kanker.com bu PhD in ElevenoritetRanker.com www.FirstRanker.com Topic:- ELEC PHD S2 1) The complex number $\frac{(1+i)(2+i)(4+i)}{(1-i)}$ can be expressed in a + ib form as follows [Question ID = 5438] 1. 5 + 7*i* [Option ID = 21746] 2. -6 + 4i[Option ID = 21747] 3. -6 + 7i[Option ID = 21748] 4. -4 + 7i[Option ID = 21749] Correct Answer :-• -6 + 7i[Option ID = 21748] 2) If f(x) = (2x + 1)/(2x - 1) and g(x) = (x + 5)/(2x - 3) then g(f(x)) is [Question ID = 5439] 5x+3x+4 [Option ID = 21750] 2. $\frac{3x+7}{2}$ 4-x[Option ID = 21751] 2x - 53. 2x-3[Option ID = 21752] 12x - 44. -2x+5[Option ID = 21753] Correct Answer :-12x - 4-2x+5[Option ID = 21753] 3) $\lim_{x \to \pi} \frac{1 + \cos x}{\tan^2 x} =$ [Question ID = 5440] 1. 1 [Option ID = 21754] 2. -1 [Option ID = 21755] 3. 1/2[Option ID = 21756] 4. -1/2 [Option ID = 21757]

Correct Answer :-

· 1/2

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⁴⁾ For the given di	ker's choice	d2. Manuar Eirof		
	inerential equation	$\frac{d^2y}{dx^2} + \frac{www}{dx} - 2y = 0$	Canker com	jrstRanker.com
	_	un un		
[Question ID = 5441 1. $y(x) = Ae^{2x} -$	Be^{-x}			
[Option ID = 21758] 2. $y(x) = Ae^{-2x}$	$+Be^{x}$			
[Option ID = 21759] 3. $y(x) = Ae^{2x} +$	Be^{x}			
[Option ID = 21760] 4. $y(x) = Ae^{-2x}$	$+Be^{-x}$			
[Option ID = 21761]				
Correct Answer :- • $y(x) = Ae^{-2x}$	$+Be^{x}$			
[Option ID = 21759]				
5) Given $x = \frac{ct}{(1-3t)}$, $y = \frac{ct^2}{(1-4t)}$, where	t is a parameter and c	is a constant, then $\frac{dy}{dx}$ in terms	s of <i>t</i> only is
[Question ID = 5442 1. $\frac{2t(1-2t)(1-3t)^2}{(1-4t)^2}$:]			
2. $\frac{[\text{Option ID} = 21762]}{(1-2t)(1-4t)^2}$				
3. $\frac{[\text{Option ID} = 21763]}{(1-2t)(1+3t)^2}$				
[Option ID = 21764] 4. $\frac{(1-2t)(1-3t)^2}{(1-7t)^2}$				
[Option ID = 21765]				
Correct Answer :- • $\frac{2t(1-2t)(1-3t)^2}{(1-4t)^2}$				
[Option ID = 21762]				
6) The eigen value	s of the matrix $\begin{vmatrix} 1 \\ 1 \\ 3 \end{vmatrix}$	1 3 5 1 are 1 1		
[Question ID = 5443]			
[Option ID = 21766] 22,-3,-6				
[Option ID = 21767] 32,3,6				
[Option ID = 21768] 4. 2,-3,-6				

vSue Rawn teeven Caropapene singular? ranker's cho www.FirstRanker.com 4 0 2 12 6 0 www.FirstRanker.com [Question ID = 5444] 1. 1 [Option ID = 21770] 2. 0 [Option ID = 21771] 3. 4 [Option ID = 21772] 4. 2 [Option ID = 21773] Correct Answer :-• 4 [Option ID = 21772] If A is orthogonal matrix and $A = \begin{vmatrix} 0 & 2b & c \\ a & b & -c \\ a & -b & c \end{vmatrix}$, the values of a and b are 8) [Question ID = 5445] 1. $a = \pm \frac{1}{\sqrt{2}}b = \pm \frac{1}{\sqrt{6}}$ [Option ID = 21774] 2. $a = \pm \frac{1}{\sqrt{3}}b = \pm \frac{1}{\sqrt{2}}$ [Option ID = 21775] 3. $a = \pm 0b = \frac{1}{\sqrt{2}}$ [Option ID = 21776] 4. $a = \pm \frac{1}{\sqrt{3}}b = \pm 0$ [Option ID = 21777] Correct Answer :-• $a = \pm \frac{1}{\sqrt{2}}b = \pm \frac{1}{\sqrt{6}}$ [Option ID = 21774] 9) The particular solution for $Y''' - Y' = e^x + e^{-x}$ is [Question ID = 5446] 1. $\frac{x(e^{x}+e^{-x})}{2}$ 2. $\frac{[\text{Option ID} = 21778]}{2}$ [Option ID = 21779] 3. $\frac{-x(e^x + e^{-x})}{2}$ 4. $\frac{\frac{[\text{Option ID = 21780}]}{-(e^x + e^{-x})}}{2}$ [Option ID = 21781] Correct Answer : $x(e^{x}+e^{-x})$ 2 www.FirstRanker.com [Option ID = 21778]

