CHAPTER-1 SETS AND FUNCTIONS

5 MARKS QUESTIONS:

March2012	Exam-1.9 Exer1.4-15	June 2012	Exam-1.8 Exam-1.20	Septm2012	Exam-1.8 Exer1.4-14
March2013	**OUT-1** Exam-1.20	June 2013	Exer1.3-6 **OUT-2**	Septm2013	Exer1.4-4 Exer1.3-7
March2014	Exam-1.8 Exam-1.22	June 2014	Exer1.2-9(iv) Exer1.4-13	Septm2014	Exam1.10 Ex1.4-16
March2015	Exer1.2-9(iii) Exer1.4-14	June 2015	Exam-1.9 Exer1.4-10	Septm2015	Exam-1.7 Exam-1.20
March2016	Exam1.13 Exer1.4-15	June 2016	Exer1.2-9(iv) Exam-1.20	Septm2016	Exam-1.7 Exer1.4-16
March2017	Exam-1.10 Exer1.4-13	June 2017		Septm2017	

1. Let A=Z – {0}, that is the set of all non zero integers and f:A→R be defined by f(x)=$\frac{|x|}{x}$, $x \in$A. Find the range and type of the function. Is it one-to-one.

2. If f:N→N is defined by f(x)=x^2 – 1, check whether f is a function. If f is not a function, find for what choice of the co-domain, f will be a function?

2 MARKS QUESTIONS:

March2012	Exer1.2-8 Exer1.4-4(iii)	June 2012	Exer1.1-4(i) Exer1.4-8	Septm2012	Exer1.1-4(i) Exam-1.17(i)
March2013	Exer1.1-6 Exer1.4-5	June 2013	Exam-1.18 Exer1.1-9	Septm2013	Exam-1.14 Exer1.2-9(iii)
March2014	Exer1.1-4(i) Exam-1.16	June 2014	Exer1.2-5 Exer1.4-15(i)	Septm2014	Ex-1.1-2 Ex-1.4-10(ii)
March2015	Exer1.2-3(v) Exam-1.21	June 2015	Exer1.1-3 Exam-1.21	Septm2015	Exer1.1-3(iii) Exer-1.4-2
March2016	Exer1.1-5 Exer1.4-10(i,ii)	June 2016	Exer1.1-4(i) Exam-1.21	Septm2016	Exer1.4-2 Exer1.1-7
March2017	Exam-1.2 Exer1.4-9	June 2017		Septm2017	

5 MARKS QUESTIONS IN PTA MODEL QUESTION PAPERS

Model-1	Exer1.2-9(v) Exam-1.20	Model-2	Exam-1.13 Exer1.4-14	Model-3	Exam-1.10 Exer1.4-10
Model-4	Exam-1.7 Exer1.4-13	Model-5	Exam-1.22 Exer1.3-7		

2 MARKS QUESTIONS IN PTA MODEL QUESTION PAPERS

Model-1	Exam-1.15(i) Exer1.1-3(iii)	Model-2	Exam-1.21 Exer1.1-2	Model-3	Exam1.17(iv) Exer1.2-5(i)
Model-4	Exam-1.18 Exer1.2-3(iv)	Model-5	Exam1.1-(ii) Exer1.4-15(ii)		

CHAPTER-2 SEQUENCES AND SERIES OF REAL NUMBERS

5 MARKS QUESTIONS:

March2012	Exam-2.15 **OUT-1**	June 2012	Exer2.4-10 Exer2.6-5	Septm2012	Exam-2.27 Exam-2.11
March2013	Exam-2.27	June 2013	Exer2.2-8 Exer2.4-19	Septm2013	Exer2.4-20 Exam2.31-2
March2014	Exam-2.34 Exer2.5-12	June 2014	Exer2.5-8(i) **OUT-2**	Septm2014	Exam2.20 **OUT-3**
March2015	Exam-2.27 **OUT-4**	June 2015	Exer2.4-9 Exam-2.34	Septm2015	Exer-2.3-3 Exam2.30(ii)
March2016	Exer2.5-8(i) **OUT-5**	June 2016	Exer2.4-10 Exer2.3-3	Septm2016	Exer2.2-8 Exer2.6-6
March2017	Exam-2.17 Exer2.5-8(i)	June 2017		Septm2017	

1. If x=1 + a+ a^2 + a^3 + …. and y=1+ b + b^2 + b^3 + … then show that 1 + ab + a^2b^2 + a^3b^3 +…..= $\frac{xy}{x+y-1}$.

