\sin^r(\pi x)$$
 (Y

$$\frac{\gamma}{\gamma \pi^{\gamma}} \sin(\pi x) + \frac{1}{9\pi^{\gamma}} \sin^{\gamma}(\pi x) \ (\Upsilon$$

$$x(1-x) + \frac{y}{y\pi^{\gamma}}\sin(\pi x) + \frac{1}{9\pi^{\gamma}}\sin^{\gamma}(\pi x)$$
 (4)

٣٩ - جواب معادله با مشتقات جزئي زير، با شرايط اوليه مرزى داده شده، كدام است؟

$$\begin{cases} u_{xx} = tu_t &, & \circ < x < \pi \\ u(\circ, t) = u(\pi, t) = \circ, & t \ge 1 \\ u(x, 1) = 1 &, & \circ < x < \pi \end{cases}$$

$$\sum_{k=0}^{\infty} \frac{f}{k\pi} t^{-k^{\gamma}} \sin kx$$
 (1)

$$\sum_{k=0}^{\infty} \frac{f}{k\pi} e^{-k^{\Upsilon}t} \sin kx$$
 (Y

$$\sum_{k=0}^{\infty} \frac{f}{(\tau k + 1)\pi} e^{-(\tau k + 1)^{\tau} t} \sin(\tau k + 1) x (\tau$$

$$\sum_{k=0}^{\infty} \frac{f}{(\gamma k+1)\pi} t^{-(\gamma k+1)^{\gamma}} \sin(\gamma k+1) x \quad (f$$

# ۴۰ می دانیم پاسخ معادلهٔ حرارت به صورت:

$$rac{\partial u}{\partial t} = c^\intercal rac{\partial^\intercal u}{\partial x^\intercal}$$
 ,  $\circ < x < l$  ,  $t > \circ$ 
: با شرایط مرزی  $rac{\partial u(\circ,t)}{\partial x} = \circ$  ,  $rac{\partial u(l,t)}{\partial x} + hu(l,t) = \circ$  به شکل زیر است:  $u(x,t) = \sum_{n=\circ}^\infty A_n e^{-k_n^\intercal c^\intercal t} \cos(k_n x)$ 

در این صورت  $\mathbf{k_n}$ ها در کدام معادله زیر صدق می کنند؟

$$k_n \tan k_n l = -h$$
 (1)

$$k_n \cot k_n l = -h$$
 (Y

$$k_n \cot k_n l = h$$
 (\*

$$k_n \tan k_n l = h$$
 (\*

در صورتی که 
$$C$$
 دایره  $C$  دایره  $C$  دایره  $C$  در صورتی که  $C$  در جهت مثلثاتی پیموده -۴۱  $C$  در جهت مثلثاتی پیموده -۴۱ در حولت مثلثاتی پیموده

شده است، برابر کدام گزینه است؟

$$-i\pi^{r}$$
 (1

$$-\pi^{\tau}$$
 ( $\tau$ 

مقدار انتگرال 
$$\frac{dz}{\tau - \sin z}$$
 بر روی دایره  $C$  به مرکز مبدأ و به شعاع  $\frac{\pi}{\tau}$ ، کدام است؟  $C$  در جهت مثلثاتی

بىمودە شدە)

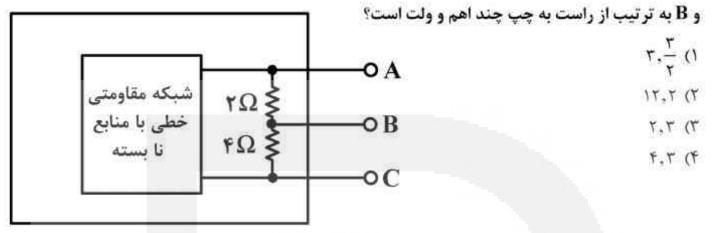
$$r\pi i \left[\frac{\pi}{r} + i \ln(r + \sqrt{r})\right] (r$$

$$\forall \pi i [-\frac{\pi}{\tau} + i \ln(\tau + \sqrt{\tau})] \ (\tau$$

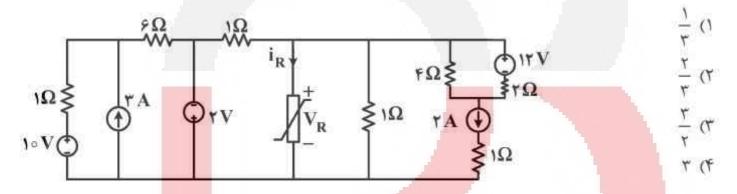
$$r\pi i \left[\frac{\pi}{r} - i \ln(r + \sqrt{r})\right]$$
 (4)