1. parabol	on ID = 54	447]			W	ww.Firs	stRan	ker.co	om	W	ww.FirstRanker.com
	lic	21									
2. hyperbo	olic	2]									
[Option 3. none of	n ID = 2178 f these	3]									
[Optior 4. elliptic	n ID = 2178	4]									
[Optior	n ID = 2178	5]									
Correct A	nswer :-										
elliptic [Optior	n ID = 2178	5]									
11) -					, dx						
TT) Cor	nsider an	ordinar	y differe	ential equ	ation dt	= 4t + 4	. if x :	= x ₀ at	t=0, the	increme of $A = 0$	ent in x
Cal	culateu u	ang Kun	ge-kulla		-uer mu	nu-step m	etiou	with d St	iep size ($\Delta t = 0$. 2 13
	on ID = 54	4481									
1. 0.66 [C	יכ = עו ווכ = 0ption ID	+ 40] 21786]									
2. 0.44 [C	Dption ID =	21787]									
3. 0.88 [C 4 0 22 [C	Option ID =	21788] 21789]									
Correct A	Inswer :-	217201									
• 0.88 [0		21700]									
12) The minutes	e velocit) as follo	y v(in ki ws:	lometre	e/minute)) of a m	otorbike	which	starts f	rom res	t, is give	en at fixed intervals of time t
	,										
t	2	4	6	8	10	12	14	16	18	20	
t v	2 10	4 18	6 25	8 29	10 32	12 20	14 11	16 5	18 2	20 0	
t v	2 10	4 18	6 25	8 29	10 32	12 20	14 11	16 5	18 2	20 0	t in 20 minutes using Simpson
t v The app 1/3rd rul	2 10 proximat le is	4 18 e distan	6 25 ce (in k	8 29 silometre	10 32 es) roun	1220ded to to	14 11 wo plac	16 5 es of d	18 2 ecimals	20 0 covered	1 in 20 minutes using Simpson
t v The app 1/3rd rul	2 10 proximat le is	4 18 e distan	6 25 ce (in k	8 29 tilometre	10 32 (rs) roun	12 20 ded to tv	14 11 wo plac	16 5 es of d	18 2 ecimals	20 0 covered	1 in 20 minutes using Simpson
t v The app 1/3rd rul [Questic	2 10 proximat le is on ID = 54	4 18 :e distan 449]	6 25 ce (in k	8 29 xilometre	10 32 es) roun	12 20 ded to tv	14 11 wo plac	16 5 es of d	18 2 ecimals	20 0 covered	1 in 20 minutes using Simpson
t v The app 1/3rd rul [Questic 1. 200	2 10 proximat le is on ID = 54	4 18 re distan 449]	6 25 .ce (in k	8 29 kilometre	10 32 s) roun	12 20 ded to tv	14 11 wo plac	16 5	18 2 ecimals	20 0 covered	d in 20 minutes using Simpson
t v The app 1/3rd rul [Questic 1. 200 [Optior 2. 200	2 10 proximat le is on ID = 54 n ID = 2179	4 18 e distan 449]	6 25 .ce (in k	8 29 ilometre	10 32 s) roun	12 20 ded to tv	14 11 wo plac	16 5 es of d	18 2 ecimals	20 0 covered	1 in 20 minutes using Simpson
t v The app 1/3rd rul [Questic 1. 200 [Optior 2. 309	2 10 proximat le is on ID = 54 n ID = 2179	4 18 ce distan 449] 0]	6 25 .ce (in k	8 29 cilometre	10 32 (s) roun	12 20 ded to tv	14 11 wo plac	16 5 :es of d	18 2 ecimals	20 0 covered	1 in 20 minutes using Simpson
t v The app 1/3rd rul [Questic 1. 200 [Optior 2. 309 [Optior 3. 119	2 10 proximat le is on ID = 54 n ID = 2179 n ID = 2179	4 18 e distan 449] 0] 1]	6 25 .ce (in k	8 29 kilometre	10 32 (s) roun	12 20 ded to tv	14 11 wo plac	16 5 ces of d	18 2 ecimals	20 0 covered	1 in 20 minutes using Simpson
t v The app 1/3rd rul [Questic 1. 200 [Optior 2. 309 [Optior 3. 119 [Optior	2 10 proximat le is on ID = 54 n ID = 2179 n ID = 2179 n ID = 2179	4 18 e distan 449] 0] 1] 2]	6 25 .ce (in k	8 29 ilometre	10 32 s) roun	12 20 ded to tv	14 11 wo plac	16 5 :es of d	18 2 ecimals	20 0 covered	1 in 20 minutes using Simpson
t v The app 1/3rd rul [Questic 1. 200 [Optior 2. 309 [Optior 3. 119 [Optior 4. 234	2 10 proximat le is on ID = 54 n ID = 2179 n ID = 2179 n ID = 2179	4 18 ce distan 449] 0] 1] 2]	6 25 .ce (in k	8 29 cilometre	10 32 (s) roun	12 20 ded to tv	14 11 wo plac	16 5 ces of d	18 2 ecimals	20 0 covered	1 in 20 minutes using Simpson
t The app 1/3rd rul [Questic 1. 200 [Optior 2. 309 [Optior 3. 119 [Optior 4. 234 [Optior	2 10 proximat le is pn ID = 54 n ID = 2179 n ID = 2179 n ID = 2179 n ID = 2179 n ID = 2179	4 18 ce distan 449] 0] 1] 2] 3]	6 25 .ce (in k	8 29 kilometre	10 32 rs) roun	12 20 ded to tv	14 11 wo plac	16 5	18 2 ecimals	20 0 covered	1 in 20 minutes using Simpson
t v The app 1/3rd rus [Questic 1. 200 [Optior 2. 309 [Optior 3. 119 [Optior 4. 234 [Optior 4. 234 [Optior 4. 234 [Optior	2 10 proximat le is on ID = 54 n ID = 2179 n ID = 2179	4 18 ce distan 449] 0] 1] 2] 3]	6 25 .ce (in k	8 29 cilometre	10 32 s) roun	12 20 ded to tv	14 11 wo plac	16 5	18 2 ecimals	20 0 covered	1 in 20 minutes using Simpson
t v The app 1/3rd ru [Questic 1. 200 [Optior 2. 309 [Optior 3. 119 [Optior 4. 234 [Optior 4. 234 [Optior 4. 234 [Optior 4. 234 [Optior	2 10 10 10 10 10 10 10 10 10 10	4 18 ce distan 449] 0] 1] 2] 3]	6 25 .ce (in k	8 29 cilometre	10 32 •s) roun	12 20 ded to tv	14 11 wo plac	16 5	18 2 ecimals	20 0 covered	1 in 20 minutes using Simpson
t v The app 1/3rd ru [Questic 1. 200 [Optior 2. 309 [Optior 3. 119 [Optior 4. 234 [Optior 4. 234 [Optior 6. 309 [Optior	2 10 proximat le is on ID = 54 n ID = 2179 n ID = 2179	4 18 e distan 449] 0] 1] 2] 3]	6 25 .ce (in k	8 29 cilometre	10 32 •s) roun	12 20 ded to tv	14 11 wo plac	16 ses of d	18 2 ecimals	20 0 covered	1 in 20 minutes using Simpson
t v The app 1/3rd ru [Questic 1. 200 [Optior 2. 309 [Optior 3. 119 [Optior 4. 234 [Optior 4. 234 [Optior 4. 234 [Optior 1. 200 1. 20	2 10 10 10 10 10 = 54 10 = 2179 10 =	4 18 se distan 449] 0] 1] 2] 3] 1] s) = s ³	6 25 ce (in k	$\frac{8}{29}$	10 32 (rs) roun + a ₀ w	12 20 ded to tw	14 11 wo plac	16 5 es of d	18 2 ecimals	20 0 covered	i in 20 minutes using Simpson
t v The app 1/3rd ru [Questic 1. 200 [Optior 2. 309 [Optior 3. 119 (Optior 4. 234 [Optior 4. 234 [Optior • 309 [Optior • 309 [Optior • 309 [Optior • 309 [Optior	2 10 proximat le is on ID = 54 in ID = 2179 in ID =	4 18 e distan 449] 0] 1] 2] 3] 1] s) = s ³ er of rea	6 25 ce (in k $+ a_2 s$ l roots o	$\frac{8}{29}$ cilometre $^{2} + a_{1}s$ f p(s) is	10 32 (rs) roun + a ₀ w	12 20 ded to tv	14 11 wo plac	16 5 es of d	18 2 ecimals	20 0 covered	i in 20 minutes using Simpson
t v The app 1/3rd ru [Questic 1. 200 [Optior 2. 309 [Optior 3. 119 [Optior 4. 234 [Optior 4. 234 [Optior 4. 234 [Optior 1. 200 1. 200 (Optior 3. 119 [Optior 1. 200 [Optior 3. 119 [Optior 1. 200 [Optior 3. 119 [Optior 1. 200 [Optior 3. 119 [Optior 1. 200 [Optior 3. 119 [Optior 1. 200 [Optior 3. 119 [Optior 3. 119 [Optior 1. 200 [Optior 3. 119 [Optior 1. 200 [Optior 3. 119 [Optior 1. 200 [Optior 3. 119 [Optior 1. 200 [Optior 3. 119 [Optior 1. 200 [Optior 3. 119 [Optior 1. 200 [Optior 3. 119 [Optior 1. 200 [Optior 1. 200 [Opt	2 10 proximat le is on ID = 54 in ID = 2179 in ID =	4 18 :e distan 449] 0] 1] 2] 3] 1] s) = s ³ er of real	6 25 ce (in k $+ a_2 s$ l roots o	$\frac{8}{29}$ cilometre $a^2 + a_1 s$ f p(s) is	10 32 (rs) roun + a ₀ w	12 20 ded to tv	14 11 wo plac	16 5 es of d	18 2 ecimals	20 0 covered	d in 20 minutes using Simpson
t v The app 1/3rd ru [Questic 1. 200 [Optior 2. 309 [Optior 3. 119 [Optior 4. 234 [Optior 4. 234 [Optior 4. 234 [Optior 4. 234 [Optior 4. 234 [Optior 5. 309 [Optior 5. 30] [Optior 5. 30]	2 10 10 10 10 = 54 10 = 2179 10 = 2179	4 18 re distan 449] 0] 1] 2] 3] 1] s) = s ³ er of real 450]	6 25 ce (in k $+ a_2 s$ l roots o	$\frac{8}{29}$ cilometre $^{2} + a_{1}s$ f p(s) is	10 32 (rs) roun + a ₀ v	12 20 ded to tv	14 11 wo plac	16 5 es of d	18 2 ecimals	20 0 covered	i in 20 minutes using Simpson
t v The app 1/3rd ru [Questic 1. 200 [Optior 2. 309 [Optior 3. 119 [Optior 4. 234 [Optior 4. 234 [Optior Correct A • 309 [Optior 13) Con roots. Th [Questic 1. 0 [Optior	2 10 10 10 10 $= 54$ 10 $= 2179$ 10 $= 54$ 10 $= 2179$ 10 $= 54$	4 18 ie distant 449] 0] 1] 2] 3] 1] s) = s ³ er of read 450] 4]	6 25 ce (in k $+ a_2 s$ l roots o	$\frac{8}{29}$ cilometre $a^2 + a_1 s$ f p(s) is	10 32 (rs) roun + a ₀ v	12 20 ded to tv vith all real	14 11 wo plac	16 5 es of d	18 2 ecimals	20 0 covered	1 in 20 minutes using Simpson its derivative p'(s) has no real
t v The app 1/3rd ru [Questic 1. 200 [Optior 2. 309 [Optior 3. 119 (Optior 4. 234 [Optior 4. 234 [Optior 4. 234 [Optior 4. 234 [Optior 4. 234 [Optior 5. 119 (Optior 13) Con roots. Th [Questic 1. 0 [Optior 2. 1	2 10 10 10 10 10 10 10 10 10 10	4 18 :e distant 449] 0] 1] 2] 3] 1] s) = s ³ er of real 450] 4]	6 25 I ce (in k	$\frac{8}{29}$ cilometre $^{2} + a_{1}s$ f p(s) is	10 32 (rs) roun + a ₀ v	12 20 ded to tv vith all real	14 11 wo plac	16 5 ces of d	18 2 ecimals	20 0 covered	1 in 20 minutes using Simpson its derivative p'(s) has no real
t v The app 1/3rd ru [Questic 1. 200 [Optior 2. 309 [Optior 3. 119 [Optior 4. 234 [Optior 4. 234 [Optior Correct A • 309 [Optior 13) Con roots. Th [Questic 1. 0 [Optior 2. 1 [Optior	2 10 10 10 10 10 10 10 10 10 10	4 18 :e distant 449] 0] 1] 2] 3] 1] s) = s ³ er of reat 450] 4] 5]	6 25 ce (in k $+ a_2 s$ l roots o	$\frac{8}{29}$ cilometre	10 32 (rs) roun + a ₀ v	12 20 ded to tv vith all reading	14 11 wo plac	16 5 ces of d	18 2 ecimals	20 0 covered	1 in 20 minutes using Simpson its derivative p'(s) has no real

