Telangana State Council Higher Education

Notations :

1.Options shown in green color and with ✔ icon are correct.

2.Options shown in red color and with ✖ icon are incorrect.

Question Paper Name :	Biomedical Engineering 4th Aug 2022 Shift 2
Subject Name :	Biomedical Engineering
Creation Date :	2022-08-04 16:46:58
Duration :	120
Total Marks :	120
Display Marks:	Yes
Calculator :	None
Magnifying Glass Required? :	No
Ruler Required? :	No
Eraser Required? :	No
Scratch Pad Required? :	No
Rough Sketch/Notepad Required? :	No
Protractor Required? :	No
Show Watermark on Console? :	Yes
Highlighter :	No
Auto Save on Console?	Yes
Change Font Color :	No
Change Background Color :	No
Change Theme :	No
Help Button :	No
Show Reports :	No
Show Progress Bar :	No

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Biomedical Engineering

Group Number :	1
Group Id :	34058054
Group Maximum Duration :	0
Group Minimum Duration :	120
Show Attended Group? :	No
Edit Attended Group? :	No
Break time :	0
Group Marks :	120
Is this Group for Examiner? :	No
Examiner permission :	Cant View
Show Progress Bar? :	No

Mathematics

Section Id :	34058099
Section Number :	1
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	10
Number of Questions to be attempted :	10
Section Marks :	10
Enable Mark as Answered Mark for Review and Clear Response :	Yes
Maximum Instruction Time :	0
Sub-Section Number :	1
Sub-Section Id :	34058099
Question Shuffling Allowed :	Yes

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Question Number : 1 Question Id : 3405806361 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The particular integral of $x^2y''' - y' = x^3$ is $y_p =$

Options :

34058025441. ✗ x^3

34058025442. ✗ $\frac{x^3}{2}$

34058025443. ✓ $\frac{x^3}{3}$

34058025444. ✗ $\frac{-x^3}{3}$

Question Number : 2 Question Id : 3405806362 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

If $y = a\sin x + b\cos x$ satisfies $y'' - y' = \cos x$ then $a + b =$

Options :

34058025445. ✗ 1

34058025446. ✓ -1

34058025447. ✗ 2

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34058025448. ✗ -2

Question Number : 3 Question Id : 3405806363 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The sum of eigen values of $\begin{pmatrix} -1 & 0 & -2 \\ 2 & -1 & 1 \\ 0 & -2 & -3 \end{pmatrix}$ is

Options :

34058025449. ✗ -3

34058025450. ✗ -4

34058025451. ✓ -5

34058025452. ✗ 5

Question Number : 4 Question Id : 3405806364 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The number of solutions of the system $x + y + z = 2$, $x - y - z = 0$, $2x + y - z = -1$ is

Options :

34058025453. ✓ 1

34058025454. ✗ 2

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34058025455. ✖ 3

34058025456. ✖ ∞

Question Number : 5 Question Id : 3405806365 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The residue of $f(z) = \text{cosec}^2 z$ at the pole $z = 4\pi$ is

Options :

34058025457. ✔ 0

34058025458. ✖ πi

34058025459. ✖ $2\pi i$

34058025460. ✖ 1

Question Number : 6 Question Id : 3405806366 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The probability that an year chosen at random contains 53 Sundays is

Options :

34058025461. ✖ $\frac{1}{4}$

34058025462. ✖

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$\frac{7}{12}$

34058025463. ✓ $\frac{5}{28}$

34058025464. ✗ $\frac{9}{28}$

Question Number : 7 Question Id : 3405806367 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Two numbers a, b are chosen at random from the set {1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15}. Then the probability that the equation 2a = 3b is satisfied, is

Options :

34058025465. ✗ $\frac{8}{{}^{15}C_2}$

34058025466. ✓ $\frac{6}{{}^{15}C_2}$

34058025467. ✗ $\frac{10}{{}^{15}C_2}$

34058025468. ✗ $\frac{12}{{}^{15}C_2}$

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Question Number : 8 Question Id : 3405806368 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Solving the equation $1-xe^{x}=0$ using Newton's method we have

$(x_n - x_{n+1})(x_n + 1) =$

Options :

34058025469. ✔ $x_n - e^{-x_n}$

34058025470. ✘ $x_n + e^{-x_n}$

34058025471. ✘ $x_n - e^{x_n}$

34058025472. ✘ $x_n + e^{x_n}$

Question Number : 9 Question Id : 3405806369 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The maximum value of $-x^2 + 2xy - y^2 + x - y + 5$ is

Options :

34058025473. ✘ $\frac{19}{4}$

34058025474. ✔ $\frac{21}{4}$

34058025475. ✘

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$\frac{23}{4}$

34058025476. ✖ $\frac{27}{4}$

Question Number : 10 Question Id : 3405806370 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The area between the curves $y = |x|$ and $y = x^4$ is

Options :

34058025477. ✖ $\frac{5}{2}$

34058025478. ✔ $\frac{5}{3}$

34058025479. ✖ $\frac{3}{5}$

34058025480. ✖ $\frac{2}{5}$

Biomedical Engineering

Section Id :	340580100
Section Number :	2
Section type :	Online

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Mandatory or Optional :	Mandatory
Number of Questions :	110
Number of Questions to be attempted :	110
Section Marks :	110
Enable Mark as Answered Mark for Review and Clear Response :	Yes
Maximum Instruction Time :	0
Sub-Section Number :	1
Sub-Section Id :	340580100
Question Shuffling Allowed :	Yes

Question Number : 11 Question Id : 3405806371 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which mode of ultrasound imaging is used for the study of blood flow through the chambers of heart

Options :

34058025481. ✗ B-mode

34058025482. ✗ A-mode

34058025483. ✓ M-mode

34058025484. ✗ C-mode

Question Number : 12 Question Id : 3405806372 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

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Correct Marks : 1 Wrong Marks : 0

How much energy is stored by a 2μF capacitor with a voltage of 1000V

Options :

34058025485. ✗ 0.05 J

34058025486. ✓ 1 J

34058025487. ✗ 5 J

34058025488. ✗ 10 J

Question Number : 13 Question Id : 3405806373 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Six light bulbs are connected in parallel across 110 V. Each bulb is related at 75W. How much current flows through each bulb

Options :

34058025489. ✓ 0.682 A

34058025490. ✗ 0.7 A

34058025491. ✗ 75 A

34058025492. ✗ 110 A

Question Number : 14 Question Id : 3405806374 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

