CITY COLLEGE

DEPARTMENT OF MATHEMATICS

Schedule for Online Internal Assessment 2021-2022

Semester-VI

Date: 10.06.2022

Semester	Stream	Paper	Date of Exam	Time of Exam	Submission email id
VI	Honours	CC13	16.06.2022	1:00PM-1:30PM	Cu112mtmasem6@gmail.com
		CC14	16.06.2022	3:00PM-3:30PM	Cu112mtmasem6@gmail.com
		DSE A(2)	17.06.2022	1:00PM-1:30PM	Cu112mtmasem6@gmail.com
		DSE B(2)	17.06.2022	3:00PM-3:30PM	Cu112mtmasem6@gmail.com
	General	DSE B	16.06.2022	3:00PM-3:30PM	Cu112mtmgsem6@gmail.com

Note:

1. Question Papers will be available in respective Whatsapp groups 15 minutes prior to the starting of the examination on the scheduled days.
2. Scanned copies of answer scripts should be sent to the respective email ids within 15 minutes after the examination in a single pdf.
3. Question Papers for General Exams will be available on college website 15 minutes prior to the starting of the examination on the scheduled days.

Sd/-   Sd/-

Principal   Head, Dept of Mathematics

City College   City College

CITY COLLEGE

Internal Assessment-2022

B.Sc. Semester – 6 (Under CBCS System) HONS & GENERAL Examinations, 2022.

Calcutta University Roll Number											
				-			-				

Calcutta University Registration Number												
			-				-				-		

B.Sc. Semester – 6(Under CBCS System)	YEAR : 2022
Subject	
Course (Hons./Gen)	
Paper	
Date of the Exam.	

Full Marks -10   Time - 30 Min

Choose the correct one option only. (Answer any fiv

1) The inverse Laplace transform of $F(s) = \frac{s+3}{s^2+2s+1}$ is   ②

(a) $2t e^{-t} + e^{-t}$, (b) $(3t+1) e^{-t}$, (c) $3 e^{-t}$, (d) $(4t+1) e^{-t}$.

2) The solution of $\frac{d^2 y}{dt^2} - y = 1$; $y(0) = y_t(0) = 0$ is   ③

(a) $\frac{1}{s(s+1)(s+2)}$, (b) $\frac{1}{s(s+1)(s-1)}$, (c) $\frac{1}{s(s+1)}$, (d) $\frac{1}{s(s-1)}$

[where $L\{f(t)\} = F(s)$].

3) The Laplace transform of $e^{at} \cos(\omega t)$ is given by   ②

(a) $\frac{s-a}{(s-a)^2 + \omega^2}$, (b) $\frac{\omega}{(s-a)^2 + \omega^2}$, (c) $\frac{a}{(s-a)^2 + \omega^2}$, (d) $\frac{s}{(s-a)^2 + \omega^2}$

4) If $f(t)$ is a function defined for all $t \geqslant 0$, its Laplace transform $F(s)$ is defined as   ②

(a) $\int_0^\infty e^{st} f(t) dt$, (b) $\int_0^\infty e^{-st} f(s) dt$, (c) $\int_0^\infty e^{-st} f(t) dt$, (d) $\int_0^\infty e^{-ist} f(t)$.

5) The sequence $\lim_{n \to \infty} [3 + (-1)^n]$ is   ②

(a) Convergent, (b) Divergent, (c) Oscillatory, (d) Harmonic.

6) If the ordinary generating function of a sequence $\{a_n\}_{n=0}^\infty$ is $\frac{1+x}{(1-x)^3}$, then $a_3 - a_0$ is equal to   ②

(a) 0, (b) 10, (c) 15, (d) 18.

7) which of the following is not Dirichlet's condition for the Fourier series expansion? ②

ⓐ $f(x)$ is periodic, single valued, finite.

ⓑ $f(x)$ has finite number of discontinuities in only one period.

ⓒ $f(x)$ has finite number of maxima and minima,

ⓓ $f(x)$ is periodic, infinite and single valued.

⑧ If the function $f(x)$ is even, then which of the following is zero? ②

ⓐ a_n , ⓑ b_n, ⓒ a_0, ⓓ none of the above.

———