

Department of Education – Western Province
First Term Evaluation - 2019
Grade 11 - Mathematics
Marking Scheme

Paper -I – Part A

01. Rs.1 000 $\times \frac{6}{100}$
Rs. 60

02. $\frac{1+3}{3x}$
 $\frac{4}{3x}$

03. $125 = 5^3$

04. $x = 60^\circ$
 $y = 50^\circ$

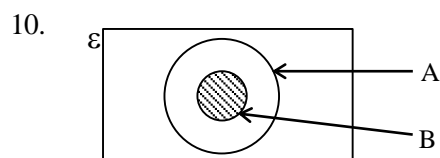
05. 3×16
48 m

06. $2x^2y$

07. $64\,000 \times \frac{2}{100} = \text{Rs.}1\,280$
 $1280 \times 5 = \text{Rs.}6\,400$

08. $x = 9$

09. $\frac{22}{7} \times 7 \times 7 \times 20$
 3080 cm^3



11. $(4 + x)(5 - x)$

12. $x = 120^\circ$ $y = 60^\circ$
 $x + y = 180^\circ$

13. $\frac{3}{x} = 1$
 $x = 3$

14. $\hat{QPR} = 118^\circ$
 $\hat{PQR} = \frac{62}{2} = 31^\circ$

15. $y = 2x - 3$

16. $a = 90^\circ$
 $b = \frac{90}{2} = 45^\circ$

17. $\frac{1}{2} \times 4 \times 3 = 6 \text{ cm}^2$
 $\frac{60}{6} = 10 \text{ cm}$

18. $x = 40^\circ$
 $y = 100^\circ$

19. $x \geq 2$
Minimum value = 2
②

20. 20°
 15°

21. Mean = 32
Number of students = 2

22. $OX^2 = 5^2 - 3^2$
 $OX = 4 \text{ cm}$

23. for the relevant construction



24. i) for suitable answer
ii) for suitable answer

25. $\hat{AOB} = 70^\circ$
 $\hat{OAB} = \frac{110^\circ}{2} = 55^\circ$

Paper I – Part B

01. (i) $\frac{3}{8}$	1	①	04. (a) (i) Rs. 72 000 + 7 200 Rs. 79 200	1	
(ii) $\frac{1}{5}$ of $\frac{5}{8}$	1			1	②
$\frac{1}{8}$	1	②	(ii) $\frac{7\,200 \times 100}{72\,000}$ 10%	1	
(iii) $\frac{5}{8} - \frac{1}{8} = \frac{4}{8}$ or $\frac{1}{2}$	1			1	②
$\frac{1}{2} = 100l$	1		(b) (i) Rs. 500 000 $\times \frac{4}{100}$	1	
Total Capacity = 200l	1	③	Rs. 20 000	1	②
(iv) $200 \times \frac{1}{8}$	1		(ii) Rs. 75 000	1	
25 l	1		Rs. 75 000 $\times \frac{8}{100}$	1	
Rs. 25 \times 150	1		Rs. 6 000	1	③
Rs. 3 750	1	④	(iii) Rs. 26 000	1	①
		10			10
02. (i) fish – 30	2		05. (i) for 25 points	2	②
Egg – 15	2		(ii) $\frac{5}{25} = \frac{1}{5}$	2	②
Vegetables – 25	2	⑥	(iii) $\frac{5}{25} = \frac{1}{5}$	2	②
(ii) $\frac{50}{120} \times 360^\circ$	1		(iv) $\frac{9}{25}$	2	②
150°	1	②	(v) $\frac{10}{25}$	2	②
(iii) 40 : 80	1				
1 : 2	1	②			
		10			10
03. (i) $\frac{60}{60} = 1 \text{ l s}^{-1}$ (liters per second 1)	2	②			
(ii) 90 km	1	①			
(iii) $\frac{90}{6}$	1				
15 kmh ⁻¹	1	②			
(iv) distance = 30km		1			
time = 2 hours	1				
speed = 15 kmh ⁻¹	1	③			
(v) $\frac{90\text{km}}{15\text{kmh}^{-1}}$	1				
6 hours	1	②			
		10			