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: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

What is the operational temperature of Autoclave

Options :

34058025493. ✖ 500^0c

34058025494. ✖ 1000^0c

34058025495. ✔ 150^0c

34058025496. ✖ 250^0c

Question Number : 15 Question Id : 3405806375 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

If the peak value of a certain sine wave voltage is 5 V, what is the rms value

Options :

34058025497. ✖ 0.707 V

34058025498. ✖ 3.535 V

34058025499. ✔ 5 V

34058025500. ✖ 1.17 V

Question Number : 16 Question Id : 3405806376 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

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: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

In a certain series RC circuit, $V_R = 4$ V and $V_C = 6$ V, what is the magnitude of the total voltage

Options :

34058025501. ✔ 7.2 V

34058025502. ✖ 4 V

34058025503. ✖ 6 V

34058025504. ✖ 52 V

Question Number : 17 Question Id : 3405806377 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

How many NOR gates are required to obtain AND operation

Options :

34058025505. ✖ 2

34058025506. ✔ 3

34058025507. ✖ 4

34058025508. ✖ 1

Question Number : 18 Question Id : 3405806378 Question Type : MCQ Option Shuffling : Yes

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Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The output of a logic gate is 1 when all its inputs are at logic 1. The gate is either

Options :

34058025509. ✓ An OR or an X-NOR

34058025510. ✗ An AND or a NAND

34058025511. ✗ An OR or an X-OR

34058025512. ✗ A NAND or an X-NOR

Question Number : 19 Question Id : 3405806379 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The logical expression $A + AB + ABC + ABCD + ABCDE + \ldots$ is equal to

Options :

34058025513. ✗ 1

34058025514. ✓ A

34058025515. ✗ $A + AB$

34058025516. ✗ AB

Question Number : 20 Question Id : 3405806380 Question Type : MCQ Option Shuffling : Yes

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Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which of the following Boolean algebraic expressions is incorrect

Options :

34058025517. ✗ $A + \bar{A}\,B = A + B$

34058025518. ✓ $A + A\,B = B$

34058025519. ✗ $(A + B)(A + C) = A + BC$

34058025520. ✗ $(A + \bar{B})(A + B) = A$

Question Number : 21 Question Id : 3405806381 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The adder preferred for applications where circuit minimization is more important than speed is

Options :

34058025521. ✗ Parallel adder

34058025522. ✓ Serial adder

34058025523. ✗ Full adder

34058025524. ✗ Half adder

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Question Number : 22 Question Id : 3405806382 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which logic gate is a basic comparator

Options :

34058025525. ✖ NOR gate

34058025526. ✖ NAND gate

34058025527. ✖ X-OR gate

34058025528. ✔ X-NOR gate

Question Number : 23 Question Id : 3405806383 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

A logic circuit that accepts several data inputs and allow only one of them at a time to get through to the output is called

Options :

34058025529. ✔ Multiplexer

34058025530. ✖ Demultiplexer

34058025531. ✖ Transmitter

34058025532. ✖ Receiver

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Question Number : 24 Question Id : 3405806384 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

A 16: 1 multiplexer can be used to design

Options :

34058025533. ✔ 4 variable logic function

34058025534. ✘ BCD to binary code converter

34058025535. ✘ BCD to 7 segment decoder

34058025536. ✘ Full adder

Question Number : 25 Question Id : 3405806385 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which of the following flip-flop is used as a latch

Options :

34058025537. ✘ J-K flip-flop

34058025538. ✘ Master-slave flip-flop

34058025539. ✘ T flip-flop

34058025540. ✔ D flip-flop

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Question Number : 26 Question Id : 3405806386 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Master- slave configuration is used in flip-flops to

Options :

34058025541. ✗ Increase its clocking rate

34058025542. ✗ Reduce power dissipation

34058025543. ✓ Eliminate race -around condition

34058025544. ✗ Improve its reliability

Question Number : 27 Question Id : 3405806387 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The integral $\int_{-\infty}^{\infty} \delta\left(t-\frac{\pi}{6}\right) 6\sin(t)\,dt$ evaluate to

Options :

34058025545. ✗ 6

34058025546. ✓ 3

34058025547. ✗ 1.5

34058025548. ✗ 0

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Question Number : 28 Question Id : 3405806388 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The real function f(t) has Fourier transform F(ω). The Fourier transform of

[f(t)-f(-t)] is

Options :

34058025549. ✖ Zero

34058025550. ✖ Real

34058025551. ✖ Real and odd

34058025552. ✔ Imaginary

Question Number : 29 Question Id : 3405806389 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The Fourier transform $x(t)=e^{-at}\,u(-t)$, when u(t) is unit step function

Options :

34058025553. ✖ Exist for any real value of a

34058025554. ✖ Does not exist for any real value of a

34058025555. ✔ Exist if the real value of a is strictly negative

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34058025556. ✗ Exists if the real value of a is strictly positive

Question Number : 30 Question Id : 3405806390 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

u(t) represents the unit step function. The Laplace transform of u(t-τ) is

Options :

34058025557. ✗ $\frac{1}{s\tau}$

34058025558. ✗ $\frac{1}{s-\tau}$

34058025559. ✓ $\frac{e^{-s\tau}}{s}$

34058025560. ✗ $e^{-s\tau}$

Question Number : 31 Question Id : 3405806391 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The region of Convergence (ROC) of the Z-transform of a causal unit step discrete-time sequence is

Options :

34058025561. ✗ $|Z| < 1$

34058025562. ✗ $|Z| \leq 1$

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34058025563. ✓ $|Z| > 1$

34058025564. ✗ $|Z| \geq 1$

Question Number : 32 Question Id : 3405806392 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The highest frequency present in signal x(t)is f_{max}. The highest frequency present in the signal $y(t) = x^2(t)$ is

Options :

34058025565. ✗ $\frac{1}{fmax}$

34058025566. ✗ f_{max}

34058025567. ✓ $2f_{max}$

34058025568. ✗ $4f_{max}$

Question Number : 33 Question Id : 3405806393 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

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Three DFT coefficients, out of the DFT coefficients of a five-point real sequence are given as: X(0) = 0, X(1) = 1-j1 and X(3) = 2 + j2. The zeroth value of the sequence x(n)

Options :

34058025569. ✖ 1

34058025570. ✔ 2

34058025571. ✖ 3

34058025572. ✖ 4

Question Number : 34 Question Id : 3405806394 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Consider a low-pass filter module with a pass band ripple of δ in the gain magnitude. If M such identical modules are cascaded, ignoring the loading effects, the pass-band ripple of the cascade is

