S.H.I.P.S.

[A Premier Institution]

SHREE HANUMAT INTERNATIONAL PUBLIC SCHOOL

(Senior Secondary)

Affiliated to the C.B.S.E., New Delhi, Vide Code No. – 1630686,

G.T. ROAD, GORAYA (Distt. Jalandhar)- 144409, Contact – 78376-36615, 01826-264069

Home Assignment 2023-24

Name: _____

Grade : IX Roll. No. _____

Note:

1. **Assignment Marks will be added in the Terminal Assessment.**
2. **Parents are required to let their child do his/her assignments on his/her own.**
3. **Use loose sheets if required to perform the task.**
4. **Best Assignment of the year will be recognised.**

ENGLISH

1.Discuss teen age issues with your parents and make
a video of the discussion and send it at dkansya@gmail.com
2.After discussion,express your feelings in the form of a diary entry.
3.Listen any two TED talks and make a report on the same.
4.Make a poster highlighting the steps to control global warming (on A4 sheet)

HINDI

क्रियाकलाप-

क्रियाकलाप- 1 ' पंजाब'' की संस्कृति , वेशभूषा, प्रसिद्ध त्योहार आदि विषयों पर कला एकीकृत परियोजना तैयार करें।

क्रियाकलाप-2

1.पद किसे कहते है? रचना के आधार पर, उत्पत्ति के आधार पर, प्रयोग के आधार पर शब्दों का वर्गीकरण कर परियोजना कार्य तैयार करें।

2.किन्हीं 10 ऐसे शब्दों को लिखे जिसमें उपसर्ग और प्रत्यय दोनों का प्रयोग होता हो।

3.वृक्षों का महत्व बताते हुए दो मित्रों के बीच का संवाद लिखे ।

4.इकाई सत्र-1 का अभ्यास करें।

PUNJABI

1.ਹੇਠ ਲਿਖੇ ਵਿਸ਼ਿਆਂ ਉੱਪਰ ਵਿਦਿਆਰਥੀ ਆਪਣੇ ਵਿਚਾਰ ਪੇਸ਼ ਕਰਦੇ ਪੈਰਾ ਰਚਨਾ ਕਰਨਗੇ।

ਸਾਡੇ ਮੇਲੇ ਤੇ ਤਿਉਹਾਰ, ਪੰਜਾਬ ਦੇ ਲੋਕ ਗੀਤ

(Roll no 1-13)

ਮਹਿੰਗਾਈ , ਭਾਰਤ ਵਿਚ ਵੱਧ ਰਹੀ ਆਬਾਦੀ

(Roll no 14-26)

ਇਤਿਹਾਸਿਕ ਸਥਾਨ ਦੀ ਯਾਤਰਾ , ਸ਼ਹੀਦ ਭਗਤ ਸਿੰਘ

(Roll no 27-39)

(2) ਪ੍ਰੋਜੈਕਟ ਫਾਈਲ :

1. ਆਧੁਨਿਕ ਕਾਵਿ ਧਾਰਾ ਦਾ ਮੋਢੀ ਭਾਈ ਵੀਰ ਸਿੰਘ
(ਕਵਿਤਾ - ਸਮਾਂ)
2. ਸ਼ਹਿਰੀ ਤੇ ਪੇਂਡੂ ਜੀਵਨ ਵਿਚ ਅੰਤਰ
3. ਪੰਜਾਬ ਦੇ ਮੇਲੇ ਤੇ ਤਿਉਹਾਰ

(3)ਹੇਠ ਲਿਖੇ ਪ੍ਰਸ਼ਨਾਂ ਦੇ ਉੱਤਰ ਦਿਓ:

(1) ' ਵਣਜਾਰੇ ਕਿੱਥੋਂ ਆਏ ਹਨ?
(2) ' ਵਿਸਾਖੀ ਦਾ ਮੇਲਾ ' ਕਵਿਤਾ ਅਨੁਸਾਰ ਸ਼ੁਕੀਨਾ ਦੀ ਭੀੜ ਕਿੱਥੇ ਜੁੜੀ ਹੈ?
(3) ' ਵਹਿਮੀ ਤਾਇਆ ' ਲੇਖ ਦਾ ਮੁੱਖ ਪਾਤਰ ਕੌਣ ਹੈ ?
(4) ਦੁਨੀਆਂ ਵਿੱਚ ਕਿਸ ਬਿਮਾਰੀ ਦਾ ਇਲਾਜ ਨਹੀਂ ਹੈ ?
(5) ' ਜਨਮਦਿਨ ' ਕਹਾਣੀ ਕਿਸਦੀ ਰਚਨਾ ਹੈ?
(6) ਕਿਰਿਆ ਦੀਆਂ ਕਿੰਨੀਆਂ ਕਿਸਮਾਂ ਹਨ?
(7) ' ਮੈਂ ਖੇਡ ਸਕਦਾ ਹਾਂ ।' ਕਿਹੜੀ ਕਿਰਿਆ ਹੈ ?
(8) ਵਿਰੋਧੀ ਸ਼ਬਦ ਲਿਖੋ: ਔੜ , ਆਸਤਕ , ਉੱਪਰ
(9) ' ਸਿੱਕਾ ਜੰਮਣਾ ' ਮੁਹਾਵਰੇ ਦਾ ਸਹੀ ਅਰਥ ਲਿਖੋ।
(10) ਵਿਸਮਿਕ ਕਿੰਨੀ ਪ੍ਰਕਾਰ ਦੇ ਹਨ?

2. ਹੇਠਾਂ ਦਿੱਤੀ ਕਾਵਿ ਟੁਕੜੀ ਨੂੰ ਪੜ੍ਹ ਕੇ ਪੁੱਛੇ ਗਏ ਪ੍ਰਸ਼ਨਾਂ ਦੇ ਉੱਤਰ ਦਿਓ:

ਸਾਡੀ ਪਿੱਠ 'ਤੇ ਖੜ੍ਹਾ ਇਤਿਹਾਸ ਸਾਡਾ,
ਸਾਨੂੰ ਮਾਣ ਹੈ ਲਹੂ ਦੇ ਰੰਗ ਉੱਤੇ।
ਅਸੀਂ ਜਾਣਦੇ ਕਿੰਝ ਕੁਰਬਾਨ ਹੋਣਾ,
ਸੋਹਣੇ ਦੇਸ਼ ਦੀ ਇੱਕ ਵੀ ਮੰਗ ਉੱਤੇ।
ਜਦੋਂ ਅੰਬਾਂ ਨੂੰ ਲੱਗਿਆ ਬੂਰ ਹੋਵੇ,
ਕੋਇਲ ਆਣ ਕੇ ਓਸ ਥਾਂ ਚਹਿਕਦੀ ਹੈ।
ਜਿੱਥੇ-ਜਿੱਥੇ ਸ਼ਹੀਦਾਂ ਦੀ ਰੱਤ ਡੁੱਲੇ ,
ਓਥੇ ਫ਼ਸਲ ਗੁਲਾਬ ਦੀ ਮਹਿਕਦੀ ਹੈ।

1. ਸਾਡੀ ਪਿੱਠ 'ਤੇ ਕੌਣ ਖੜਾ ਹੈ ?
2. ਸਾਨੂੰ ਕਿਸ ਦੇ ਰੰਗ 'ਤੇ ਮਾਣ ਹੈ?
3 .ਆਪਣੇ ਸੋਹਣੇ ਦੇਸ਼ ਦੀ ਇੱਕ ਮੰਗ ਤੇ ਅਸੀਂ ਕੀ ਕਰਨਾ ਜਾਣਦੇ ਹਾਂ ?