2. Find the sum of the series $2+4(3)^2+6(5)^2+8(7)^2+$……

3. Find the sum of all 3 digits natural numbers which are divisible by 8.

4. The sum of 4 consecutive terms of an A.P. is 20 and the sum of their squares is 120. Find those numbers.

5. If 7 times the 7th term of an A.P. is equal to 11 times the 11th term, show that its 18th term is zero. Can you find the first and the common difference? Justify your answer.

2 MARKS QUESTIONS:

March2012	Exer2.2-10	June 2012	**OUT-1**	Septm2012	**OUT-2**
March2013	Exam-2.16	June 2013	Exam-2.33(ii)	Septm2013	Remark P(36)
March2014	Exer2.2-5	June 2014	**OUT-3**	Septm2014	Exam-2,3
March2015	Exam-2.4(ii)	June 2015	**OUT-4**	Septm2015	Exer2.1-1(i)
March2016	Exer2.2-4	June 2016	Exam2.29(iii)	Septm2016	Exam-2.6
March2017	**OUT-5**	June 2017		Septm2017	

1. In an arithmetic series S_n=1275, first term a=3, common difference d=4. Find n.

2. In an A.P., 5 times of the fifth term is equal to 7 times of the seventh term. Prove that 12th term is 0.

3. Find the number of terms in the arithmetic series 5+11+17+…+95.

4. Find the sum of first 10 terms of the series $1^2 - 2^2 + 3^2 - 4^2 + \ldots$

5. $\frac{-2}{7}, \boldsymbol{m}, \frac{-7}{2}(\boldsymbol{m}+\mathbf{2})$ are in G.P. Find the value of m.

5 MARKS QUESTIONS IN PTA MODEL QUESTION PAPERS

Model-1	Exer2.5-8(i) **OUT-1**	Model-2	Exam-2.27 **OUT-2**	Model-3	Exam-2.34 Exer2.3-9
Model-4	Exam-2.25 Exer2.4-9	Model-5	Exer2.4-19 **OUT-3**		

1. Find the sum of all natural numbers between 400 and 600 which are divisible by 11.

2. The sum of first 10 terms of an A.P. is 25 and the common difference is twice the first term. Find the 10th term.

3. Find the sum upto n terms of the series 0.7 + 0.97 + 0.997 + ….

2 MARKS QUESTIONS IN PTA MODEL QUESTION PAPERS

Model-1	Exam-2.22	Model-2	Exam-2.31(i)	Model-3	**OUT-1**
Model-4	**OUT-2**	Model-5	Exer2.2-17		

1. Find the sum of 1 + 5^2 + 5^3 + …. upto 8 terms.

2. Find the sum of all odd natural number between 6 and 40.

CHAPTER-3 ALGEBRA

5 MARKS QUESTIONS:

March2012	Exam-3.17, Exer3.13-2(ii) Exer3.16-9	June 2012	Exam-3.18, Exer3.13-2(i) **OUT-1**	Septm 2012	Exer3.5-12, Exer3.13-1(ii) Exam-3.43
March2013	Exer3.5-12 Exam-3.44	June 2013	**OUT-2,** Exer3.5-6 Exam-3.34	Septm 2013	Exam-3.35, Exer3.18-4 Exam-3.2
March2014	Exer3.16-6, **OUT-3** Exam-3.52	June 2014	Exam3.33, Exer3.18-8 Exer3.5-1(xii)	Septm 2014	**OUT-4,** Exam-3.35 Ex-3.16-5
March2015	Exer3.5-(v), Exer3.13-1(iv) Exam-3.22	June 2015	Exam-3.35, **OUT-5** Exer3.18-11	Septm 2015	Exer3.5-1(iii) Exer3.11-3
March2016	Exer3.5-1(xii), **Exer3.11-1(viii),** Exer3.17-7	June 2016	Exam-3.18, Exer3.13-2(i) Exer3.11-4	Septm 2016	**OUT-6,** Exam-3.33 Exer3.18-8(ii,iii)
March2017	Exam-3.21 Exer3.16-6, **OUT-7**	June 2017		Septm 2017	

1. The sum of the reciprocals of (x+2) and (x – 2) is equal to 6 times the reciprocal of 4x + 7. Find the values of x.

2. If a quadratic polynomial is divided by (x – 1) and (x + 1) leave the remainders 11 and 1 respectively, find the polynomial.

3. Simplify $\frac{a^2-16}{a^3-8} \times \frac{2a^2-3a-2}{2a^2+9a+4} \div \frac{3a^2-11a-4}{a^2+2a+4}$. **6.** Solve $\frac{x}{x+1} + \frac{x+1}{x} = \frac{61}{30}$.

4. If α and β are the roots of the equation $x^2 - 3x + 1 = 0$, then form a quadratic equation whose roots are $\frac{1}{\alpha+\beta}$ *and* $\frac{1}{\alpha\beta}$.