Options :

34058025573. ✔ $1-(1-\delta)^M$

34058025574. ✖ δ^M

34058025575. ✖ $(1-\delta^M)$

34058025576. ✖ $(1-\delta)^M$

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Question Number : 35 Question Id : 3405806395 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The Laplace transform of the function f(t). u(t) is F(s). where u(t) represents the unit step function. The inverse Laplace transform of $e^{-s}F(s)$ is

Options :

34058025577. ✗ $f(t)\ u(t-1)$

34058025578. ✗ $f(t-1)\ u(t)$

34058025579. ✓ $f(t-1)\ u(t-1)$

34058025580. ✗ $f(t)/t-1$

Question Number : 36 Question Id : 3405806396 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The fundamental period of the sequence $x[n] = 3\sin(1.3\pi n+0.5\pi) + 5\sin(1.2\pi n)$ is

Options :

34058025581. ✓ 20

34058025582. ✗ $\frac{2\pi}{1.3\pi}$

34058025583. ✗ $\frac{2\pi}{1.2\pi}$

34058025584. ✗ 10

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Question Number : 37 Question Id : 3405806397 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

An ammeter with input resistance of 50 Ω gives full scale deflection for 50 μA current. The input resistance of a 0 – 1 mA ammeter obtained by connecting a shunt across the 0 – 50 μA meter will be

Options :

34058025585. ✖ 50 Ω

34058025586. ✖ 25 Ω

34058025587. ✖ 5 Ω

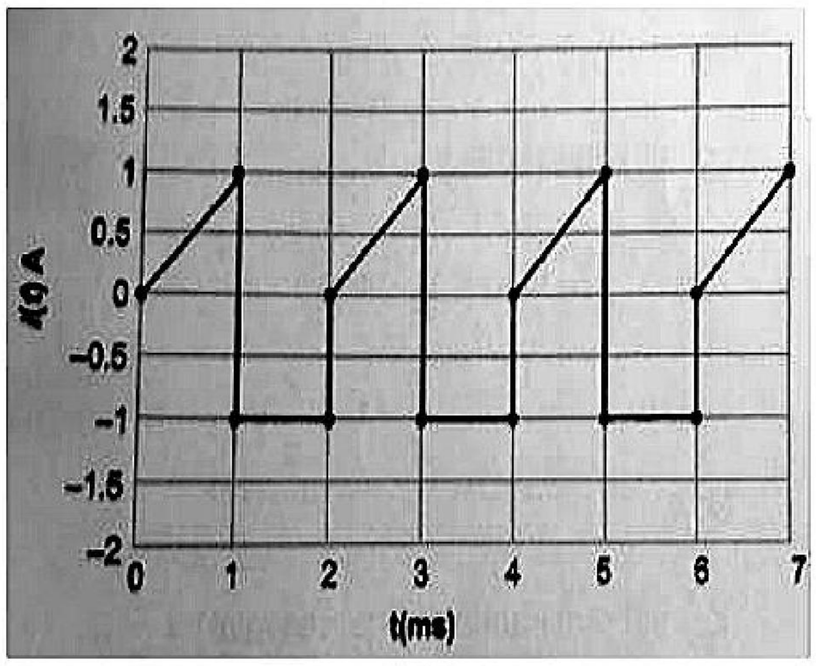
34058025588. ✔ 2.5 Ω

Question Number : 38 Question Id : 3405806398 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

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The current waveform i(t) shown below, is passed through a PMMC type ammeter. The reading of the ammeter up to two decimal place is



Options :

34058025589. ✔ -0.25 A

34058025590. ✘ -0.12 A

34058025591. ✘ 0.37 A

34058025592. ✘ 0.5 A

Question Number : 39 Question Id : 3405806399 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

A resistance potentiometer has a total resistance of 10000 Ω and is rated 4 W. If the range of potentiometer is 0 to 100 mm, then sensitivity in V/mm

Options :

34058025593. ✘ 1.0

34058025594. ✔ 2.0

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34058025595. ✖ 2.5

34058025596. ✖ 25

Question Number : 40 Question Id : 3405806400 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

A wire potentiometer of length 11 m and resistance 1 Ω/m balances a standard cell voltage of 1.018 V at a length of 10 m 18 cm. If the voltage of the battery supplying the current through the potentiometer is 2.0 V, then the value of the series resistance connected to the potentiometer is

Options :

34058025597. ✔ 9 Ω

34058025598. ✖ 90 Ω

34058025599. ✖ 900 Ω

34058025600. ✖ 990 Ω

Question Number : 41 Question Id : 3405806401 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The bridge most suited for measurement of a four-terminal resistance in the range of 0.001 Ω to 0.1 Ω is

Options :

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34058025601. ✗ Wien's bridge

34058025602. ✓ Kelvin double bridge

34058025603. ✗ Maxwell's bridge

34058025604. ✗ Schering bridge

Question Number : 42 Question Id : 3405806402 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The base units in SI system are

Options :

34058025605. ✗ Metre, kilogramme, second

34058025606. ✗ Metre, kilogramme, second, ampere

34058025607. ✓ Metre, kilogramme, second, ampere, kelvin, candela, mole

34058025608. ✗ Metre, kilogramme, second, ampere, kelvin, candela

Question Number : 43 Question Id : 3405806403 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

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The voltage of a circuit is measured by a voltmeter having input impedance comparable with the output impedance of the circuit thereby causing an error in voltage measurement. This error may be called as

Options :

34058025609. ✗ Gross Error

34058025610. ✗ Random Error

34058025611. ✗ Error caused by misuse of instrument

34058025612. ✓ Error caused by loading effect

Question Number : 44 Question Id : 3405806404 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

A set of readings has a wide range. Therefore, it has

Options :

34058025613. ✓ Low precision

34058025614. ✗ High precision

34058025615. ✗ Medium accuracy

34058025616. ✗ High accuracy

Question Number : 45 Question Id : 3405806405 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

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: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

If the confidence level is 0.95, then the values lying outside the confidence intervals are

Options :

34058025617. ✗ 1 in 5

34058025618. ✓ 1 in 20

34058025619. ✗ 1 in 100

34058025620. ✗ 1 in 1000

Question Number : 46 Question Id : 3405806406 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The true value of Q of a coil is 245 and the measured value of 244.5. The ratio of distributed capacitance to self-capacitance of the coil is

