Shirpur Education Society's

R. C. PATEL INSTITUTE OF TECHNOLOGY, SHIRPUR

An Autonomous Institute

(Affiliated to Dr. Babasaheb Ambedkar Technological University, Lonere)

आर. सी. पटेल इन्स्टिट्यूट ऑफ टेक्नॉलॉजी, शिरपूर

(स्वायत्त महाविद्यालय)

A.Y.-2021-22 – SYBTech – Computer Engineering	
ODD SEMSTER (SEM-III)	
Subject- Engineering Mathematics-III	Sub Code- BSCO3010T
Day & Date- Thursday 20/01/2022	Time-10.45am to 12.00pm
Term Test – II - Max Marks-15	

Note- Solve any 03 out of 04

Q. N.	Question	Marks
1	Show that if $0 < x < \pi$, $cosx = \frac{8}{\pi} \sum_{m=1}^{\infty} \frac{m}{(4m^2-1)} \, sin2mx$	5
2	Obtain Fourier expansion for $sinax$ in the interval $-l < x < l$, where a is not an integer	5
3	Find the Complex form of Fourier series of $f(x) = 2x$ in the interval $[0,2\pi]$	5
4	Show that the set of functions $cosnx$, $n = 1,2,3,...$ is orthogonal on $[0,2\pi]$ & also Construct an orthonormal set	5