14) Gauss Seidel method is used to solve the following equations (as per the given order):
X 1+	$2x_2 + 3x_3 = 5;$
2x 1	$+ 3x_2 + x_3 = 1;$
3x1	$+ 2x_2 + x_3 = 3;$
Ass	suming initial guess as $x_1=x_2=x_3=0$, the value of x_3 after the first iteration is
[Q u 1. 1	uestion ID = 5451] .55
[2.2	Option ID = 21798] 55
[3. 1	Option ID = 21799] .00
[4. 3	Option ID = 21800] 2.67
]	Option ID = 21801]
Cor	rect Answer :-
• •	Option ID = 21798]
1. (2. 1 3. (4. (Jestion ID = 5452] 0.50 [Option ID = 21802] .25 [Option ID = 21803] 0.25 [Option ID = 21804] 0.33 [Option ID = 21805]
Cor • (rect Answer :-).25 [Option ID = 21804]
16	IF $F(s)$ is the Fourier transform of $f(x)$ then the Fourier transform of $e^{5x}f(x)$ is
[Qu 1.]	uestion ID = 5453] $F\left(\frac{s}{5}\right)$
[2.]	Option ID = 21806] F(5s)
[3. <mark>]</mark>	Option ID = 21807] F(s + 5)
[4.]	Option ID = 21808] F(s-5)
[Option ID = 21809]
Cor •]	rect Answer :- $F(s+5)$
[Option ID = 21808]
17) The Fourier cosine transform of $7e^{-x} + e^{-5x}$ is
10	loction ID = 54541
עַנ ₁	$\boxed{2}\left(\begin{array}{c}7\end{array}\right)$
1.	$\sqrt{\pi}\left(\frac{1}{(s^2+1)(s^2+25)}\right)$