Options :

34058025621. ✓ $2.04 \text{ X } 10^{-3}$

34058025622. ✗ 1.002

34058025623. ✗ 0.997

34058025624. ✗ 100

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Question Number : 47 Question Id : 3405806407 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

A Hall effect transducer is used for the measurement of a magnetic field of 1.5 Wb/m^2 with a copper transducer for which Hall effect coefficient is -52×10^{-12} V-m/A-Wb m^{-2}. The thickness of the element is 2 mm and the current passing is 5 A, Find the voltage generated

Options :

34058025625. ✓ $-0.195\ \mu V$

34058025626. ✗ $0.195\ \mu V$

34058025627. ✗ -390 mV

34058025628. ✗ -390×10^{-9} V

Question Number : 48 Question Id : 3405806408 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

A cadmium sulphide cell has the highest response for a light of wavelength of nearly

Options :

34058025629. ✗ 300 nm

34058025630. ✗ 800 nm

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34058025631. ✓ 500 nm

34058025632. ✗ 600 nm

Question Number : 49 Question Id : 3405806409 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

A quartz piezo-electric crystal having a thickness of 2mm and voltage sensitivity of 0.05 V-m/N is subjected to a pressure of 1.5MN/m^2. If permittivity = 40.6 X 10^{-12} F/m, the output voltage will be

Options :

34058025633. ✗ 100 V

34058025634. ✓ 150 V

34058025635. ✗ 165 V

34058025636. ✗ 0 V

Question Number : 50 Question Id : 3405806410 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The coils having self-inductance of 10mH and 15mH have an effective inductance of 40mH, when connected in series aiding. What will be the equivalent if we connect them in series-opposing

Options :

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34058025637. ✗ 20mH

34058025638. ✓ 10mH

34058025639. ✗ 5mH

34058025640. ✗ Zero

Question Number : 51 Question Id : 3405806411 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

A resistance potentiometer is a

Options :

34058025641. ✗ First order instruments

34058025642. ✓ Zero order instruments

34058025643. ✗ Second order instruments

34058025644. ✗ First and second order instruments

Question Number : 52 Question Id : 3405806412 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

An advantage of a permanent magnet coil instrument is that it

Options :

ZOLLEGE.in

34058025645. ✗ Free from fiction error

34058025646. ✓ Has high (torque/weight of the moving parts) ratio

34058025647. ✗ Has low (torque/weight of the moving parts) ratio

34058025648. ✗ Can be used on both a.c. and d.c.

Question Number : 53 Question Id : 3405806413 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

If a dynameter type wattmeter is connected in an ac circuit, the power indicated by the wattmeter will be

Options :

34058025649. ✗ Volt-ampere product

34058025650. ✓ Average power

34058025651. ✗ Peak power

34058025652. ✗ Instantaneous power

Question Number : 54 Question Id : 3405806414 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

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A photo voltaic cell is connected across a very large value of resistance, its sensitivity at higher illumination levels is typically

Options :

34058025653. ✗ Infinity

34058025654. ✗ Zero

34058025655. ✗ Some finite value which is very large

34058025656. ✓ Some finite value which is very small and nears zero

Question Number : 55 Question Id : 3405806415 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

In a Q meter, an inductor tunes to 2MHz with 450 pF and to 4MHz with 90 pF.

The distributed capacitance of the inductor is

Options :

34058025657. ✓ 30 pF

34058025658. ✗ 45 pF

34058025659. ✗ 90 pF

34058025660. ✗ 360 pF

Question Number : 56 Question Id : 3405806416 Question Type : MCQ Option Shuffling : Yes

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Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which one of the following statement is not correct

Options :

34058025661. ✓ It is not possible to have precise measurement which are not accurate

34058025662. ✗ Correctness in measurement requires both accuracy and precision

34058025663. ✗ Reproducibility and consistency are expressions that best describe precision in measurements

34058025664. ✗ An instrument with 2% accuracy is better than another with 5% accuracy

Question Number : 57 Question Id : 3405806417 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The dynamic characteristics of capacitive transducer are similar to those of

Options :

34058025665. ✗ Low pass filters

34058025666. ✓ High pass filters

34058025667. ✗ Notch filters

34058025668. ✗ Band stop filters

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Question Number : 58 Question Id : 3405806418 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which of the photoelectric transducers is used for production of electric energy by converting solar energy

Options :

34058025669. ✗ Photo emissive

34058025670. ✗ Photo diode

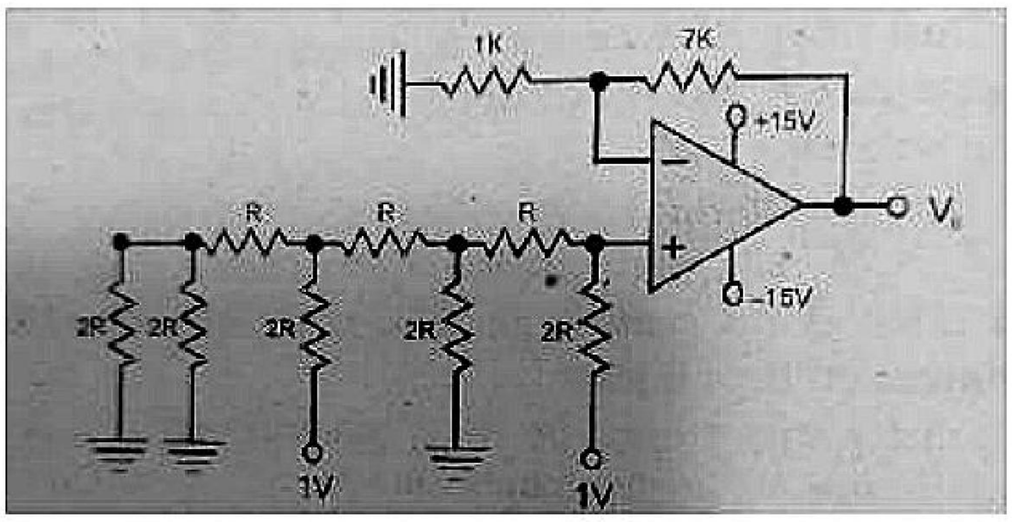
34058025671. ✗ Photo transistor

34058025672. ✓ Photo voltaic cell

Question Number : 59 Question Id : 3405806419 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

For the 4- bit DAC shown, the output voltage V is



Options :

34058025673. ✗ 10 V

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34058025674. ✓ 5V

34058025675. ✗ 4V

34058025676. ✗ 8V

Question Number : 60 Question Id : 3405806420 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The contents of the accumulator in an 8085 microprocessor are altered after the execution of the instruction.