## مدارهای الکتریکی (۱ و ۲):

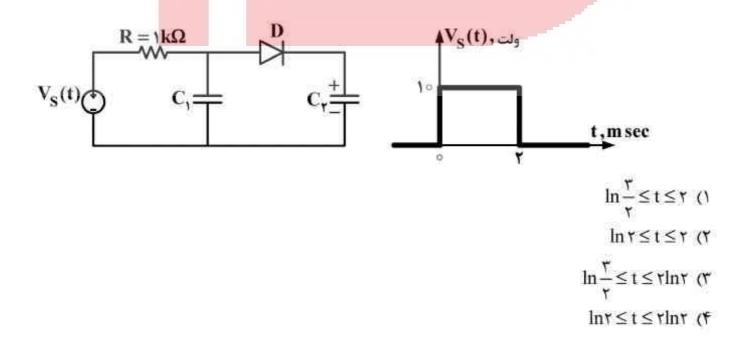
C و B را B میگذرد. و اگر بین B و B را C در مدار شکل زیر، اگر بین B و B را C و اگر بین B و C را C بین C از C از C از C سرهای C اتصال کوتاه کنیم جریان C از C به C از C به C از سرهای C میگذرد. شبکه معادل تونن دیده شده C می C به C به C در مدار نیم جریان C به می کند رد. شبکه معادل تونن دیده شده C به می کند رد. شبکه معادل تونن دیده شده C به می کند رد. شبکه معادل تونن دیده شده C به می کند رد. شبکه معادل تونن دیده شده C به می کند رد. شبکه معادل تونن دیده شده C به می کند رد. شبکه می کند رد به می کند را کند رویان می کند را کند را



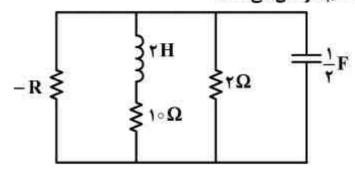
۴۴ در مدار شکل زیر، توان مصرفی مقاومت غیر خطی با مشخصه  $V_{R}=rac{\pi}{v}i_{R}^{\pi}$  چند وات است



در مدار شکل زیر، خازن  $C_1 = 1 \mu F$  و بیبار است، خازن  $C_7 = 7 \mu F$  و به میزان ۲۵ میکرو ژول انرژی  $C_7 = 1 \mu F$  در مدار شکل زیر، کدام گزینه در مورد بازه زمانی ذخیره شده با پلاریته داده شده دارد. با ورودی منبع ولتاژ  $V_S(t)$  شکل زیر، کدام گزینه در مورد بازه زمانی هدایت دیود ایده آل D بر حسب میلی ثانیه صحیح است؟

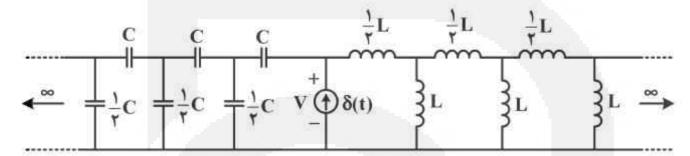


۴۶ مدار شکل زیر، به ازای چه مقدار مقاومت R (بر حسب اهم) نوسان میکند؟



۴) به ازای هیچ مقدار R نوسان نمی کند.

۴۷ مدار شکل زیر، از هر دو طرف به سمت بینهایت میرود. با شرایط اولیه صفر، معادلهٔ ولتاژ دو سر منبع -۴۷ جریان ضربه برای د < t برابر کدام است؟



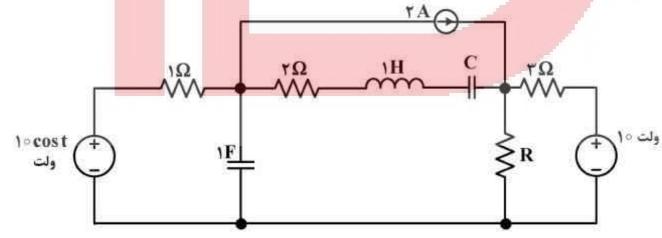
 $\frac{1}{C}\sin\frac{t}{\sqrt{LC}}$  (1)