ਹੇਠ ਲਿਖੇ ਕਾਵਿ- ਟੁਕੜੀ ਨੂੰ ਪੜ੍ਹ ਕੇ ਪ੍ਰਸ਼ਨਾਂ ਦੇ ਉੱਤਰ ਦਿਓ।

ਸਭ ਅੰਨ ਅਨਾਜ ਗ਼ਰੀਬਾਂ ਦਾ,

ਗੋਦਾਮਾਂ ਦੇ ਵਿੱਚ ਦਫ਼ਨ ਪਿਆ।

ਸਭ ਦੁਨੀਆਂ ਦਾ ਲੋਹਾ ਕੋਇਲਾ,

ਹਥਿਆਰਾਂ ਦੇ ਵਿੱਚ ਬਦਲ ਗਿਆ।

ਦੈਂਤਾਂ ਦੀਆਂ ਭੱਠੀਆਂ ਗਰਮ ਸਦਾ,

ਲੋਕਾਂ ਚੁੱਲ੍ਹੇ ਅੰਗਿਆਰ ਨਹੀਂ।

(1)ਗੋਦਾਮਾਂ ਵਿਚ ਕੀ ਕੁਝ ਰੱਖਿਆ ਹੋਇਆ ਹੈ ?

(2)ਲੋਹੇ ਤੇ ਕੋਲੇ ਨੂੰ ਕਿਸ ਵਿੱਚ ਬਦਲਿਆ ਜਾ ਰਿਹਾ ਹੈ?

(3) ਦੈਂਤਾਂ ਦੀਆ ਭੱਠੀਆਂ ਕਿਹੋ ਜਿਹੀਆਂ ਸਨ?

MATHEMATICS

CLASS IX : CHAPTER - 1
NUMBER SYSTEM

1. Which one of the following is a rational number:

(a) $\sqrt{3}$ (b) $\sqrt{2}$ (c) 0 (d) $\sqrt{5}$

2. 0.6666 in $\frac{p}{q}$ form is:

(a) $\frac{6}{99}$ (b) $\frac{2}{3}$ (c) $\frac{3}{5}$ (d) $\frac{1}{66}$

3. $4\frac{1}{8}$ in decimal form is:

(a) 4.125 (b) $4.\overline{15}$ (c) $4.1\overline{5}$ (d) $0.\overline{415}$

4. The value of $\left(3+\sqrt{3}\right)\left(3-\sqrt{3}\right)$ is:

(a) 0 (b) 6 (c) 9 (d) 3

5. The value of $\left(\sqrt{5}+\sqrt{2}\right)^2$ is:

(a) $7+2\sqrt{5}$ (b) $1+5\sqrt{2}$ (c) $7+2\sqrt{10}$ (d) $7-2\sqrt{10}$

6. The value of $\left(\sqrt{5}+\sqrt{2}\right)\left(\sqrt{5}-\sqrt{2}\right)$ is:

(a) 10 (b) 7 (c) 3 (d) $\sqrt{3}$

7. The value of $\left(3+\sqrt{3}\right)\left(2+\sqrt{2}\right)$ is:

$(a) 6+3\sqrt{2}+2\sqrt{3}+\sqrt{6}$

$(b) 3+3\sqrt{2}+3\sqrt{3}+6$

$(c) 6-3\sqrt{2}-2\sqrt{3}-\sqrt{6}$

$(d) 6-3\sqrt{2}+2\sqrt{3}-\sqrt{6}$

8. The value of $\left(\sqrt{11}+\sqrt{7}\right)\left(\sqrt{11}-\sqrt{7}\right)$ is:

(a) 4 (b) – 4 (c) 18 (d) – 18

9. The value of $\left(5+\sqrt{5}\right)\left(5-\sqrt{5}\right)$ is :

(a) 0 (b) 25 (c) 20 (d) – 20

10. On rationalizing the denominator of $\frac{1}{\sqrt{7}}$, we get

(a) 7 (b) $\frac{\sqrt{7}}{7}$ (c) $\frac{-\sqrt{7}}{7}$ (d) $\sqrt{7}$

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11. If $x=\frac{\sqrt{3}+\sqrt{2}}{\sqrt{3}-\sqrt{2}}$ and $y=\frac{\sqrt{3}-\sqrt{2}}{\sqrt{3}+\sqrt{2}}$, find the value of x^2+y^2.