Options :

34058025677. ✗ CMP C

34058025678. ✗ CPI 3 A

34058025679. ✓ ANI 5 C

34058025680. ✗ ORA A

Question Number : 61 Question Id : 3405806421 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

A memory system has a total of 8 memory chips, each with 12 address lines and 4 data lines. The total size of memory system is

Options :

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34058025681. ✓ 16 kbytes

34058025682. ✗ 48 kbytes

34058025683. ✗ 32 kbytes

34058025684. ✗ 64 kbytes

Question Number : 62 Question Id : 3405806422 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Voltage series feedback (also called series – shunt feedback) result in

Options :

34058025685. ✗ Increase in both input and output impedance

34058025686. ✗ Decrease in both input and output impedance

34058025687. ✓ Increase in input impedance and decrease in output impedance

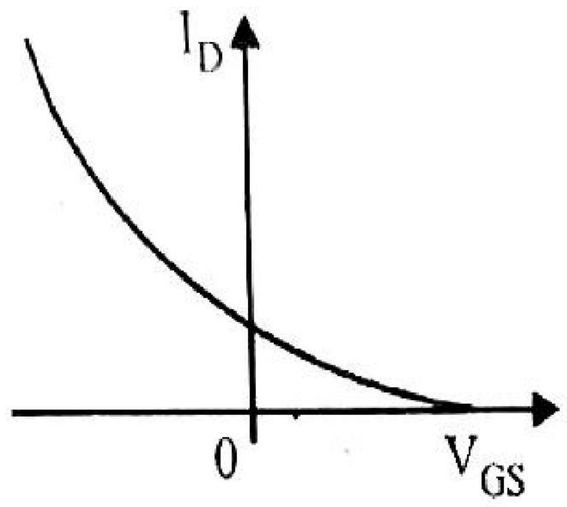
34058025688. ✗ Decrease in input impedance and increase in output impedance

Question Number : 63 Question Id : 3405806423 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

ZOLLEGE.in

The variation of drain current with gate-to-source voltage (I_D -V_{GS} characteristic) of a MOSFET is shown below. The MOSFET is



Options :

34058025689. ✗ An n-channel depletion mode device

34058025690. ✗ An n-channel enhancement mode device

34058025691. ✓ An p-channel depletion mode device

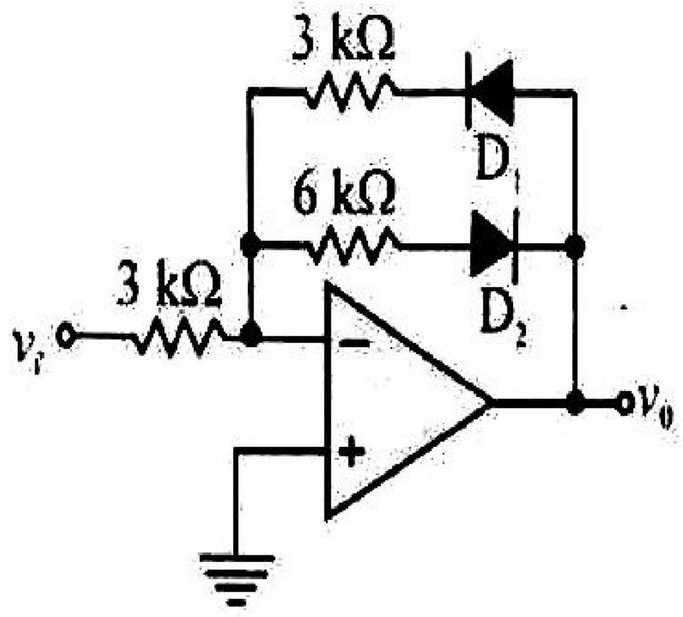
34058025692. ✗ An p-channel enhancement mode device

Question Number : 64 Question Id : 3405806424 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

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In the circuit shown below if input voltage is 2V, then the output voltage is



Options :

34058025693. ✖ 4V

34058025694. ✔ -4V

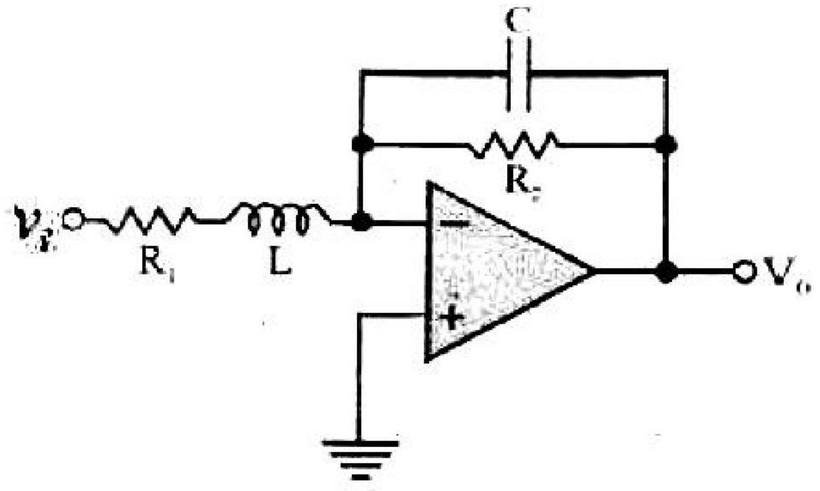
34058025695. ✖ 3V

34058025696. ✖ -3V

Question Number : 65 Question Id : 3405806425 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The OP-AMP circuit shown represent a



Options :

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34058025697. ✗ High pass filter

34058025698. ✓ Low pass filter

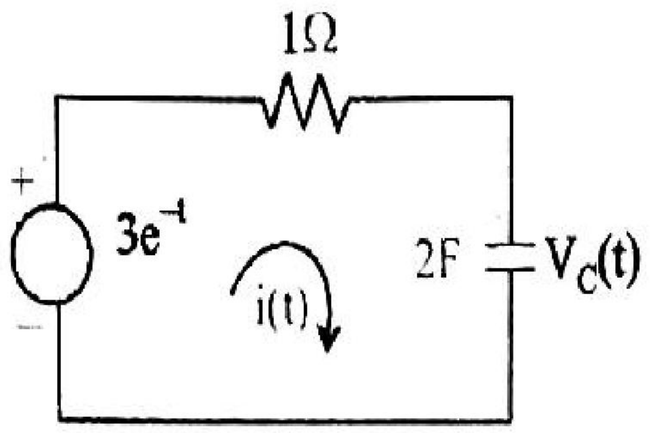
34058025699. ✗ Band pass filter

34058025700. ✗ Band reject filter

Question Number : 66 Question Id : 3405806426 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