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[Question ID = 5457] $1 = \frac{5}{2}$		
1. $\frac{1}{\sqrt{2t}}e^2$		
[Option ID = 21822]		
2. $\frac{1}{\sqrt{2}}e^{-\frac{3}{2}}$		
[Ontion ID = 21823]		
$3. \frac{1}{}$		
$\sqrt{\pi}$		
[Option ID = 21824] $1 = -\frac{5}{2}$		
$\frac{1}{\sqrt{2t\pi}}e^2$		
[Option ID = 21825]		
Correct Answer :-		
$\cdot \frac{1}{\sqrt{2t\pi}} e^{-\frac{3}{2}}$		
[Ontion ID = 21825]		
[option in 21020]		
21) Which MATLAB command will retur	n the corner elements of a 5-by-5 matrix A	?
1. A([1,1], [end, end]) [Option ID = 21826]		
 A({[1,1], [1, end], [end,1], [end, end]}) [Opt A(1:end, 1:end) [Option ID = 21828] 	ion ID = 21827]	
4. A([1, end], [1, end]) [Option ID = 21829]		
Correct Answer :-		
• A([1, end], [1, end]) [Option ID = 21829]		
22) Two vectors created in MATLAB as		
>> X = [7 7 7 7];		
>> Y=6:9;		
The output of the command $X == Y$ is		
[Question ID = 5459]		
1. $0 + 0 = 218201$		
[Option ID = 21830] 2. 6789		
[Option ID = 21831]		
s. / / / /		
4. 0101		
[Option ID = 21833]		
Correct Answer :-		
• $U = 100$		
23) Consider the following MATLAB vec	tors:	
x = [1 2];		
y = [3 4];		
z = [x' [y ; y]]';		
What is the value of z after this program	n executes?	
$[O_{\text{vestion}}] = 5460$		
[Question ID = 5460]		