12. If $x=\frac{\sqrt{5}+\sqrt{3}}{\sqrt{5}-\sqrt{3}}$ and $y=\frac{\sqrt{5}-\sqrt{3}}{\sqrt{5}+\sqrt{3}}$, find the value of $x+y+xy$.

13. If $x=\frac{2-\sqrt{5}}{2+\sqrt{5}}$ and $y=\frac{2+\sqrt{5}}{2-\sqrt{5}}$, find the value of x^2-y^2.

14. If $\frac{5+2\sqrt{3}}{7+\sqrt{3}}=a-\sqrt{3}b$, find a and b where a and b are rational numbers.

15. If a and b are rational numbers and $\frac{4+3\sqrt{5}}{4-3\sqrt{5}}=a+b\sqrt{5}$, find the values of a and b.

16. If a and b are rational numbers and $\frac{2+\sqrt{3}}{2-\sqrt{3}}=a+b\sqrt{3}$, find the values of a and b.

17. If a and b are rational numbers and $\frac{\sqrt{11}-\sqrt{7}}{\sqrt{11}+\sqrt{7}}=a-b\sqrt{77}$, find the values of a and b.

18. Evaluate: $\frac{1}{\sqrt{2}+1}+\frac{1}{\sqrt{3}+\sqrt{2}}+\frac{1}{\sqrt{4}+\sqrt{3}}+.....+\frac{1}{\sqrt{9}+\sqrt{8}}$

19. If $x=\frac{1}{2+\sqrt{3}}$, find the value of $2x^3-7x^2-2x+1$.

20. If $x=\frac{1}{2-\sqrt{3}}$, find the value of x^3-2x^2-7x+5.

21. If $\sqrt{2}=1.414$ and $\sqrt{5}=2.236$, find the value of $\frac{\sqrt{10}-\sqrt{5}}{2\sqrt{2}}$ upto three places of decimals.

22. Find six rational numbers between 3 and 4.

23. Find five rational numbers between $\frac{3}{5}$ and $\frac{4}{5}$

CLASS IX : CHAPTER - 2
POLYNOMIALS

1. The zero of p(x) = 2x – 7 is:

(a) $\frac{7}{2}$ (b) $\frac{2}{7}$ (c) $\frac{-2}{7}$ (d) $\frac{-7}{2}$

2. The zero of p(x) = 9x + 4 is:

(a) $\frac{4}{9}$ (b) $\frac{9}{4}$ (c) $\frac{-4}{9}$ (d) $\frac{-9}{4}$

3. Which are the zeroes of $p(x) = x^2 - 1$:

(a) 1, –1 (b) – 1, 2 (c) –2, 2 (d) –3, 3

4. Which are the zeroes of p(x) = (x – 1)(x – 2):

(a) 1, –2 (b) – 1, 2 (c) 1, 2 (d) –1, –2

5. Which one of the following is the zero of p(x) = lx + m

(a) $\frac{m}{l}$ (b) $\frac{l}{m}$ (c) $-\frac{m}{l}$ (d) $-\frac{l}{m}$

6. Which one of the following is the zero of p(x) = $5x - \pi$:

(a) $-\frac{4}{5}\pi$ (b) $\frac{1}{5}\pi$ (c) $\frac{4}{5}\pi$ (d) none of these