Paper - II

<p>01. (a) (i) $y = 4$ (ii) for axes For 6 correct points Smooth curve</p> <p>(b) (i) 4 (ii) $-1 \leq x \leq 1$ (iii) $(2-x)(2+x) = 0$ $4 - x^2 = 0$ roots $x = 2$ and $x = -2$ (iv) $x > 2$</p>	<p>1 ① 1 1 1 ③ 1 ① 2 ② 1 1 ② 1 ① 10</p>	<p>04. Area  = Area  - 3 $2x(x-1) = \frac{(x-1+2x+2) \times x}{2} - 3$ $4x(x-1) = (3x+1) \times x - 6$ $4x^2 - 4x = 3x^2 + x - 6$ $4x^2 - 4x - 3x^2 - x + 6 = 0$ $x^2 - 5x + 6 = 0$ $(x-3)(x-2) = 0$ $x-3 = 0$ or $x-2 = 0$ $x = 3$ or $x = 2$ When $x = 3$, Area of the rectangle = 6×2 = 12 cm^2 When $x = 2$ Area of the rectangle = 4×1 = 4 cm^2</p>	<p>2 1 1 1 2 2 2 1 1 10 1 1 10</p>
<p>02. Rs. $50\,000 \times \frac{12}{100}$ Rs. 6 000 Rs. $10\,000 \times 12$ Rs. 120 000 Rs. $6\,000 + 15\,000$ Rs. 21 000 Rs. $120\,000 - 21\,000$ Rs. 99 000 Rs. $99\,000 \times \frac{10}{100}$ Rs. 9 900 Rs. $99\,000 + 9\,900$ Rs. 108 900</p>	<p>1 1 ② 1 1 ② 1 ① 1 ① 1 1 ② 1 1 ② 10</p>	<p>05. (i) $(40 - 50)$ (ii) for the mid value column (x) For the deviation column (d) For fd column Mean = $A + \frac{\sum fd}{\sum f}$ = $45 + \left(\frac{90}{30}\right)$ = $45 + 3$ = 48 (iii) Rs. $48 \times 30 \times 5\,000$ Rs. 7 200 000 Rs. 7 200 000 > 7 000 000</p>	<p>1 ① 1 1 1 1 1 1 ⑥ 1 1 1 1 ③ 10</p>
<p>03. (a) (i) $3x + 5y = 153 \rightarrow (1)$ $x = 3y - 5$ $x - 3y = -5 \rightarrow (2)$ (ii) $(2) \times 3$ $3x - 9y = -15 \rightarrow (3)$ $3x + 5y - (3x - 9y) = 153 - (-15)$ $14y = 168$ $y = 12$ $x - 3 \times 12 = -5$ $x = 31$</p> <p>(b) $x^3 + 3x^2 \times 5 + 3 \times x \times 5^2 + 5^3$ $x^3 + 15x^2 + 75x + 125$</p>	<p>1 1 ② 1 1 1 1 1 ⑤ 2 1 ③ 10</p>	<p>06. (a) $\frac{1}{2} \times \frac{4}{3} \pi r^3 = \frac{1}{3} \pi a^2 \times 2a$ $\frac{2}{3} \pi r^3 = \frac{2}{3} \pi a^3$ $r^3 = a^3$ $r = a$ (b) $\lg x = 2 \lg 6.82 + \frac{1}{3} \lg 0.005$ = $2 \times 0.8338 + \frac{1}{3} \times \bar{3}.6990$ = $1.6676 + \bar{1}.2330$ = 0.9006 $x = \text{antilog } 0.9006$ $x = 7.953$</p>	<p>1 1 1 1 ④ 1 1+1 1 1 1 1 ⑥ 10</p>