 $\frac{1}{C}\cos\frac{t}{\sqrt{LC}}$  (7

 $\frac{r}{C}\sin\sqrt{\frac{r}{LC}}t$  (r

 $\frac{r}{C}\cos\sqrt{\frac{r}{LC}}t$  (\*

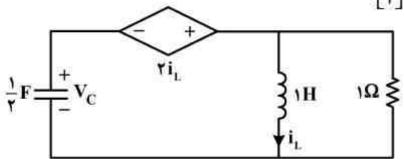
۴۸ در شبکهٔ شکل زیر، که در حالت دائمی قرار دارد، مقدار ظرفیت خازن C باید چند فاراد باشد تا حداکثر توان متوسط به مقاومت R برسد؟



1 (1

<u>τ</u> (τ 1 (τ

ور مدار شکل زیر، بردار حالت  $\mathbf{x}(\circ) = \begin{bmatrix} \circ \\ \mathbf{v} \end{bmatrix}$ ,  $\mathbf{x} \triangleq \begin{bmatrix} \mathbf{i_L} \\ \mathbf{v_C} \end{bmatrix}$  سحار کدام است؟ -۴۹



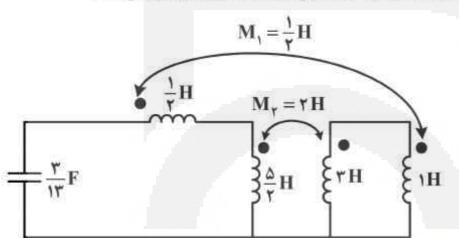
$$\mathsf{T} \mathbf{v}_{C}^{\mathsf{T}} + \mathbf{i}_{L}^{\mathsf{T}} - \mathsf{T} \mathbf{v}_{C} \mathbf{i}_{L} = \lambda \ \, (\mathsf{N})$$

$$v_C^{\gamma} + \epsilon i_L^{\gamma} + \epsilon v_C i_L = \epsilon$$
 (7

$$v_C^{r} + si_L^{r} + rv_Ci_L = r$$
 (r

$$\mathcal{F}v_C^{\mathsf{Y}} + i_L^{\mathsf{Y}} - \mathcal{F}v_C i_L = \mathcal{F}$$
 (4

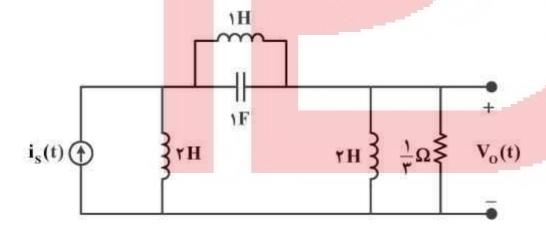
۵۰ مدار شکل زیر، به ازای شرایط اولیه غیر صفر، در چه فرکانسی (برحسب هر تز) نوسان میکند؟



- <del>γ</del> (1
- <del>γ</del>π (۲
- $\frac{r}{r\pi} (r)$   $\frac{r}{r\pi} (r)$

است؟

در مدار شکل زیر، تابع انتقال شبکهی  $H(s) = \frac{V_o(s)}{I_s(s)}$  دارای چند قطب است و چه تعداد از آنها صفر  $-\Delta 1$ 



- ۱) ۳، یکی
- ۲) ۳، هیچکدام صفر نیستند.
  - ۳) ۴، یکی
- ۴) ۴، هیچکدام صفر نیستند.

و دهنهٔ خطی و  $\mathbf{T} = \begin{bmatrix} \mathbf{A} & \mathbf{B} \\ \mathbf{C} & \mathbf{D} \end{bmatrix}$  برای دو دهنهٔ خطی و  $\mathbf{Y}_{Y1}$  برای دو دهنهٔ خطی و  $\mathbf{Y}_{Y1}$  برای دو دهنهٔ خطی و تغییرتاپذیر با زمان  $\mathbf{N}$  به صورت زیر داده شدهاند:

$$Y_{Y1} = \frac{-s}{s+Y}, A = \frac{1}{s}$$

پاسخ حالت صفر برای خروجی  $V_{_{\mathrm{o}}}(t)$  در آزمایش شکل زیر، کدام است؟



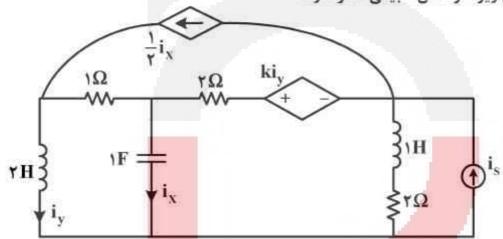
 $e^{-rt}u(t)$  (1

 $e^{-rt}u(t)$  (7

 $(1-e^{-\Upsilon t})u(t)$  ( $\Upsilon$ 

 $(1-e^{-rt})u(t)$  (\*

۴۵٫ مدار شکل زیر، فرکانس طبیعی صفر دارد- ۵۳ مدار شکل زیر، فرکانس طبیعی صفر دارد



-<del>1</del> (1

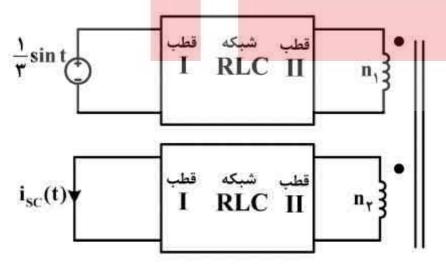
1 (7

A (T

-0 (4

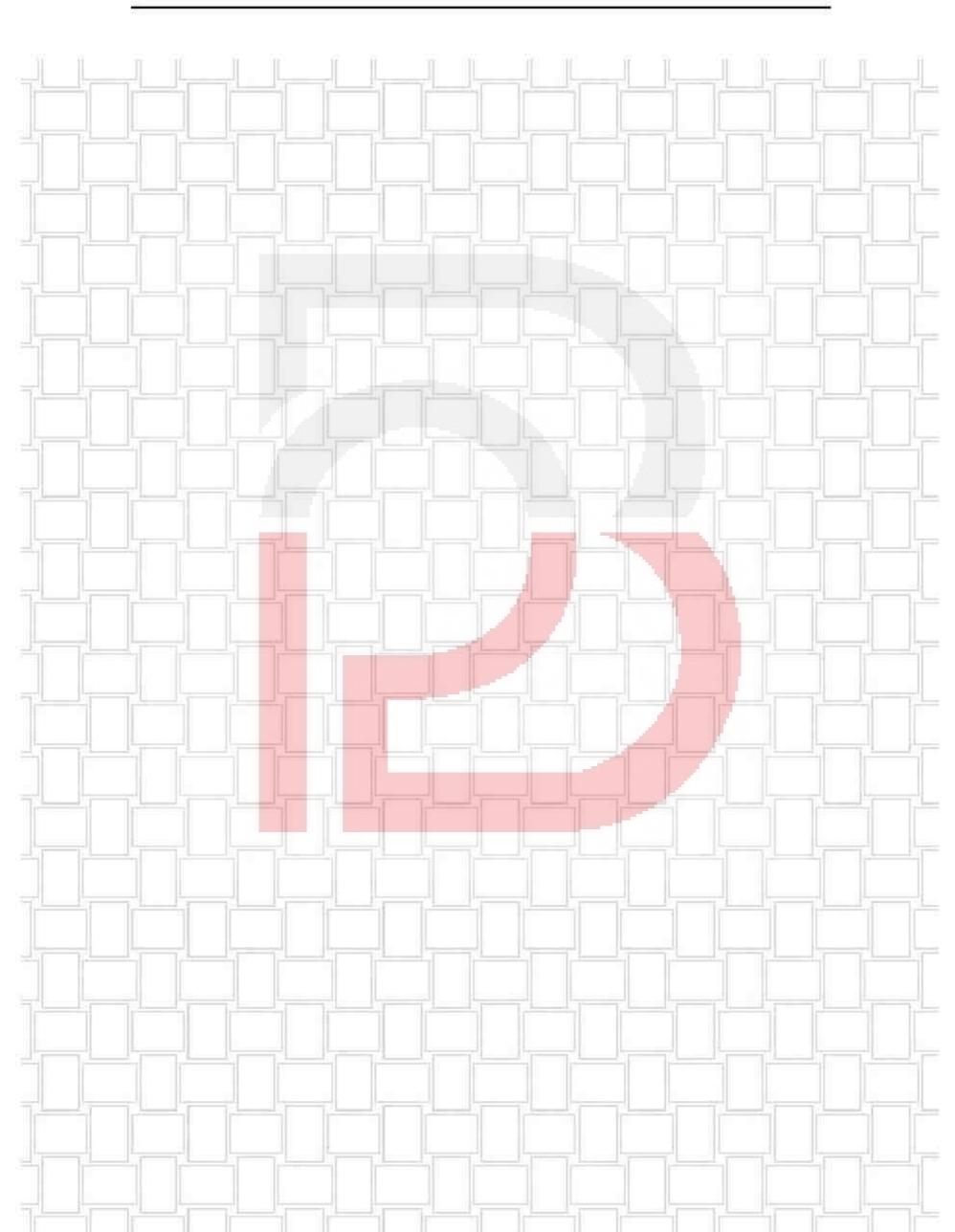
متصل ور شکل زیر، ۲ شبکه RLC یکسان در قطب دوم به واسطه یک ترانسفورماتور ایده آل به یکدیگر متصل  $p(t) = \sin \gamma$  معادل  $n_1$  معادل  $p(t) = \sin \gamma$  باشد، جریان شده اند. در صورتی که توان لحظه ای تحویل داده شده به سیم پیچ  $i_{sc}(t)$  معادل  $i_{sc}(t)$  کدام است؟