7. On dividing $x^3 + 3x^2 + 3x + 1$ by x we get remainder:

(a) 1 (b) 0 (c) – 1 (d) 2

8. On dividing $x^3 + 3x^2 + 3x + 1$ by $x + \pi$ we get remainder:

$(a) - \pi^3 + 3\pi^2 - 3\pi + 1$

$(b)\pi^3 - 3\pi^2 + 3\pi + 1$

$(c) - \pi^3 - 3\pi^2 - 3\pi - 1$

$(d) - \pi^3 + 3\pi^2 - 3\pi - 1$

9. On dividing $x^3 + 3x^2 + 3x + 1$ by 5 + 2x we get remainder:

(a) $\frac{8}{27}$ (b) $\frac{27}{8}$ (c) $-\frac{27}{8}$ (d) $-\frac{8}{27}$

10. If x – 2 is a factor of $x^3 - 3x + 5a$ then the value of a is:

(a) 1 (b) –1 (c) $\frac{2}{5}$ (d) $\frac{-2}{5}$

11. Without actual division, prove that $2x^4 - 5x^3 + 2x^2 - x + 2$ is divisible by $x^2 - 3x + 2$.

12. Simplify $(2x - 5y)^3 - (2x + 5y)^3$.

13. Multiply $x^2 + 4y^2 + z^2 + 2xy + xz - 2yz$ by $(-z + x - 2y)$.

14. If a, b, c are all non-zero and $a + b + c = 0$, prove that $\frac{a^2}{bc} + \frac{b^2}{ca} + \frac{c^2}{ab} = 3$

15. If $a + b + c = 5$ and $ab + bc + ca = 10$, then prove that $a^3 + b^3 + c^3 - 3abc = -25$.

16. Without actual division, prove that $2x^4 - 6x^3 + 3x^2 + 3x - 2$ is exactly divisible by $x^2 - 3x + 2$.

17. Without actual division, prove that $x^3 - 3x^2 - 13x + 15$ is exactly divisible by $x^2 + 2x - 3$.

18. Find the values of a and b so that the polynomial $x^3 - 10x^2 + ax + b$ is exactly divisible by $(x - 1)$ as well as $(x - 2)$.

19. Find the integral zeroes of the polynomial $2x^3 + 5x^2 - 5x - 2$.

20. If $(x - 3)$ and $\left(x - \frac{1}{3}\right)$ are both factors of $ax^2 + 5x + b$, then show that $a = b$.

21. Find the values of a and b so that the polynomial $x^4 + ax^3 - 7x^2 + 8x + b$ is exactly divisible by $(x + 2)$ as well as $(x + 3)$.

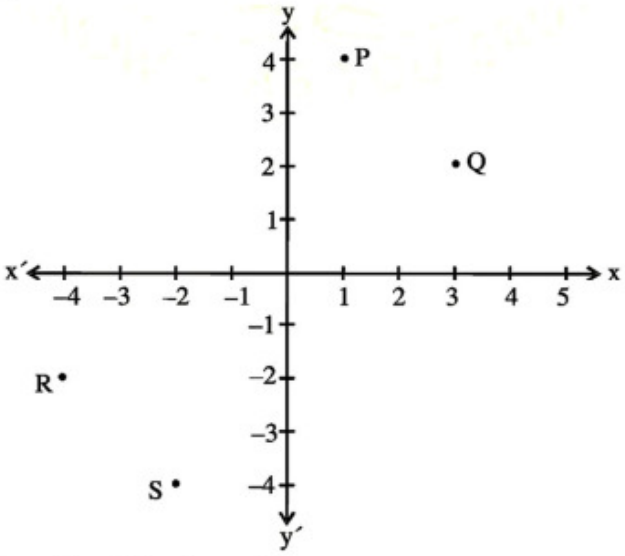
CLASS IX : CHAPTER - 3
COORDINATE GEOMETRY

1. Which of the following points lie in I and II quadrants?
   (1, 1), (2, –3), (–2, 3), (-1, 1), (–3, –2), (4, 3)

2. Which of the following points lie on (a) x-axis (b) y-axis?
   (5, 1), (8, 0), (0, 4), (–3, 0), (0, –3), (0, 5), (0, 0)

3. If the x-coordinate of a point is negative, it can lie in which quadrants?

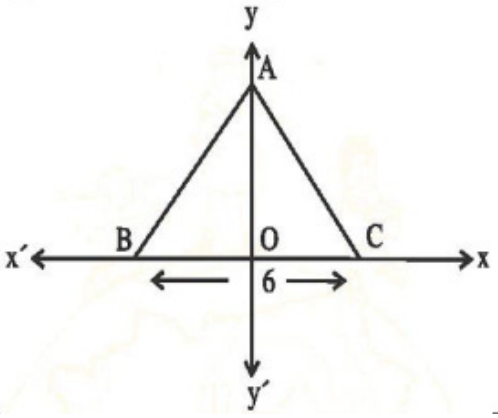
4. From the figure, write the coordinates of the point P, Q, R and S. Does the line joining P and Q pass through origin?