5. Sum of two numbers is 24 and sum of their reciprocals is 1/6, find the numbers.

7. Find the values of a and b if $16X^4 - 24X^3 + (a-1)x^2 + (b+1)x + 49$ is a perfect square.

2 MARKS QUESTIONS:

March2012	Exer3.18-4 **OUT-1**	June 2012	Exam-3.7 Exer3.18-2(i)	Septm2012	Exer3.18-2(i) **OUT-2**
March2013	Exam-3.49 Exer3.14-6	June 2013	Exam-3.13 Exer3.14-6	Septm2013	Exer3.7-6 Exer3.14-5
March2014	Exer3.6-2(iii) Exam-3.51	June 2014	Exer3.17-1(vi) **OUT-3**	Septm2014	Ex-3.1-1(iii) Exam-3.5-1
March2015	Exam3.25 Exer3.18-3(i)	June 2015	Exer3.7-7 Exer3.17-2(ii)	Septm2015	Exam-3.1 Exer3.18-2(ii)
March2016	Exer3.11-1(i) Exer3.18-4	June 2016	Exam3.12 **OUT-4**	Septm2016	**OUT-5** Exer3.18-2(ii)
March2017	Exer3.9-(i) Exer3.1-7	June 2017		Septm2017	

1. If the sum of two consecutive odd integers is 20, find the numbers.

2. If the product of two consecutive positive even integers is 24, find the numbers.

3. Simplify: $\frac{x^2-4}{a^3-1} \times \frac{a^3-a}{x^3+2x^2}$.**4.** If – 5 is a root of the quadratic equation $2x^2 + px - 15 = 0$, find the value of p.

5. Find the quotient and the remainder when $3x^3 - 17x^2 + 31x - 12$ is divided by 3x – 2.

5 MARKS QUESTIONS IN PTA MODEL QUESTION PAPERS

Model-1	Exer3.5-1(i), Exr3.13-1(iii) **OUT-1**	Model-2	Exam-3.23, Exer3.13-2(i) Exer3.18-12	Model-3	Exam-3.41, **OUT-2** Exer-3.8-2(iv)
Model-4	Exam-3.17, Exr3.11-1(vii) **OUT-3**	Model-5	Exam-3.5, Exam-3.44 Exer3.12-2(v)		

1. Prove that $\frac{1-x^4}{1-x} + \frac{1-x^3}{1+x} = \frac{2(1+x+x^2)+x^3}{1+x}$. **2.** Find the square root of $81x^4 - 72x^3 + 70x^2 - 24x + 9$.

3. If $25x^4 - 30x^3 - 11x^2 + ax - b$ is a perfect square, then find a and b.

2 MARKS QUESTIONS IN PTA MODEL QUESTION PAPERS

Model-1	Exam-3.29 Exer3.18-2(iii)	Model-2	Exer3.10-1(ii) **OUT-1**	Model-3	Exam-3.49 Exer3.4-1(i)
Model-4	Exer3.3-1(iii) Exr3.18-3(iii)	Model-5	Exer3.1-1 **OUT-2**		

1. Simplify $\frac{4x^3-12x^2}{2x^2-18} - x$. **2.** Find the square root of $(x+1)^6 + \frac{1}{(x+1)^6} + 2$.

CHAPTER-4 MATRICES

5 MARKS QUESTIONS:

March2012	Exer4.3-6	June 2012	Exer4.3-6	Septm2012	Exer4.3-9
March2013	Exer4.2-8 Exer4.3-6	June 2013	Exer4.3-6	Septm2013	**OUT-1**
March2014	Exam-4.16	June 2014	Exer4.3-9	Septm2014	Ex-4.3-9
March2015	Exer4.3-9	June 2015	Exam-4.19	Septm2015	Exer4.3-6
March2016	Exam-4.16	June 2016	Exer4.3-6	Septm2016	Exam-4.14
March2017	Exer4.3-9	June 2017		Septm2017	

1. If A=$\begin{pmatrix} 1 & 8 \\ 7 & 2 \end{pmatrix}$ then show that $A^2 - 3A - 54I=0$.

2 MARKS QUESTIONS

March2012	Exer4.2-5 Exer4.3-2(ii)	June 2012	Exam-4.5 Exer4.3-2(ii)	Septm2012	Exer4.2-3 Exam-4.17
March2013	Defn P(131) Exam-4.5	June 2013	Exer4.1-5 **OUT-1**	Septm2013	Exer4.2-3 Exer4.3-2(iv)
March2014	Exam-4.17 Exam-4.4	June 2014	Exam-4.5 Exer4.2-4	Septm2014	Ex-4.2-2 Ex-4.3-2(iii)
March2015	Exam-4.5 Exer4.2-3	June 2015	Exer4.2-3 Exer4.3-1	Septm2015	Exam-4.5 Exam4.13
March2016	Exer4.3-2(iii) **OUT-2**	June 2016	Exer4.2-4 Exam-4.17	Septm2016	Exer4.1-6(iii) Exer4.2-3
March2017	Exer4.1-6(ii) Exer4.2-4	June 2017		Septm2017	