- Ircost (1
  - osint (T
- -∆cost (٣
- -Ircost (f

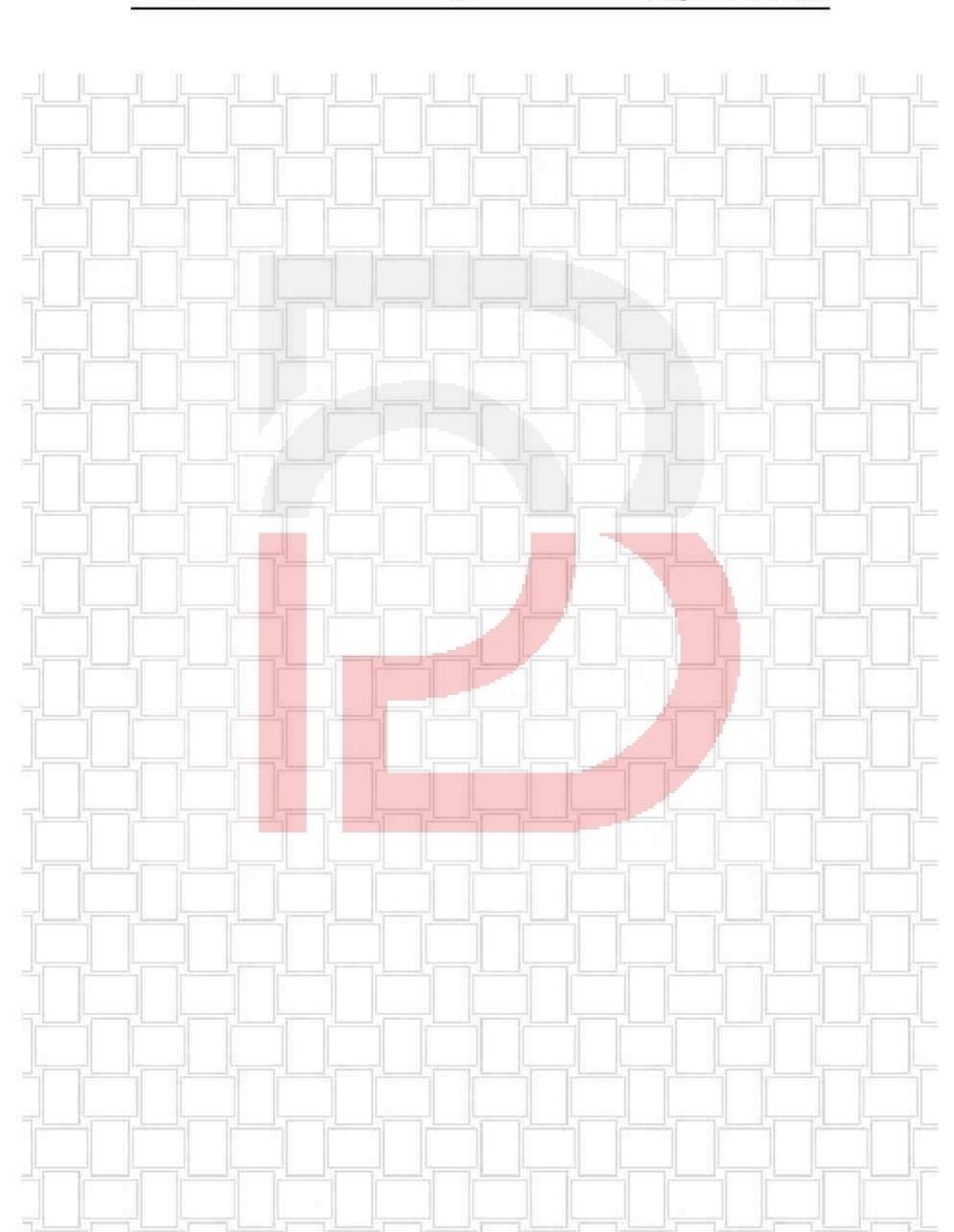


$$\frac{\mathbf{n}_1}{\mathbf{n}_{\gamma}} = \frac{\gamma}{\gamma}$$

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آزمون مجموعه مهندسی برق 407C صفحه ۱۵



آزمون مجموعه مهندسی برق 407C صفحه ۱۶