A circuit consisting a 1Ω resistor and a 2F capacitor in series is excited from a voltage source with the voltage expressed as $3e^{-t}$, as shown in given figure. If the i(0-)and V_c(0-)both are zero, then the values of i(0+) and i(∞) will be respectively



Options :

34058025701. ✗ 3 A and 1.5 A

34058025702. ✗ 1.5 A and zero

34058025703. ✓ 3A and zero

34058025704. ✗ 1.5 and 3A

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Question Number : 67 Question Id : 3405806427 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

For V(s)= $\frac{s+2}{s(s+1)}$, the initial and final value of v(t) will be respectively

Options :

34058025705. ✗ 1 and 1

34058025706. ✗ 2 and 2

34058025707. ✗ 2 and 1

34058025708. ✓ 1 and 2

Question Number : 68 Question Id : 3405806428 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The Fourier transform of a function g(t) is given by $G(w) = \frac{\omega^2+21}{\omega^2+9}$. Then the function g(t) is given as

Options :

34058025709. ✓ $\delta(t) + 2\exp(-3|t|)$

34058025710. ✗ $cos3\omega t + 21\exp(-3t)$

34058025711. ✗ $sin3\omega t + 7cos\omega t$

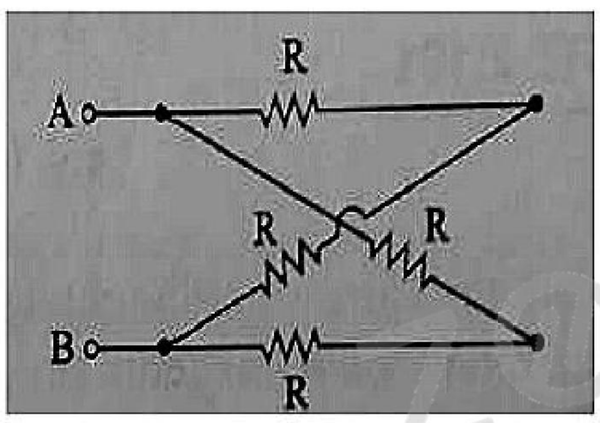
ZOLLEGE.in

34058025712. ✖ $sin3\omega t + 21\exp(-3t)$

Question Number : 69 Question Id : 3405806429 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Four resistances of equal value, R are connected as shown below. What is the equivalent resistance between the terminal A and B?



Options :

34058025713. ✖ R/4

34058025714. ✖ A/2

34058025715. ✖ 4 R

34058025716. ✔ R

Question Number : 70 Question Id : 3405806430 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

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Power consumed by a pure inductor is

Options :

34058025717. ✗ Infinite

34058025718. ✗ Very high

34058025719. ✓ Zero

34058025720. ✗ Very small

Question Number : 71 Question Id : 3405806431 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The product of voltage and current in an ac circuit is called

Options :

34058025721. ✗ Active power

34058025722. ✓ Apparent power

34058025723. ✗ Average power

34058025724. ✗ Reactive power

Question Number : 72 Question Id : 3405806432 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

In a series resonant circuit, a change in supply voltage will cause a change in

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Options :

34058025725. ✓ The current drawn

34058025726. ✗ The Q-factor of the circuit

34058025727. ✗ The bandwidth of the circuit

34058025728. ✗ The resonant frequency.

Question Number : 73 Question Id : 3405806433 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which of the following conditions is true for both series and parallel resonance

Options :

34058025729. ✗ Impedance is minimum

34058025730. ✓ Power factor is unity

34058025731. ✗ Power factor is zero

34058025732. ✗ Power is low

Question Number : 74 Question Id : 3405806434 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The width of the depletion layer of a junction will increase when

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Options :

34058025733. ✗ The p-n junction is forward biased

34058025734. ✓ The p-n junction is reverse biased

34058025735. ✗ The p-n junction is forward biased with a voltage which is higher than the normal rating

34058025736. ✗ The p-n junction is kept unbiased for a long time

Question Number : 75 Question Id : 3405806435 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which of the following statements is not true for a Zener diode

Options :

34058025737. ✗ A forward-biased Zener diode behaves identical to a forward-biased diode

34058025738. ✗ Zener diode under the reverse-biased condition is used as a voltage regulator

34058025739. ✓ Zener diode under the forward-biased condition is used as a voltage regulator

34058025740. ✗ The operation of a reverse-biased Zener diode is different than that of reverse-biased diode.

Question Number : 76 Question Id : 3405806436 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

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Correct Marks : 1 Wrong Marks : 0

Linear variable differential transformer is a

Options :

34058025741. ✗ Temperature-sensitive transducer

34058025742. ✗ Pressure transducer

34058025743. ✓ Displacement transducer

34058025744. ✗ Vibration measuring transducer

Question Number : 77 Question Id : 3405806437 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

For the system $\frac{C(s)}{R(s)} = \frac{16}{s^2+8s+16}$ the nature of the time response will be

Options :

34058025745. ✗ Over damped

34058025746. ✗ Under damped

34058025747. ✓ Critically damped

34058025748. ✗ Damping ratio is zero

Question Number : 78 Question Id : 3405806438 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

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: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The natural frequency of oscillations of the output for the equation

$\frac{d^2x}{dt^2} + 1.5\frac{dx}{dt} + 4x = 1$ is

Options :

34058025749. ✗ 0 rad/sec

34058025750. ✗ 1.5 rad/sec

34058025751. ✓ 2 rad/sec

34058025752. ✗ 4 rad/sec

Question Number : 79 Question Id : 3405806439 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Unit impulse response of a system in Laplace Transform gives

Options :