[Option ID = 21834]



26) The length and cross sectional area of n-type photo conductor are 150 µm and 10-7 cm² respectively. What is the

changes from 10 ²⁷ to 10 ²⁵ electro	ons/m ³ then the value of plasma
	changes from 10 ²⁷ to 10 ²⁵ electr

28) Match List I with List II typical spectroscopic regions type of transitions

List I	List II
A. Infrared region	I. Electron transition involving valance electrons
B. Ultraviolet visible region	II. Nuclear transitions
C. X-ray region	III. Vibrational transitions of molecules
D. γ-ray region	IV. Transitions involving inner shell electrons

Choose the correct answer from the options given below:

```
[Question ID = 5465]
```

```
1. A - III, B - I, C - IV, D - II
```

```
[Option ID = 21854]
2. A - IV, B - II, C - I, D - III
```

```
[Option ID = 21855]
3. A - I, B - II, C - III, D - IV
```

```
[Option ID = 21856]
4. A - III, B - IV, C - I, D - II
```

```
[Option ID = 21857]
```

Correct Answer :-

```
• A - III, B - I, C - IV, D - II
   [Option ID = 21854]
```

```
29) The value of \theta at which the first order peak in X-ray (\lambda = 1.53 Å) diffraction corresponding to (1 1 1) plane of a single
cubic structure with the lattice constant a = 2.65 Å is proximately
```

```
[Question ID = 5466]
1. 15°
```

```
[Option ID = 21858]
```

```
2. 45°
```

```
3. 30°
```

```
[Option ID = 21860]
4. 90°
```

