



FACULTY OF COMPUTER SCIENCE & MULTIMEDIA

Program	: Bachelor of Information Technology (Hons.)
Course	: MATH I
Course Code	: BIT 116
Year/ Semester	: I Year /I Semester
Assessment	: Assignment
Weightage	: 20 Marks
Date	: 11th May 2020–Monday

Instruction to candidates

- 1) Plagiarism - The University will not tolerate cheating, or assisting others to cheat, and views cheating in coursework as serious academic offence. The work that a student submits for grading must be the student's own work, reflecting his or her learning. Where work from other sources is used, it must be properly acknowledged and referenced.
- 2) Times New Roman, font size 12, alignment justified and 1.5 line spacing
- 3) Header to indicate: course Code & Name on the top left and Program and Semester on the right
- 4) Footer to indicate: Page numbers on the bottom right
- 5) Kindly save your file in PDF format

Answer the following Questions

1. Find the Domain and Range of $f(x) = \sqrt{2 - x - x^2}$
2. Find the solution of: $\frac{dx}{x^2+1} + \frac{dy}{y+1} = 0$
3. Differentiate: $y = 4\sec\theta + \tan\theta$
4. If $f''(x) = 20x^3 - 12x^2 + 6x$, then find $f(x)$.
5. Find the area enclosed between x axis, the curve $y = x^3 - 2x + 5$ and the ordinates $x=1$ and $x=2$. [2]
6. Find $\int \frac{dx}{e^x + 1}$ (Antiderivatives)
7. State and Verify mean value theorem for $f(x) = x^3 - x$ in $[0, 2]$

******BEST OF LUCK******