34058025753. ✓ Transfer function

34058025754. ✗ System gain

34058025755. ✗ Unit step function

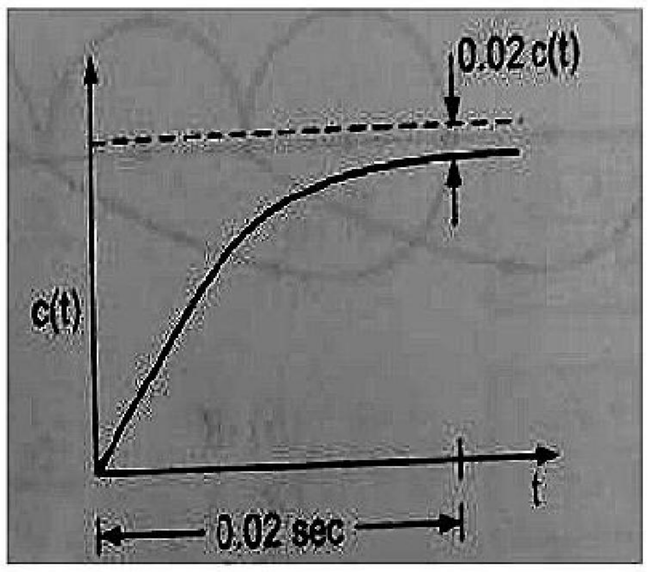
34058025756. ✗ Unit ramp function

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Question Number : 80 Question Id : 3405806440 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The unit step response of a first order system is shown below. The time constant of the system is _____



Options :

34058025757. ✓ 0.005 sec

34058025758. ✗ 2 sec

34058025759. ✗ 0.02 sec

34058025760. ✗ 0.5 sec

Question Number : 81 Question Id : 3405806441 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

In nature, the source of Bioelectric potential is _____

Options :

34058025761. ✗ Electronic

ZOLLEGE.in

34058025762. ✗ Electric

34058025763. ✓ Ionic

34058025764. ✗ Mechanical

Question Number : 82 Question Id : 3405806442 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

After a cell is stimulated, the time required for the cell to return to its pre-stimulus state is known as _____

Options :

34058025765. ✗ Restoration period

34058025766. ✗ Regain period

34058025767. ✓ Refactory period

34058025768. ✗ Regenerative period

Question Number : 83 Question Id : 3405806443 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The superimposed wave of neuron potentials operating in a non-synchronized manner in a physical sense is known as_____

Options :

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34058025769. ✖ VCG

34058025770. ✖ ECG

34058025771. ✔ EEG

34058025772. ✖ PCG

Question Number : 84 Question Id : 3405806444 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Amplitude Zone Time Epoch Coding contains digital logic, which is able to detect _____

Options :

34058025773. ✔ Baseline wander

34058025774. ✖ QRS complex

34058025775. ✖ R-R interval

34058025776. ✖ Motion artefact

Question Number : 85 Question Id : 3405806445 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

ZOLLEGE.in

_____indicates Ventricular Muscle Depolarization

Options :

34058025777. ✗ P wave

34058025778. ✓ QRS complex

34058025779. ✗ T wave

34058025780. ✗ PR interval

Question Number : 86 Question Id : 3405806446 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The non-invasive method used to measure the saturation of oxygen carried in your red blood cells is

Options :

34058025781. ✗ Ear Oximetry

34058025782. ✓ Pulse Oximetry

34058025783. ✗ Skin-Reflectance Oximetry

34058025784. ✗ Intravascular Oximetry

Question Number : 87 Question Id : 3405806447 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

ZOLLEGE.in

Correct Marks : 1 Wrong Marks : 0

Electromagnetic principle is used to measure blood flow because blood has a high _____

Options :

34058025785. ✗ Magnetic induction

34058025786. ✗ Electrical resistivity

34058025787. ✓ Electrical conductivity

34058025788. ✗ Impedance

Question Number : 88 Question Id : 3405806448 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Bio-potential amplifier provides _____

Options :

34058025789. ✓ High input impedance and high CMRR

34058025790. ✗ Low input impedance and high CMRR

34058025791. ✗ High input impedance and low CMRR

34058025792. ✗ Low input impedance and low CMRR

Question Number : 89 Question Id : 3405806449 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

ZOLLEGE.in

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Adams stokes attacks can be successfully treated with a _____

Options :

34058025793. ✗ Defibrillator

34058025794. ✗ Nerve stimulator

34058025795. ✗ Artificial heart valve

34058025796. ✓ Pacemaker

Question Number : 90 Question Id : 3405806450 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The major health concern with MRI is_____

Options :

34058025797. ✓ Localized burns due to metallic implants

34058025798. ✗ Radiation dose

34058025799. ✗ Reaction to applied drugs

34058025800. ✗ Extreme cold

Question Number : 91 Question Id : 3405806451 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

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: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

X- rays when passed through a strong uniform magnetic field, Then they

Options :

34058025801. ✖ Get deflected in the direction perpendicular to the field

34058025802. ✖ Get deflected in the direction of the field

34058025803. ✖ Get deflected in the direction opposite to the field

34058025804. ✔ Do not get deflected at all

Question Number : 92 Question Id : 3405806452 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The speed of ultrasound depends upon

Options :

34058025805. ✖ Frequency

34058025806. ✖ Amplitude

34058025807. ✖ Phase

34058025808. ✔ Material

Question Number : 93 Question Id : 3405806453 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

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: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

In nuclear imaging PET and SPECT are so unique because _____

Options :

34058025809. ✓ They show the metabolic functions

34058025810. ✗ They give more details about the imaged organ/tissue

34058025811. ✗ They do not require dyes

34058025812. ✗ They do not require X – Rays

Question Number : 94 Question Id : 3405806454 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

For imaging purposes _____radiations are used

Options :

34058025813. ✓ Gamma

34058025814. ✗ Alpha

34058025815. ✗ Beta

34058025816. ✗ Delta

Question Number : 95 Question Id : 3405806455 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

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: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Process done with CT to visualize the flow of blood in the renal arteries is known as _____

Options :

34058025817. ✘ CT Cardiography

34058025818. ✘ Simple CT

34058025819. ✔ CT Angiography

34058025820. ✘ CT Angioplasty

Question Number : 96 Question Id : 3405806456 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

In direct current defibrillator, a pulse with a duration of about 5 ms is generated by means of a

Options :

34058025821. ✘ Monostable multivibrator

34058025822. ✘ Clock IC 555

34058025823. ✔ Capacitor discharge

34058025824. ✘ Astable multivibrator

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Question Number : 97 Question Id : 3405806457 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The mode of ventilation which allows the patient to breathe spontaneously at his/her own respiratory rate and depth between the ventilator breaths is____

Options :