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Ranker.com www.FirstRanker.com www.FirstRanker.com [Option ID = 21860] 30) If an IMPATT diode amplifier has negative resistance $R_d = -15 \Omega$ and load resistance $R_L = 25 \Omega$ the power gain is [Question ID = 5467] 1. 25 [Option ID = 21862] 2. 0 [Option ID = 21863] 3. 00 [Option ID = 21864] 4. 16 [Option ID = 21865] Correct Answer :-• 16 [Option ID = 21865] 31) How many AND gates are required for 1 to 16 de-multiplexer? [Question ID = 5468] 1. 8 [Option ID = 21866] 2. 16 [Option ID = 21867] 3. 14 [Option ID = 21868] 4. 20 [Option ID = 21869] Correct Answer :-• 16 [Option ID = 21867] 32) A 12 bit ADC is used to convert analog voltage of 0 to 10 V into digital. The resolution is [Question ID = 5469] 1. 24.4 mV [Option ID = 21870] 2. 2.44 mV [Option ID = 21871] 3. 1.2 V [Option ID = 21872] 4. none of these [Option ID = 21873] Correct Answer :-• 2.44 mV [Option ID = 21871] 33) The value of x for the given system: $(\sqrt{22})_x = 6$ is [Question ID = 5470] 1. 17 [Option ID = 21874] 2. 15 [Option ID = 21875] 3. 16 [Option ID = 21876] 4. none of these [Option ID = 21877] Correct Answer :-• 17 [Option ID = 21874] 34) The input impedance of the following circuit 100 k 10 k • v0 www.FirstRanker.com 10 k

2. 110 kΩ [Option ID = 21879] 3. 10 kΩ [Option ID = 21879] 3. 10 kΩ [Option ID = 21880] 4. Infinity [Option ID = 21881]	www.FirstRanker.com	www.FirstRanker.com
Correct Answer :- • 10 kΩ [Option ID = 21880]		
 35) What is the bandwidth of single stage [Question ID = 5472] 1. 2 MHz [Option ID = 21882] 2. 5 KHz [Option ID = 21883] 3. 1 MHz [Option ID = 21884] 4. 2 KHz [Option ID = 21885] 	e amplifier if its rise time is 0.35 microsec	onds?
Correct Answer :- • 1 MHz [Ontion ID = 21884]		
36) If the electric field strength E of an magnetic flux density B is calculated as [Question ID = 5473] 1. $-\frac{2}{v_0} cos\omega \left(t - \frac{z}{v_0}\right) a_x A/m$	n electromagnetic wave in free space is s	given by E = 2cos w(t-z/n₀) ay V/m. T
36) If the electric field strength E of an magnetic flux density B is calculated as [Question ID = 5473] 1. $-\frac{2}{v_0} cos\omega \left(t - \frac{z}{v_0}\right) a_x A/m$ [Option ID = 21886] 2. $-\frac{2}{v_0} cos\omega \left(t - \frac{z}{v_0}\right) a_y A/m$ [Option ID = 21887] 2. $-\frac{2}{v_0} cos\omega \left(t - \frac{z}{v_0}\right) a_y A/m$	n electromagnetic wave in free space is s	given by E = 2cos w(t-z/n₀) ay V/m. T
36) If the electric field strength E of an magnetic flux density B is calculated as [Question ID = 5473] 1. $-\frac{2}{v_0} cos\omega \left(t - \frac{z}{v_0}\right) a_x A/m$ [Option ID = 21886] 2. $-\frac{2}{v_0} cos\omega \left(t - \frac{z}{v_0}\right) a_y A/m$ [Option ID = 21887] 3. $-\frac{2}{v_0} sin\omega \left(t - \frac{z}{v_0}\right) a_x A/m$ [Option ID = 21888] 4. $-\frac{2}{v_0} sin\omega \left(t - \frac{z}{v_0}\right) a_y A/m$ [Option ID = 21888] 4. $-\frac{2}{v_0} sin\omega \left(t - \frac{z}{v_0}\right) a_y A/m$ [Option ID = 21888]	a electromagnetic wave in free space is	given by E = 2cos w(t-z/n₀) ay V/m. T
36) If the electric field strength E of an magnetic flux density B is calculated as [Question ID = 5473] 1. $-\frac{2}{v_0} cos\omega \left(t - \frac{z}{v_0}\right) a_x A/m$ [Option ID = 21886] 2. $-\frac{2}{v_0} cos\omega \left(t - \frac{z}{v_0}\right) a_y A/m$ [Option ID = 21887] 3. $-\frac{2}{v_0} sin\omega \left(t - \frac{z}{v_0}\right) a_x A/m$ [Option ID = 21888] 4. $-\frac{2}{v_0} sin\omega \left(t - \frac{z}{v_0}\right) a_y A/m$ [Option ID = 21888] 4. $-\frac{2}{v_0} sin\omega \left(t - \frac{z}{v_0}\right) a_y A/m$ [Option ID = 21889] Correct Answer :-	a electromagnetic wave in free space is	given by E = 2cos w(t-z/n₀) ay V/m. T

