



al-Khawārizmī

National Programming Contest

11th – 12th May 2018

International Islamic
University Malaysia



الجامعة الإسلامية العالمية ماليزيا
INTERNATIONAL ISLAMIC UNIVERSITY MALAYSIA
يونس بن سينا: ابن الأعرابي، أبو عبد الله



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Problem Set Analysis



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ACM ICPC Al-Khawarizmi 2015

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Problem Setters

A	Aku Negaraku	Mr Zawawi
B	Cheap Deliveries	Ashraf
C	Eli's Curious Mind	Ayesheh
D	Explorace	Mdm Norleyza
E	Matrix Multiplication Calculator	Mdm Marini
F	Sum of Sub Rectangle Areas	Mr Satej (world finalist)
G	Wak Sani Satay	Mdm Rodziah
H	Stroop Effect	Prof Zarina
I	Super Ball	Ashraf
J	Virus Outbreak	Mr Zawawi





		Level	Attempts	# of YES
A	Aku Negaraku	Easy	42	15
B	Cheap Deliveries	Very hard	5	2
C	Eli's Curious Mind	Medium	6	4
D	Explorace	Medium	7	7
E	Matrix Multiplication Calculator	Easy	41	17
F	Sum of Sub Rectangle Areas	Very hard	11	3
G	Wak Sani Satay	Easy	63	28
H	Stroop Effect	Medium	32	4
I	Super Ball	Hard	0	0
J	Virus Outbreak	Medium	106	16





		Solving Approach
A	Aku Negaraku	Simulation. Critical case $M > N$
B	Cheap Deliveries	Dijkstra, Graph Modeling, DP TSP.
C	Eli's Curious Mind	Dynamic Programming /Fibanocci
D	Explorace	Minimum spanning tree
E	Matrix Multiplication Calculator	Implementation
F	Sum of Sub Rectangle Areas	Formula: $(n*(n+1)*(n+2)/6)^2$
G	Wak Sani Satay	Implementation
H	Stroop Effect	Implementation, understanding question.
I	Super Ball	DP/Directed Acyclic Graph
J	Virus Outbreak	Dynamic Programming /Fibanocci



1st YES



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		minute
A	Aku Negaraku	8
B	Cheap Deliveries	255
C	Eli's Curious Mind	79
D	Explorace	78
E	Matrix Multiplication Calculator	16
F	Sum of Sub Rectangle Areas	109
G	Wak Sani Satay	42
H	Stroop Effect	123
I	Super Ball	-
J	Virus Outbreak	6



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