1. If A=(1 2 - 1)and B=$\begin{pmatrix} 2 \\ 1 \\ 4 \end{pmatrix}$ then, find $(AB)^T$.

2. Find the values of x, y, z if $\begin{pmatrix} x+y \\ y+z \\ z-5 \end{pmatrix} = \begin{pmatrix} 7 \\ 9 \\ 0 \end{pmatrix}$.

5 MARKS QUESTIONS IN PTA MODEL QUESTION PAPERS

Model-1	Exam-4.19	Model-2	Exer4.3-6	Model-3	Exam-4.14
Model-4	Exer4.3-13	Model-5	Exer4.2-7		

2 MARKS QUESTIONS IN PTA MODEL QUESTION PAPERS

Model-1	Exam-4.4 Exer4.2-5	Model-2	Exam-4.15 Exer4.1-6(iii)	Model-3	Exam-4.18 Exer4.1-10
Model-4	Exam-4.7 Exer4.2-4	Model-5	Exam-4.11 Exer4.3-2(ii)		

CHAPTER-5 CO-ORDINATE GEOMETRY

5 MARKS QUESTIONS:

Mar2012	Exer5.2-5(i), Exam-5.23	Jun12	Exam-5.29, **OUT-1**	Sep2012	Exer5.2-5(iii), **OUT-2**
Mar2013	**OUT-3,** Exer5.3-10	Jun13	Exer5.2-5(iii), Exer5.5-13	Sep2013	Exer5.2-4(ii), Exam-5.17
Mar2014	Exam-5.12, Exer5.5-10	Jun14	Exam5.29, **OUT-4**	Sep2014	Ex-5.2-5(ii), Ex-5.3-12
Mar2015	**OUT-5,** Exer5.4-20	Jun15	**OUT-6,** Exam-5.12	Sep2015	Exer5.2-5(i), Exer5.5-14
Mar2016	Exer5.2-5(iii), Exer5.5-18	Jun16	Exer5.3-12, **OUT-4**	Sep2016	Exer5.5-14, Exer5.2-5(iii)
Mar2017	Exam-5.12, Exer5.4-17	Jun17		Sep2017	

1. Find the equations of the straight lines passing through (- 3,10) whose sum of the intercepts is 8.
2. If (5, - 3), (- 5,3), (6,6) are the mid-points of the sides of a triangles, find the equations of the sides.
3. Find the area of a triangle whose three sides are having the equations x + y=2, x – y=0 and x+2y – 6=0.
4. The line 4x +3y – 12=0 intersect the x,y axes at A and B respectively. Find the area of ΔAOB.
5. Prove that (0,5), (–2, –2), (5,0) and (7,7) are the vertices of a rhombus.
6. Find the equation of the straight line passing through the point of intersection of the lines 5x – 8y+23=0 and 7x + 6y – 71=0 and is perpendicular to the line joining the points (5,1) and (– 2,2).

2 MARKS QUESTIONS:

March2012	Exer5.1-4 **OUT-1**	June 2012	Exer5.1-3 Exam-5.6	Septm2012	Exer5.4-7 Exam-5.5
March2013	Exer5.5-5 Exer5.3-9	June 2013	Exam-5.9 Exer5.4-2	Septm2013	Exam-5.10 Exam-5.20
March2014	**OUT-2** Exam-5.19	June 2014	Exer5.1-3 Exam5.21	Septm2014	Ex-5.1-7 **OUT-3**
March2015	Exer5.1-3 Exer5.4-5(iii)	June 2015	Exam-5.9 Exer55-8	Septm2015	Exam-5.5 Exer5.3
March2016	Exer5.1-4 Exer5.5-5	June 2016	Exam-5.5 Exer5.4-4	Septm2016	Exer5.1-4 **OUT-4**
March2017	Exer5.1-7 **OUT-5**	June 2017		Septm2017	

1. Find the equation of a straight line passing through (– 1, – 2) and perpendicular to the line y=7.
2. The coordinates of the midpoint of the line segment joining the points (2a+2,3) and (4, 2b+1) are (2a,2b). Find the values of a and b.
3. P and Q trisect the line segment joining the points (2,1) and (5, – 8). If the point P lies on 2x – y+k=0, then the value of k.
4. If the points (p^2,0), (0,q^2) and (1,1) are collinear, prove that $\frac{1}{p^2}+\frac{1}{q^2}=1$.
5. "The points (o,a), a>0 lie on X-axis for all a". Justify the truthness of the statement.

