

3472/1

Matematik
Tambahan
Kertas 1
2 jam
Ogos 2015

JABATAN PELAJARAN NEGERI KELANTAN

PEPERIKSAAN PERCUBAAN SIJIL PELAJARAN MALAYSIA 2015


ADDITIONAL MATHEMATICS

Paper 1

MARKING SCHEME

Skema Pemarkahan ini mengandungi **6** halaman bercetak

PERATURAN PEMARKAHAN- KERTAS 1

No.	Solution and Mark Scheme	Sub Marks	Total Marks
1	(a) $m = -3$ (b) $\{-1, 0, 3, 5\}$	1 1	2
2	$k = 7$ $3(kx - 6) - 2 = k(3x - 2) - 6$ @ setara	2 B1	2
3	4.19, -1.19 (Both) $x^2 - 3x + \left(-\frac{3}{2}\right)^2 = 5 + \left(-\frac{3}{2}\right)^2$ @ setara	2 B1	2
4	(a) $f(x) = x^2 + x - 6$ (b) $x < -3, x > 2$ 	1 2 B1	3
5	$p = 1$ $2\left(\frac{1}{2}\right)^2 = \frac{p}{2}$ $\alpha + 2\alpha = \frac{3}{2}$ @ $\alpha(2\alpha) = \frac{p}{2}$ @ $\alpha = \frac{1}{2}$	3 B2 B1	3
6	$x = 5$ $-2x + 4 = -x - 1$ @ setara 10^{-2} @ 10^{-1}	3 B2 B1	3
7	$\log_a y = \frac{h-1}{2}$ $h - 2\log_a y = 1$ $\log_a x - \log_a y^2$	3 B2 B1	3

8	$n = 6$ $3^n = 481$ $\frac{5(3^n - 1)}{3 - 1} > 1200$	3 B2 B1	3
9	2706 2204 + 502 @ setara 2204 @ 251 @ 502 @ setara	3 B2 B1	3
10	(a) 20 (b) 63.281 $\frac{45}{4} @ 200 \left(\frac{9}{16} \right)^2 @ setara$	1 2 B1	3
11	(a) $m = \frac{3}{2}, n = 3$ (b) $y = 3x - 2x^2$	1, 1 1	3
12	(a) $h = -\frac{2}{3}, K = (0, -4)$ (b) $y = \frac{3}{4}x + 6$ $m = \frac{3}{4} @ setara$	1, 1 2 B1	4
13	$t = 8, 2$ $\sqrt{(2+2)^2 + (5-t)^2} = 5$	2 B1	2
14	(a) $\frac{2}{p}$ (b) $-\frac{\sqrt{4-p^2}}{2}$	1 3	4

	$(1) \left(-\frac{\sqrt{4-p^2}}{2} \right) - (0) \left(\frac{p}{2} \right)$ $\sin 90^\circ \cos \theta - \cos 90^\circ \sin \theta$	B2	
		B1	
15	(a) $\begin{pmatrix} -4 \\ 10 \end{pmatrix}$ (b) $k = 5$ $\frac{k}{10} = \frac{-2}{-4} \text{ @ setara}$	1	3
		2	
		B1	
16	$\frac{9}{2}\underline{x} + 4\underline{y}$ $6\underline{x} + 2\underline{y} + \frac{-3\underline{x} + 4\underline{y}}{2}$ $\overrightarrow{PM} = \overrightarrow{PQ} + \overrightarrow{QM} \text{ or } \overrightarrow{QM} = \frac{1}{2}\overrightarrow{QR}$	3	3
		B2	
		B1	
17	(a) $\frac{3}{10}$ $\frac{dy}{dx} = 20x - 6$ (b) $\frac{1}{10}$ $y = 10 \left(\frac{3}{10} \right)^2 - 6 \left(\frac{3}{10} \right) + 1$	2	4
		B1	
		2	
		B1	
18	(a) 13 $\frac{dV}{dx} = 12x + 1$	2	4
		B1	

	(b) $13k$ $\delta x = k$	2 B1	
19	-30 $\int_0^6 g(x)dx = -66 - (-36)$ Luas $\square - \int_0^6 g(x)dx = 36$	3 B2 B1	3
20	(a) $\theta = 0.9326 \text{ rad}$ $r = 10.23$ (b) 6.773 $\frac{1}{2}(10.23)^2(0.9326 - \sin 0.9326)$	2 B1 2 B1	4
21	(a) $k = 2p - 11$ $\frac{2+3+2k+k+6+10+12}{6} = p$ (b) $\frac{3k+6}{2}$ $\frac{2k+k+6}{2}$	2 B1 2 B1	4
22	(a) $p = 6$ $10+8+p+5+1=30$ (b) 57.83 $\frac{34.5(1)+44.5(6)+54.5(10)+64.5(8)+74.5(5)}{30}$	2 B1 2 B1	4
23	(a) 462 (b) 281 ${}^6C_3 \times {}^5C_2 + {}^6C_4 \times {}^5C_1 + {}^6C_5 \times {}^5C_0$ ${}^6C_3 \times {}^5C_2$ atau ${}^6C_4 \times {}^5C_1$ atau ${}^6C_5 \times {}^5C_0$	1 3 B2 B1	4

24	<p>(a) $h=7$</p> $\frac{4}{4+h+h-3} = \frac{h-3}{4+h+h-3}$ <p>(b) $\frac{7}{15}$</p>	<p>2</p> <p>B1</p> <p>1</p>	3
25	<p>(a) 0.6468</p> <p>$1-2(0.1766)$</p> <p>(b) 36.30</p> $\frac{X-35}{1.4} = 0.929$	<p>2</p> <p>B1</p> <p>2</p> <p>B1</p>	4