34058025825. ✗ Pressure Control Mode

34058025826. ✗ Assist Control Mode

34058025827. ✓ Synchronous Intermittent Mandatory Ventilation

34058025828. ✗ Controlled Mandatory Ventilation

Question Number : 98 Question Id : 3405806458 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

In a spirometer the volume of air that can forcibly be blown out after full inspiration is known as _____

Options :

34058025829. ✓ Forced vital capacity

34058025830. ✗ Forced expiratory volume in 1 second

34058025831. ✗ Peak expiratory flow

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34058025832. ✖ Maximum voluntary ventilation

Question Number : 99 Question Id : 3405806459 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

What is the compression ratio of AZTECH coded delta is given as

[-3, -100, 5, 55, -2, -120, 10, 10]

Options :

34058025833. ✖ 1:10

34058025834. ✔ 2:5

34058025835. ✖ 1:2

34058025836. ✖ 3:7

Question Number : 100 Question Id : 3405806460 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The range of wavelength for the near IR spectrometer is_____

Options :

34058025837. ✔ **0.8-250 µm**

34058025838. ✖ **2.5-25 µm**

34058025839. ✖ **25-1000 µm**

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34058025840. ✖ 250-1000 µm

Question Number : 101 Question Id : 3405806461 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The distal row of the carpal bones consists of

Options :

34058025841. ✖ Scaphoid

34058025842. ✖ Lunate

34058025843. ✖ Triquatral

34058025844. ✔ Trapezium

Question Number : 102 Question Id : 3405806462 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The joint between first and second cervical vertebrae

Options :

34058025845. ✖ Gliding joint

34058025846. ✖ Saddle joint

34058025847. ✔ Pivot joint

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34058025848. ✖ Hind joint

Question Number : 103 Question Id : 3405806463 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The life span of RBCs is approximately _____ days

Options :

34058025849. ✖ 20

34058025850. ✔ 120

34058025851. ✖ 1200

34058025852. ✖ 2

Question Number : 104 Question Id : 3405806464 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Sarcolemma is the membrane which covers

Options :

34058025853. ✖ Nerve fibre

34058025854. ✔ Muscle fibre

34058025855. ✖ Visceral fibre

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34058025856. ✖ Spinal cord

Question Number : 105 Question Id : 3405806465 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Intercostal muscles are present in

Options :

34058025857. ✔ Ribs

34058025858. ✖ Thigh

34058025859. ✖ Diaphragm

34058025860. ✖ Abdomen

Question Number : 106 Question Id : 3405806466 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Formation of corpus luteum takes place under the influence of

Options :

34058025861. ✔ LH

34058025862. ✖ TSH

34058025863. ✖ Progesterone

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34058025864. ✗ Estrogen

Question Number : 107 Question Id : 3405806467 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

In which part of the respiration system, gaseous exchange takes place

Options :

34058025865. ✓ Alveoli

34058025866. ✗ Pharynx

34058025867. ✗ Larynx

34058025868. ✗ Trachea

Question Number : 108 Question Id : 3405806468 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Asphyxia occurs due to

Options :

34058025869. ✗ Deficient supply of CO_2

34058025870. ✗ Extreme supply of CO_2

34058025871. ✗ Sufficient supply of oxygen

34058025872. ✓

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Deficient supply of oxygen

Question Number : 109 Question Id : 3405806469 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

What is the colour code of O_2 supply in an ICU of a hospital

Options :

34058025873. ✖ Blue

34058025874. ✖ Red

34058025875. ✖ White

34058025876. ✔ Green

Question Number : 110 Question Id : 3405806470 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

_____ part of neuron is sometimes myelinated.

Options :

34058025877. ✖ Dendrite

34058025878. ✔ Axon

34058025879. ✖ Soma

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34058025880. ✖ Axon hillock

Question Number : 111 Question Id : 3405806471 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

For a biomaterial measurement of _____ is done by Constant stress test

Options :

34058025881. ✖ Ductility

34058025882. ✖ Toughness

34058025883. ✔ Creep

34058025884. ✖ Fatigue

Question Number : 112 Question Id : 3405806472 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Diamond and corundum are examples of _____ ceramics

Options :

34058025885. ✖ Glass

34058025886. ✔ Abrasives

34058025887. ✖ Refractories

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34058025888. ✖ Stone

Question Number : 113 Question Id : 3405806473 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which of the following statement is correct with regard to the mechanical valves

Options :

34058025889. ✖ Have very good Biocompatibility

34058025890. ✖ Reliability is very Low

34058025891. ✔ Long term anticoagulant therapy required

34058025892. ✖ Minimise the natural heart valve function

Question Number : 114 Question Id : 3405806474 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The frequency of operation of short wave diathermy is

Options :

34058025893. ✔ 17-27 MHz

34058025894. ✖ 20-102 MHz

34058025895. ✖ 0.5-25 MHz

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34058025896. ✖ 30-1000 MHz

Question Number : 115 Question Id : 3405806475 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The repair and reconstruction of the joint is called

Options :

34058025897. ✖ Arthrodesis

34058025898. ✖ Arthrotomy

34058025899. ✔ Arthroplasty

34058025900. ✖ Amputation

Question Number : 116 Question Id : 3405806476 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Approximate number of neurons present in an adult are _____

Options :

34058025901. ✖ 10 million

34058025902. ✖ 100 million

34058025903. ✖ 10 billion

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34058025904. ✓ 100 billion

Question Number : 117 Question Id : 3405806477 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Deficient salivation is known as

Options :

34058025905. ✗ Xerophthalmia

34058025906. ✓ Xerostomia

34058025907. ✗ Ptyalism

34058025908. ✗ Halitosis

Question Number : 118 Question Id : 3405806478 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Extensor muscle on back of arm is called

Options :

34058025909. ✗ Bisceps

34058025910. ✓ Triceps

34058025911. ✗ Brachialis

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34058025912. ✖ Flexor

Question Number : 119 Question Id : 3405806479 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

_____ uses creation of negative pressure for its function

Options :

34058025913. ✖ Ventilator

34058025914. ✖ Aspirator

34058025915. ✔ Suction aspirator

34058025916. ✖ Syringe pump

Question Number : 120 Question Id : 3405806480 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

A ECG Bio-amplifier is designed with a gain of 2048. What is the peak voltage of the ECG signal

Options :

34058025917. ✖ 1.28 V

34058025918. ✔ 2.45 V

34058025919. ✖ 1.96 V

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34058025920. ✖ 2.57 V

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