

 KEMENTERIAN PENDIDIKAN TINGGI		 POLITEKNIK MALAYSIA KUCHING SARAWAK		COURSE CODE/ COURSE NAME		DBM2033 DISCRETE MATHEMATICS	
				COURSEWORK ASSESSMENT		QUIZ 3	
				SESSION		DECEMBER 2017	
JABATAN MATEMATIK, SAINS DAN KOMPUTER							
NAME	NUR AFIAH SYAHIRAH BT KARIM			DURATION	20 MINS	CLO1	10 MARKS
REGISTRATION NO.	05DDT17F1027					CLO2	
PROGRAMME/ SECTION	OPT28					CLO3	
					TOTAL MARKS		10 MARKS

Instructions

- Answer ALL questions. Write your answers in the spaces provided.
- Show your working to get marks. You may use a non-programmable scientific calculator.

Question (CLO1, C2)

Find $f(2)$, $f(3)$, $f(4)$ and $f(5)$ if f is defined recursively by $f(0) = f(1) = 1$ and for $n = 1, 2 \dots$

$$f(n+1) = f(n)/f(n-1)$$

$$\frac{f(n)}{f(n-1)}$$

[10 marks]

$$f(1+1) = \frac{f(1)}{f(1-1)}$$

$$f(2) = \frac{1}{f(0)}$$

$$= \frac{1}{1}$$

$$f(2) = 1$$

$$f(3+1) = \frac{f(3)}{f(3-1)}$$

$$f(4) = \frac{1}{f(2)}$$

$$= \frac{1}{1}$$

$$f(4) = 1$$

$$f(2+1) = \frac{f(2)}{f(2-1)}$$

$$f(3) = \frac{1}{f(1)}$$

$$= \frac{1}{1}$$

$$f(3) = 1$$

$$f(4+1) = \frac{f(4)}{f(4-1)}$$

$$f(5) = \frac{1}{f(3)}$$

$$= \frac{1}{1}$$

$$f(5) = 1$$