

**ODISHA SECONDARY SCHOOL TEACHERS' ASSOCIATION (OSSTA)**

**SCORING KEY**

**CLASS - IX ANNUAL EXAMINATION 2020**

**MATHEMATICS**

**PART - I (OBJECTIVE)**

<b>SET - A</b>			<b>SET - B</b>		
1. (i) 11	(ii) $(x + 1)(x - 1)^2$	(iii) $\frac{5}{6}$	1. (i) 21	(ii) $(2a+b)(b-2a)$	(iii) $\frac{3}{5}$
(iv) $\frac{2}{5}$	(v) $\frac{f_1 + f_2}{2}$		(iv) 1 : 1	(v) $m_2 - m_1$	
2. (i) $\{(a, c), (a, d), (b, c), (b, d)\}$ ,			2. (i) $\{(1, 3), (1, 4), (2, 3), (2, 4)\}$ ,	(ii) $3abc$	
(ii) $3abc$	(iii) $Q_2$	(iv) 26	(v) $45^\circ$	(iii) $Q_2$	(iv) $\pm 6abc$
				(v) 50	
3. (i) F	(ii) T	(iii) T	(iv) F	(v) F	
4. (i) -4 ବା 10	(ii) 4 ବା 1	(iii) ଭୁଜ	4. (i) (10 ବା -12)	(ii) (1 ବା 2)	(iii) କୋଟି
(iv) ଯୋଗ ପ୍ରକ୍ରିୟା	(v) $\frac{1}{2}$		(iv) ଯୋଗାଢ଼ର	(v) $\frac{1}{2}$	
5. (i) (c) $\frac{1}{x}$	(ii) (e) 2	(iii) (a) 1	5. (i) (d) 0	(ii) (a) 2	(iii) (e) 1
(iv) (b) 6	(v) (d) 0		(iv) (f) 4	(v) (b) $\sqrt{3}$	
6. (i) $40^\circ$	(ii) $540^\circ$	(iii) 4:5	(iv) 2	(v) 16	
7. (i) $115^\circ$	(ii) $108^\circ$	(iii) 45 ବ.ସେ.ମି.	6. (i) $55^\circ$	(ii) $1080^\circ$	(iii) 4:9
(iv) $\frac{1-\sqrt{3}}{2\sqrt{2}}$	(v) 12 ସେ.ମି.		(iv) 2	(v) 18	
8. (i) T	(ii) F	(iii) T	(iv) F	(v) T	
9. (i) $50^\circ$	(ii) ସାମାନ୍ତରିକ କ୍ଷେତ୍ର	(iii) 4 ସେ.ମି.	7. (i) $75^\circ$	(ii) $90^\circ$	(iii) 23 ବ. ସେ.ମି.
(iv) 1	(v) 330 ବ.ସେ.ମି.		(iv) $\frac{1+\sqrt{3}}{2\sqrt{2}}$	(v) 11 ସେ.ମି.	
10. (i) (d) 9	(ii) (e) $30^\circ$	(iii) (a) 28	8. (i) T	(ii) T	(iii) F
(iv) (b) $\sqrt{3}$	(v) (f) 12		(iv) F	(v) T	
			9. (i) $60^\circ$	(ii) ରମ୍ଭ	(iii) 7 ସେ.ମି.
			(iv) 1	(v) $10\sqrt{2}$ ସେ.ମି.	
			10. (i) (e) 12	(ii) (f) $18^\circ$	(iii) (d) 120
			(iv) (a) $\frac{4}{\sqrt{3}}$	(v) (b) 9	



**ODISHA SECONDARY SCHOOL TEACHERS' ASSOCIATION (OSSTA)**

**SCORING KEY**

**CLASS - IX ANNUAL EXAMINATION 2020**

**MATHEMATICS**

**PART - I (OBJECTIVE)**

<u>SET - C</u>	<u>SET - D</u>
1. (i) 14    (ii) $(a+b)^3(a^2-ab+b^2)$ (iii) 1 (iv) 1:5    (v) 41	1. (i) {1, 2, 5, 6}    (ii) $(x+y)(x-y)^3$ (iii) 1 (iv) 1    (v) ବିନ୍ୟାସ
2. (i) mn    (ii) 0    (iii) $Q_3$ (iv) 25    (v) 320	2. (i) 5    (ii) 0    (iii) $Q_4$ (iv) 60    (v) $54^\circ$
3. (i) F    (ii) T    (iii) F    (iv) T    (v) T	3. (i) T    (ii) T    (iii) T    (iv) F    (v) F
4. (i) (2 ବା -1)    (ii) (3 ବା 2)    (iii) ଏକ (iv) ବିୟୋଗ ପ୍ରକ୍ରିୟା    (v) $\frac{1}{4}$	4. (i) ( $\frac{1}{3}$ ବା -3)    (ii) (4 ବା -1)    (iii) ଦୁଇ (iv) ସଂଯୋଗ    (v) $\frac{1}{4}$
5. (i) (d) 1    (ii) (e) 2    (iii) (a) $\frac{5}{4}$ (iv) (c) $\frac{1}{3}$ (v) (b) $\frac{1}{\sqrt{3}}$	5. (i) (d) $-x$ (ii) (f) 2    (iii) (e) $\frac{4}{3}$ (iv) (b) 0    (v) (a) 1
6. (i) $40^\circ$ (ii) $360^\circ$ (iii) 2:3    (iv) 2    (v) 120	6. (i) $70^\circ$ (ii) $360^\circ$ (iii) 15:28    (iv) 2    (v) 40
7. (i) $20^\circ$ (ii) $80^\circ$ (iii) 21 ବ.ସେ.ମି. (iv) $\frac{1+\sqrt{3}}{2\sqrt{2}}$ (v) 32 ସେ.ମି.	7. (i) $180^\circ$ (ii) $85^\circ$ (iii) 96 ବ.ସେ.ମି. (iv) $\frac{\sqrt{3}-1}{2\sqrt{2}}$ (v) 172 ବ.ସେ.ମି.
8. (i) T    (ii) T    (iii) F    (iv) F    (v) T	8. (i) T    (ii) F    (iii) T    (iv) F    (v) T
9. (i) $56^\circ$ (ii) ଆୟତଚିତ୍ର    (iii) 12 ବ.ସେ.ମି. (iv) $\tan^2 \theta$ (v) 14 ସେ.ମି.	9. (i) $63^\circ$ (ii) ସାମାନ୍ତରିକ ଚିତ୍ର    (iii) 6 ସେ.ମି. (iv) $\cot^2 \theta$ (v) 135 ବ.ସେ.ମି.
10. (i) (c) 10    (ii) (a) $67\frac{1}{2}$ (iii) (f) 20 (iv) (e) $2\sqrt{2}$ (v) (b) $6\sqrt{3}$	10. (i) (c) 6    (ii) (a) $60^\circ$ (iii) (f) 18 (iv) (b) $\sqrt{3}$ (v) (e) 6