[Question ID = 5474]
1. 181 V/m
[Option ID = 21890]
2. 360 V/m
[Option D = 21891]
5. 545 ¥/III
[Option ID = 21892]
4. 271 V/m
[Option ID = 21893]
Correct Answer :
• 360 V/m
[Option ID = 21891]
38) An electron starts with zero velocity from a cathode which is at a potential of -5 kV and then moves into a region
where the potential is zero. The velocity of this electron is
[Question ID = 5475]
1. 32.65 × 10 ⁶ m/s [Option ID = 21894]
2. 31.55 × 10 ⁷ m/s [Option ID = 21895]
3. 41.95 × 10 ⁶ m/s [Option ID = 21896]
4. 52.65 × 10 ⁷ m/s [Option ID = 21897] www.FirstRanker.com
Correct Answer :-

I	power pergrater whose source impedance is 50 W is connected to an oscilloscope by 1 m of 75 W polythene (e.=
f	illed coaxial cable. The VSWR and phase velocity with FirstRanker com respective www.FirstRanker.com
i	Question ID = 5476]
1	2.0 and 0.70×10^8 m/s [Option ID = 21898]
2	1.3 and 3.65×10^8 m/s [Option ID = 21899] 1.5 and 1.90×10^8 m/s [Option ID = 21800]
4	. 2.5 and 2.50 × 10^7 m/s [Option ID = 21900]
(Correct Answer :-
	$1.5 \text{ and } 1.90 \times 10^{\circ} \text{ m/s} [Option] = 21900]$
 	40) A transmission line is terminated by a resistance load which is less than the characteristic impedance and VSWR on time is 1.5. The ratio of reflected wave to the incident wave in decibels is [Question ID = 5477]
1	. U dB [Option ID = 21902] . 1.5 Db [Option ID = 21903]
3	13.98 dB [Option ID = 21904]
4	1.5 dB [Option ID = 21905]
(Correct Answer :-
	-13.98 dB [Option ID = 21904]
4	41) The power internally generated within a double-hetero junction LED if it has internal quantum efficiency of 54.5 % drive current of 50 mA with a peak emission wavelength of 0.72 μm is Question ID = 54781
1 1	. 0.09 W [Option ID = 21906]
2	. 0.047 W [Option ID = 21907]
3	. 0.01 W [Option ID = 21908]
4	. עו א נטאנא = בו אטאן = בואטאן
(Correct Answer :-
	0.047 W [Option ID = 21907]
1 2 3 4	Question ID = 5479] . 7.46 mA [Option ID = 21910] . 1.23 mA [Option ID = 21911] . 5.24 mA [Option ID = 21912] . 14.76 mA [Option ID = 21913]
(Correct Answer :-
	14.76 mA [Option ID = 21913]
 4	13) In 8086 microprocessor the overflow flag is set when Question ID = 54801
1	the sum is more than 16 bits [Option ID = 21914]
2	. carry and sign flags are set. [Option ID = 21915] Subtraction [Option ID = 21916]
4	signed numbers go out of their range after an arithmetic operation [Option ID = 21917]
(Correct Answer :-
•	signed numbers go out of their range after an arithmetic operation [Option ID = 21917]
4	44) What is the bit size of the 8051 microcontroller?
1	. 4 bit [Option ID = 21918]
2	. 16 bit [Option ID = 21919]
3 ⊿	. 128 bit [Option ID = 21920] . 8 bit [Option ID = 21921]
+	
(Correct Answer :-
	י ס טור [טףנוטו וש = 21721]
4	45) A 50 Ω lossless transmission line has a pure reactance of j100 Ω as its load. The VSWR in the line is
,	Ouestion ID = 54821
1 1	עניטווויע – אווויע – איז דער אַנער אָנער אָנער אָנער אָנער אָנער אָנער אָנער אַנער אַנער אַנער אַנער אַנער אַנע . ∞ (infinity)
	[Option ID = 21922]
	a di

