

Question Bank For BDP Course

ঐচ্ছিক পাঠক্রম (Elective Course)

অঙ্ক (Mathematics)

পঞ্চদশ পত্ৰ (15th Paper)

Complex Analysis & Laplace Transform: EMT-15

Question 1

Examine the differentiability of

 $f(z) = \bar{z}$:

 $f(z) = \bar{z}$ অপেষ্ণকটির অবকলন্যোগ্যতা

পরীষ্ঠা করুন :

Question 2

Examine the differentiability of

f(z)=z+1:

f(z)=z+1 অপেক্ষকটির অবকলনযোগ্যতা

পরীক্ষা করুন :

Question 3

Examine the continuity of

 $f(z) = z^2 + z + 1$:

 $f(z) = z^2 + z + 1$ অপেক্ষকটির সন্ততা

পরীষ্ঠা করুন :

Question 4

Examine the continuity of

 $f(z) = \overline{z}$:

f(z) = z অপেক্ষকটির সন্ততা পরীক্ষা

করুল :

Question 5

Find the value of $\mathcal{L}\{1\}$:

L{1} –এর মাল কত?

Question 6

Find the value of $\mathcal{L}\{t\}$:

£{t} -এর মাল কত?

Question 7

Find the value of
$$\mathcal{L}\{t^2 - \cos 2t + 5e^{-t}\}$$
: $\mathcal{L}\{t^2 - \cos 2t + 5e^{-t}\}$ –এর মান কত?

Question 8

Find the value of $\mathcal{L}\{f(t)\}$ – where

$$f(t) = \begin{cases} 0, 0 \le t < 2 \\ 1, 2 \le t < 4 \\ 0, t \ge 4 \end{cases}$$

 $\mathcal{L}\{f(t)\}$ –এর মান নির্ণ্য করুন যেখানে

$$f(t) = \begin{cases} 0, 0 \le t < 2 \\ 1, 2 \le t < 4 \\ 0, t \ge 4 \end{cases}$$

Question 9

Find the value of $\mathcal{L}\{f'(t)\}$ where

$$f(t) = t$$

 $\mathcal{L}\{f'(t)\}$ বাহির করুল যেখালে f(t)=t

Question 10

Find the value of $\mathcal{L}\{\sin bt\}$:

 $\mathcal{L}\{\sin bt\}$ বাহির করুল :

Question 11

Find the value of $\mathcal{L}\{\sin^2 at\}$:

 $\mathcal{L}\{\sin^2 at\}$ বাহির করুল :

Question 12

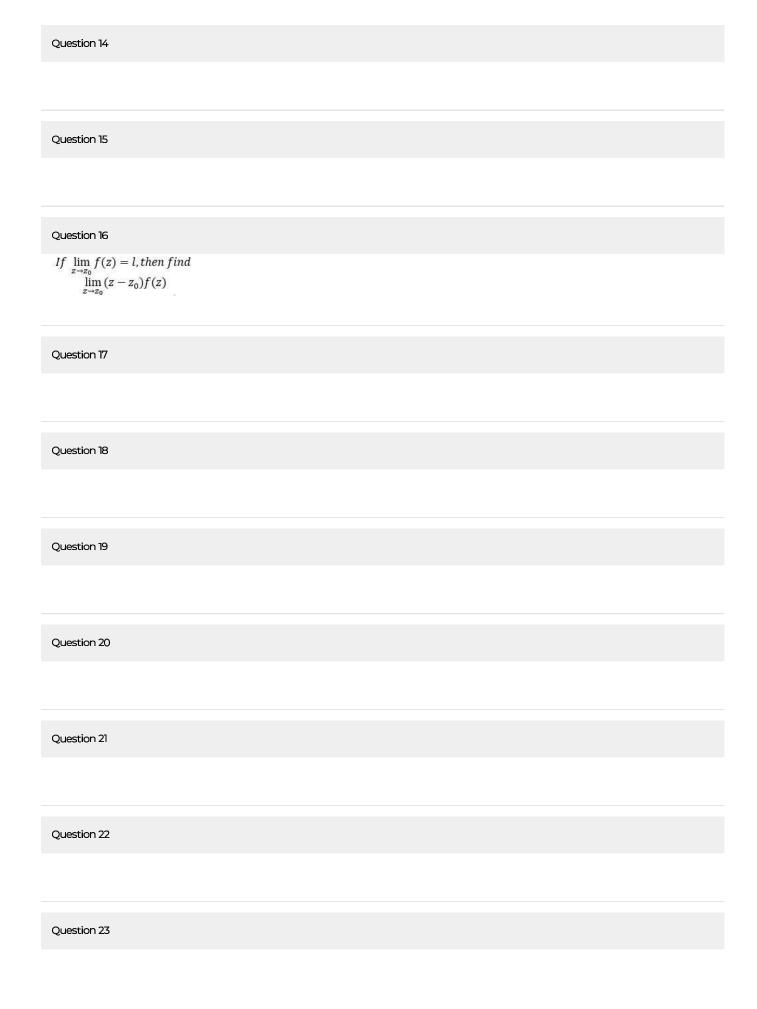
Find the value of $\mathcal{L}^{-1}\left\{\frac{s}{\left(s^2+1\right)^2}\right\}$:

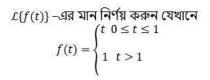
$$\mathcal{L}^{-1}\left\{\frac{s}{\left(s^2+1\right)^2}\right\}$$
 বাহির করুল :

Question 13

Solve :

$$y'' + y = t$$
, $y(0) = 1$, $y'(0) = -2$





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Find the value of $\mathcal{L}\{t^n\}$ where n=1,2,3,...

Question 25

Question 26

Question 27

Question 28

Question 29

Question 30

$$\mathcal{L}^{-1}\{\frac{1}{(s^2+1)^2}\}$$

বাহির কর।