5 MARKS QUESTIONS IN PTA MODEL QUESTION PAPERS

Model-1	Exam-5.18 Exer5.2-5(i)	Model-2	Exer5.5-10 **OUT-1**	Model-3	Exer5.1-12 Exer5.3-12
Model-4	Exam-5.23 **OUT-2**	Model-5	Exam-5.12 Exam-5.25		

1. Find the area of the quadrilateral whose vertices are (– 1,6), (–3, –9), (5, –8), (3,9).
2. Find the equation of a straight line which is passing through the point of intersection of the lines 2x+3y – 1=0 and 3x+2y=4 and the midpoint of the straight line joining the two points $\left(\frac{3}{8},\frac{-7}{10}\right),\left(\frac{-7}{8},\frac{-3}{10}\right)$.

2 MARKS QUESTIONS IN PTA MODEL QUESTION PAPERS

Model-1	Exam-5.6 **OUT-1**	Model-2	Exam-5.21 Exer5.1-7	Model-3	Exer5.5-9 **OUT-2**
Model-4	Exer5.2-2(iii) Exer5.3-7	Model-5	Exam-5.2 **OUT-3**		

1. Find the x and y intercepts of the straight line $\frac{10}{x}+\frac{9}{y}=-\frac{8}{xy}$.
2. Find the equation of the straight line whose x and y intercepts are $-\frac{2}{7}$ *and* $\frac{3}{5}$.
3. Find the equation of the straight line whose angle of inclination is 60° and y intercept is $\frac{1}{\sqrt{3}}$

CHAPTER-6 GEOMETRY

5 MARKS QUESTIONS:

March2012	Theorem-6.3	June 2012	Theorem-6.6	Septm2012	Exer6.1-12
March2013	Theorem-6.6	June 2013	Theorem-6.1	Septm2013	Theorem-6.3
March2014	Theorem-6.1	June 2014	Exer6.3-7	Septm2014	Theorem-6.1
March2015	Exer6.3-5	June 2015	Theorem-6.5	Septm2015	Theorem-6.3
March2016	Theorem-6.1	June 2016	Exam-6.7	Septm2016	Theorem-6.4
March2017	Theorem-6.5	June 2017		Septm2017	

2 MARKS QUESTIONS:

March2012	Exam-6.5	June 2012	Exam-6.1	Septm2012	Exam-6.5
March2013	Exer6.3-1	June 2013	Exer6.1-11	Septm2013	Exam-6.5
March2014	Exer6.3-2	June 2014	Exam-6.1	Septm2014	Ex-6.1-11
March2015	Exer6.3-3(i)	June 2015	Exam-6.5	Septm2015	Exam-6.13-(i)
March2016	Exer6.3-1	June 2016	**OUT-1**	Septm2016	Exam-6.15
March2017	Exam-6.8	June 2017		Septm2017	

1. In a given ΔABC, $DE || BC$. if $BD = x - 3$, $AB = 2x$, $CE = x - 2$ and $AC = 2x + 3$. Find x.

5 MARKS QUESTIONS IN PTA MODEL QUESTION PAPERS

Model-1	Exer6.3-5	Model-2	Exer6.1-5	Model-3	Exam-6.11
Model-4	Theorem-6.2	Model-5	Theorem-6.3		

2 MARKS QUESTIONS IN PTA MODEL QUESTION PAPERS

Model-1	Exam-6.5	Model-2	Exam-6.6	Model-3	Exer6.3-3(i)
Model-4	Exer6.1-11	Model-5	Exam-6.8		

CHAPTER-7 TRIGONOMETRY

5 MARKS QUESTIONS:

March2012	Exer7.2-12	June 2012	Exer7.2-17	Septm2012	Exam-7.18
March2013	Exer7.2-10 Exam-7.6	June 2013	Exam-7.19	Septm2013	Exam-7.12
March2014	Exer7.2-8	June 2014	Exam-7.18	Septm2014	Exam-7.20
March2015	Exam-7.12	June 2015	Exer7.2-16	Septm2015	Exam-7.24
March2016	Exer7.2-8	June 2016	Exam-7.18	Septm2016	Exer7.2-17
March2017	Exam-7.24	June 2017		Septm2017	