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[Option ID = 21925]		
Correct Answer :-		
• « (infinity)		
[Option ID = 21922]		
46) The bit stream 01001 is difference bit as '1' and assigning p transmitted phase sequence becom	entially encoded using 'Delay and EX-OR' schem hases of 'O' and π for 1's and 0's respectively es	ne for DPSK transmission. Assuming the in the encoded sequence, the
[Question ID = 5483] 1. ΟπππΟ		
[Option ID = 21926] 2. π0ππ0		
[Option ID = 21927] 3. Οππ00		
[Option ID = 21928] 4. πππΟπ		
[Option ID = 21929]		
Correct Answer :- • 0πππ0		
[Option ID = 21926]		
47) An AM modulator has output x_c	$f(t) = A\cos(400\pi t) + B\cos(380\pi t) + B\cos(420\pi t).$	The carrier power is 100W and the
[Question ID = 5484]		
[Question ID = 5484] 1. 14.14, 8.16 [Option ID = 21930] 2. 50, 10 [Option ID = 21931]		
[Question ID = 5484] 1. 14.14, 8.16 [Option ID = 21930] 2. 50, 10 [Option ID = 21931] 3. 22.36, 13.46 [Option ID = 21932]		
[Question ID = 5484] 1. 14.14, 8.16 [Option ID = 21930] 2. 50, 10 [Option ID = 21931] 3. 22.36, 13.46 [Option ID = 21932] 4. None of these		
[Question ID = 5484] 1. 14.14, 8.16 [Option ID = 21930] 2. 50, 10 [Option ID = 21931] 3. 22.36, 13.46 [Option ID = 21932] 4. None of these [Option ID = 21933]		
[Question ID = 5484] 1. 14.14, 8.16 [Option ID = 21930] 2. 50, 10 [Option ID = 21931] 3. 22.36, 13.46 [Option ID = 21932] 4. None of these [Option ID = 21933] Correct Answer :- • 14.14, 8.16		
[Question ID = 5484] 1. 14.14, 8.16 [Option ID = 21930] 2. 50, 10 [Option ID = 21931] 3. 22.36, 13.46 [Option ID = 21932] 4. None of these [Option ID = 21933] Correct Answer :- • 14.14, 8.16 [Option ID = 21930]		
[Question ID = 5484] 1. 14.14, 8.16 [Option ID = 21930] 2. 50, 10 [Option ID = 21931] 3. 22.36, 13.46 [Option ID = 21932] 4. None of these [Option ID = 21933] Correct Answer :- • 14.14, 8.16 [Option ID = 21930] 48) To prevent overloading of the [Question ID = 5485] 1. Squelch [Option ID = 21934] 2. Variable sensitivity [Option ID = 21935] 3. Variable selectivity [Option ID = 21937]	last IF amplifier in a receiver, one should use	
[Question ID = 5484] 1. 14.14, 8.16 [Option ID = 21930] 2. 50, 10 [Option ID = 21931] 3. 22.36, 13.46 [Option ID = 21932] 4. None of these [Option ID = 21933] Correct Answer :- • 14.14, 8.16 [Option ID = 21930] 48) To prevent overloading of the [Question ID = 5485] 1. Squelch [Option ID = 21934] 2. Variable sensitivity [Option ID = 21935] 3. Variable selectivity [Option ID = 21937] Correct Answer :- • Variable sensitivity [Option ID = 21935]	last IF amplifier in a receiver, one should use	
[Question ID = 5484] 1. 14.14, 8.16 [Option ID = 21930] 2. 50, 10 [Option ID = 21931] 3. 22.36, 13.46 [Option ID = 21932] 4. None of these [Option ID = 21933] Correct Answer :- • 14.14, 8.16 [Option ID = 21930] 48) To prevent overloading of the I [Question ID = 5485] 1. Squelch [Option ID = 21934] 2. Variable sensitivity [Option ID = 21935] 3. Variable selectivity [Option ID = 21936] 4. Double conversion [Option ID = 21937] Correct Answer :- • Variable sensitivity [Option ID = 21935] 49) A base band PCM system with a 72µsec. If the noise power spectral [Question ID = 5486] 1. 1.15 x 10 ⁻⁵ [Option ID = 21939] 3. 2.8 x 10 ⁻⁵ [Option ID = 21940] 4. 2.36 x 10 ⁻⁵ [Option ID = 21941]	last IF amplifier in a receiver, one should use a matched filter at receiver is implemented wit density is 1.0 x 10 ⁻⁴ V ² /Hz, the probability of e	h ±5V bipolar pulse with pulse duration rror for this system is given by
[Question ID = 5484] 1. 14.14, 8.16 [Option ID = 21930] 2. 50, 10 [Option ID = 21931] 3. 22.36, 13.46 [Option ID = 21932] 4. None of these [Option ID = 21933] Correct Answer :- • 14.14, 8.16 [Option ID = 21930] 48) To prevent overloading of the [Question ID = 21930] 48) To prevent overloading of the [Question ID = 5485] 1. Squelch [Option ID = 21934] 2. Variable sensitivity [Option ID = 21935] 3. Variable selectivity [Option ID = 21936] 4. Double conversion [Option ID = 21937] Correct Answer :- • Variable sensitivity [Option ID = 21937] 49) A base band PCM system with a 72µsec. If the noise power spectral [Question ID = 5486] 1. 1.15 × 10 ⁻⁵ [Option ID = 21939] 3. 2.8 × 10 ⁻⁵ [Option ID = 21940] 4. 2.36 × 10 ⁻⁵ [Option ID = 21941]	last IF amplifier in a receiver, one should use a matched filter at receiver is implemented wit density is 1.0 x 10 ⁻⁴ V ² /Hz, the probability of e	h ±5V bipolar pulse with pulse duration rror for this system is given by

 6 kbps [Option ID = 21942] 26.4 kbps [Option ID = 21943] 18 kbps [Option ID = 21944] 24 kbps [Option ID = 21945] 	www.FirstRanker.com	www.FirstRanker.com
Correct Answer :-		

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