2 MARKS QUESTIONS:

March2012	Exam-7.7 Exam-7.16	June 2012	Exam-7.1 Exer7.2-2	Septm2012	Exer7.1-2(iii) Exam-7.15
March2013	**OUT-1** Exam-7.15	June 2013	Exer7.1-2(iv) **OUT-2**	Septm2013	**OUT-3** Exam-7.10
March2014	Exer7.1-2(v) Exam-7.16	June 2014	Exer7.1-2(iii) Exam-7.15	Septm2014	Ex-7.1-2(viii) Ex-7.2-1
March2015	Exer7.1-2(v) Exer7.2-1	June 2015	**OUT-4** Exam-7.15	Septm2015	Exam-7.7 Exam-7.15
March2016	**OUT-5** Exam-7.10	June 2016	Exam-7.7 Exam-7.17	Septm2016	Exam-7.7 Exam-7.16
March2017	Exer7.1-4 Exam-7.17	June 2017		Septm2017	

1. Prove that $\frac{1}{sin^2\theta} - \frac{1-sin^2\theta}{1-cos^2\theta} = 1$.

2. A boy of height 5 feet away from the pillar of distance 100 feet saw the top of the pillar with angle of elevation 45°. Find the height of the pillar.

3. If sinθ=cosθ, θ is an acute angle, show that $\tan^2\theta - 2\cos^2\theta = 0$.

4. Simplify $\cos\theta\sqrt{1+tan^2\theta} + \sin\theta\sqrt{1+cot^2\theta}$

5. If ΔABC is a right angled at C, then find the values of cos(A+B) and sin(A+B).

5 MARKS QUESTIONS IN PTA MODEL QUESTION PAPERS

Model-1	Exam-7.18	Model-2	Exer7.2-17	Model-3	Exer7.1-5
Model-4	Exer7.2-16	Model-5	Exam-7.22		

2 MARKS QUESTIONS IN PTA MODEL QUESTION PAPERS

Model-1	Exer7.1-2(iii) Exer7.2-2	Model-2	Exer7.1-2(vii) Exam-7.16	Model-3	Exer7.1-2(vi) Exam-7.17
Model-4	Exam-7.10 Exer7.2-5	Model-5	Exer7.1-2(ii) Exer7.2-1		

PREVIOUS YEAR PUBLIC EXAMS QUESTIONS FOR X STANDARD

CHAPTER-8 MENSURATION

5 MARKS QUESTIONS:

March2012	Exer8.3-4, Exer8.1-13	June2012	Exam-8.12, Exer8.3-17	Septm2012	Exer8.3-5, **OUT-1**
March2013	Exer8.3-4, Exam-8.16	June2013	Exam-8.4, Exer8.3-17	Septm2013	Exer8.2-11, **OUT-2**
March2014	Exer8.2-12, Exer8.3-5	June2014	Exer8.3-5, Exer8.1-5	Septm2014	Ex-8.1-13, Ex-8.3-13
March2015	Exam-8.8, Exer8.3-13	June2015	Exer8.2-17, Exer8.3-11	Septm2015	Exam-8.20, Exam-8.22
March2016	Exam-8.16, Exam-8.23	June2016	**OUT-3,** Exer8.3-11	Septm2016	**OUT-4,** Exam-8.23
March2017	Exer8.2-12, **OUT-5**	June2017		Septm2017	

1. The shape of a water tank mounted on lorry is a cylinder with two hemispheres stuck to each of its ends. The uniform thickness of the tank is 7cm. The total length of the tank is 700cm and the diameter is 56cm. The tank is full of water. The entire water is filled in water containers. If the capacity of each container is 672cm^3, find the required number of containers.

2. A solid right circular cone of radius 3 cm and slant height 5 cm is cut by a plane through the vertex of the cone A into two exact pieces. Find the total surface area of a single piece.

3. A cricket stump is in the shape of a cylinder surmounted by a cone. The diameter of the cylinder and the total height of the stump are 10cm and 80cm respectively. If the height of the conical part is 12cm, then find its total surface area.

4. The curved surface area and total surface area of a solid circular cylinder are 880sq.cm and 1188sq.cm respectively. Find its volume.

5. The length, breadth and height of a solid metallic rectangular cuboid are 44cm, 21cm and 12cm respectively. It is melted and a solid cone is made out of it. If the height of the cone is 24cm, then find the diameter of its base.

2 MARKS QUESTIONS:

Mar12	Exam-8.5, Exer8.2-9	Jun12	Exer8.1-10, **OUT-1**	Sep12	Exer8.1-2, Exer8.2-1
Mar13	Exer8.1-12, Exam-8.17	Jun13	Exer8.1-12, Exer8.2-4	Sep13	Exer8.1-16, Exer8.2-10
Mar14	Exer8.1-1, **OUT-2**	Jun14	Exer8.2-19, Exam-8.10	Sep14	**OUT-3,** Exam-8.8
Mar15	**OUT-4,** Exam-8.11	Jun15	Exer8.1-7, Exam-8.17	Sep15	**OUT-5, OUT-6**
Mar16	Exer8.1-3, Exer8.1-14	Jun16	Exer8.2-5, Exer8.1-12	Sep16	Exer8.1-17, **OUT-7**
Mar17	Exam-8.19, Exer8.1-6	Jun17		Sep17	

1. Find the ratio of the volumes of two spheres of radii 3cm and 4cm respectively.

2. How many litres of water will a hemispherical tank hold whose diameter is 4.2m?

3. The radius of the circular well is 5m. Find the cost of cementing the surface at a depth of 14m at a rate of Rs.2/m^2.

4. If the circumference of the base of a solid right circular cylinder is 154cm and height is 16cm, ind its C.S.A.

5. A cone of height 24cm has a curved surface area of 550cm^2. Find the volume of the cone.

6. The external diameter of a cylindrical shaped iron pipe is 25cm and its length is 20cm. If the thickness of the pipe is 1cm, find the total surface area of the pipe.

7. Radius and slant height of a cone are 20cm and 29cm respectively. Find its volume.

5 MARKS QUESTIONS IN PTA MODEL QUESTION PAPERS

Model-1	Exam-8.21 Exer8.3-11	Model-2	Exam-8.2 Exer8.3-4	Model-3	Exer8.1-15 **OUT-1**
Model-4	Exer8.1-5 Exam-8.23	Model-5	Exer8.3-17 **OUT-2**		

1. A solid sphere of diameter 42 cm is melted and recast into a number of smaller identical ones, each of diameter 7 cm and height 3 cm. Find the number of cones so formed.
2. A solid metallic cylinder of diameter 4cm and height 45cm. is melted and recast into identical spherical shots of radius 3cm each. Find the number of spherical shots.

2 MARKS QUESTIONS IN PTA MODEL QUESTION PAPERS

Model-1	Exer8.2-5 **OUT-1**	Model-2	Exer8.1-12 **OUT-2**	Model-3	Exam-8.1(ii) Exer8.2-17
Model-4	Exam-8.16 **OUT-3**	Model-5	Exer8.1-7 Exer8.2-20		

1. If the total surface area of a solid right circular cylinder is thrice its curved surface area, then find the height in terms of its radius.
2. The surface area of a sphere is 616 sq.cm. Find its diameter.
3. Find the curved surface area of a cone whose volume and height are 120π cm^3 and 10 cm res.

CHAPTER-9 PRACTICAL GEOMETRY

10 MARKS QUESTIONS:

March2012	Exam-9.5 Exer9.3-2	June 2012	Exer9.1-5 Exer9.2-4	Septm2012	Exam-9.8 Exer9.1-5
March2013	Exer9.3-3 Exam-9.4	June 2013	Exer9.1-5 Exam-9.4	Septm2013	Exer9.1-5 Exer9.3-2
March2014	Exam-9.3 Exer9.3-4	June 2014	Exer9.1-3 Exam-9.4	Septm2014	Ex-9.1-4 Ex-9.3-4
March2015	Exer9.1-4 Exer9.2-5	June 2015	Exer9.1-3 Exer9.2-4	Septm2015	Exer9.1-5 Exer9.2-4
March2016	Exer9.1-5 Exer9.3-8	June 2016	Exam-9.3 Exer9.2-4	Septm2016	Exer9.1-3 Exer9.3-4
March2017	Exer9.1-4 Exer9.3-7	June 2017		Septm2017	

10 MARKS QUESTIONS IN PTA MODEL QUESTION PAPERS

Model-1	Exam-9.2 Exer9.3-10	Model-2	Exer9.2-2 Exer9.3-2	Model-3	Exer9.1-4 Exer9.3-8
Model-4	Exam-9.3 Exer9.2-5	Model-5	Exam-9.5 Exer9.3-7		

CHAPTER-10 GRAPHS

10 MARKS QUESTIONS:

March2012	Exer10.1-4 Exer10.2-3	June 2012	Exam-10.3 Exer10.2-3	Septm2012	Exer10.1-4 Exer10.2-5
March2013	Exam-10.4 Exer10.2-3	June 2013	Exam-10.3 Exer10.2-1	Septm2013	Exer10.1-1(iv) Exam10.9
March2014	Exam-10.5 Exer10.2-4	June 2014	Exam-10.6 Exer10.2-1	Septm2014	Exer10.1-2(ii) Exam-10.8
March2015	Exer10.1-4 Exam-10.9	June 2015	Exam-10.4 Exer10.2-5	Septm2015	Exer10.1-5 Exer10.2-2
March2016	Exer10.1-4 Exer10.2-6	June 2016	Exam-10.5 Exer10.2-4	Septm2016	Exam-10.3 Exer10.2-5
March2017	Exam-10.4 Exer10.2-5	June 2017		Septm2017	

10 MARKS QUESTIONS IN PTA MODEL QUESTION PAPERS

Model-1	Exer10.1-5 Exer10.2-4	Model-2	Exam-10.5 Exer10.2-5	Model-3	Exam-10.8 Exer10.1-7
Model-4	Exr10.1-2(iv) Exer10.2-1	Model-5	Exer10.1-4 Exer10.2-2		

CHAPTER-11 STATISTICS

5 MARKS QUESTIONS:

March2012	Exer11.1-8	June 2012	Exer11.1-6(i)	Septm2012	Exer11.1-6(ii)
March2013	Exam-11.10	June 2013	Exer11.1-16	Septm2013	Exam11.15
March2014	Exer11.1-7	June 2014	Exam-11.5	Septm2014	**OUT-1**
March2015	Exam-11.12	June 2015	Exer11.1-6(ii)	Septm2015	**OUT-2**
March2016	Exer11.1-7	June 2016	Exer11.1-16	Septm2016	Exam-11.17
March2017	Exam-11.17	June 2017		Septm2017	

1. A test in General Knowledge was conducted for a class. The marks out of 40, obtained by 6 students were 20, 14, 16, 30, 21 and 25. Find the standard deviation of the data.

2. The mean and standard deviation of a set of 100 observations were worked as 40 and 5 respectively. By mistake 40 was entered as 50. Calculate the correct mean and standard deviation.

2 MARKS QUESTIONS:

March2012	Exam-11.1	June 2012	Exer11.1-17	Septm2012	Exam-11.3
March2013	Exer11.1-3	June 2013	Exer11.1-17	Septm2013	Exer11.1-5
March2014	Exam-11.11	June 2014	Exam-11.11	Septm2014	Ex-11.1-1(i)
March2015	Exam-11.1	June 2015	Exer11.1-5	Septm2015	Exer11.1-5
March2016	Exer11.1-17	June 2016	Exer11.1-5	Septm2016	Exer11.1-5
March2017	Exer11.1-2	June 2017		Septm2017	

5 MARKS QUESTIONS IN PTA MODEL QUESTION PAPERS

Model-1	Exam-11.21	Model-2	Exam-11.6	Model-3	Exam-11.20
Model-4	Exam-11.13	Model-5	Exer11.1-10		

2 MARKS QUESTIONS IN PTA MODEL QUESTION PAPERS

Model-1	Exer11.1-2	Model-2	Exer11.1-17	Model-3	Exam-11.11
Model-4	Exam-11.2	Model-5	Exam-11.1		

CHAPTER-12 PROBABILITY

5 MARKS QUESTIONS:

March2012	Exam-12.18	June 2012	Exam-12.18	Septm2012	Exam-12.18
March2013	Exam-12.13	June 2013	Exam-12.17	Septm2013	Exer12.2-14
March2014	Exam-12.5	June 2014	Exer12.2-10	Septm2014	Ex-12.2-4
March2015	Exer12.2-14	June 2015	Exam12.18	Septm2015	Exam-12.13
March2016	**OUT-1**	June 2016	Exam12.18	Septm2016	Exer12.2-9
March2017	Exer12.2-4	June 2017		Septm2017	

1. A box contains 4 white balls, 6 red balls, 7 black balls and 3 blue balls. One ball is drawn at random from the bag. Find the probability that the ball drawn is:
[i]neither white nor black, [ii]red or white and [iii]either white or red or black or blue.

2 MARKS QUESTIONS:

March2012	Exam-12.3	June2012	Exam-12.4	Septm2012	Exer12.1-2
March2013	Exam-12.4	June2013	Exer12.2-10	Septm2013	Exam-12.6
March2014	Exer12.1-14	June2014	Exer12.1-12(i)	Septm2014	Ex-12.1-2
March2015	Exer12.1-8	June2015	Exer12.1-5	Septm2015	**OUT-1**
March2016	Exer12.1-12	June2016	Exer12.1-14	Septm2016	Exer12.2-3
March2017	Exam-12.2	June2017		Septm2017	

1. A point is chosen at random inside a circle of radius 2cm. What is the probability that this point is nearer to the centre than to the circumference?

5 MARKS QUESTIONS IN PTA MODEL QUESTION PAPERS

Model-1	Exer12.2-15	Model-2	Exam-12.13	Model-3	Exer12.1-15
Model-4	Exer12.2-7	Model-5	Exer12.2-14		

2 MARKS QUESTIONS IN PTA MODEL QUESTION PAPERS

Model-1	Exer12.1-1	Model-2	Exer12.1-7(iii)	Model-3	Exer12.2-2
Model-4	Exam-12.9	Model-5	Exam-12.3		

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