5. Write the coordinates of the following points:
   (i) lying on both axes
   (ii) lying on x-axis and with x-coordinate 4
   (iii) lying on y-axis with y-coordinate –3.

6. The coordinates of the three vertices of a rectangle ABCD are A(3, 2), B(–4, 2), C(–4, 5). Plot these points and write the coordinates of D.

7. ABC is an equilateral triangle as shown in the figure. Find the coordinates of its vertices.



8. Plot the following points on a graph paper:

x	1	2	3	4	5
y	5	8	11	14	17

Join these points. What do you observe?

9. What is the name of horizontal and the vertical lines drawn to determine the position of any point in the Cartesian plane?

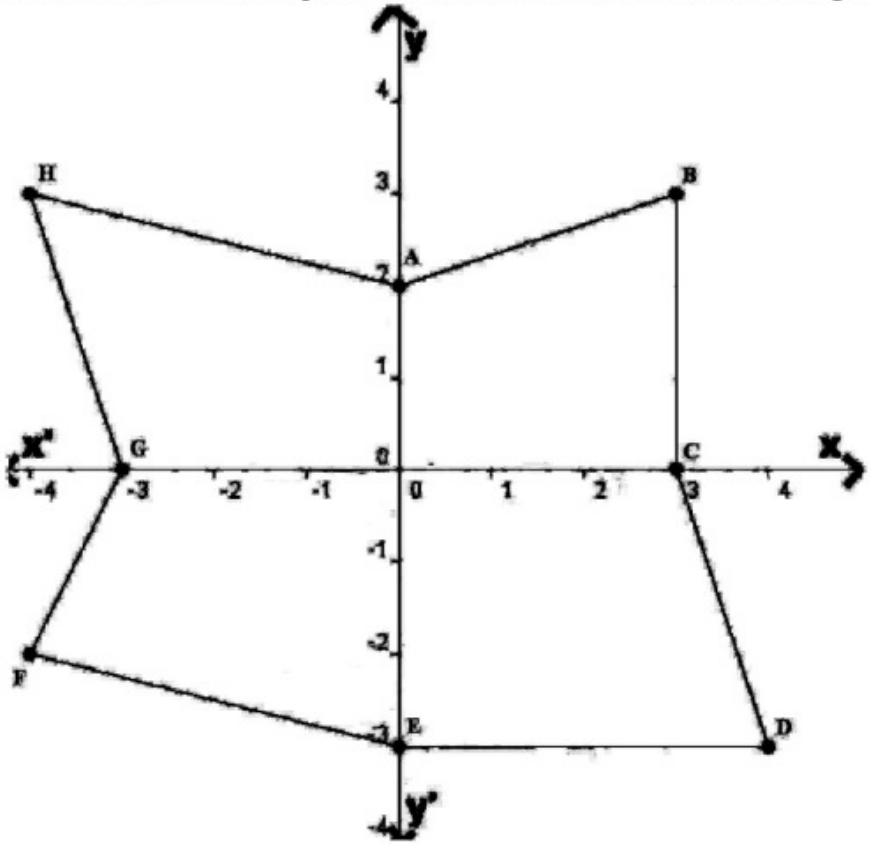
10. What is the name of each part of the plane formed by these two lines?

11. Write the name of the point where these two lines intersect.

12. Locate the points (5, 0), (0, 5), (2, 5), (5, 2), (–3, 5), (–3, –5), (5, –3) and (6, 1) in the Cartesian plane.

13. Draw the line passing through (2, 3) and (3, 2). Find the coordinates of the points at which this line meets the x-axis and y-axis.

14. Locate the coordinates of labelled points A, B, C, D, E, F, G and H in the following diagram:

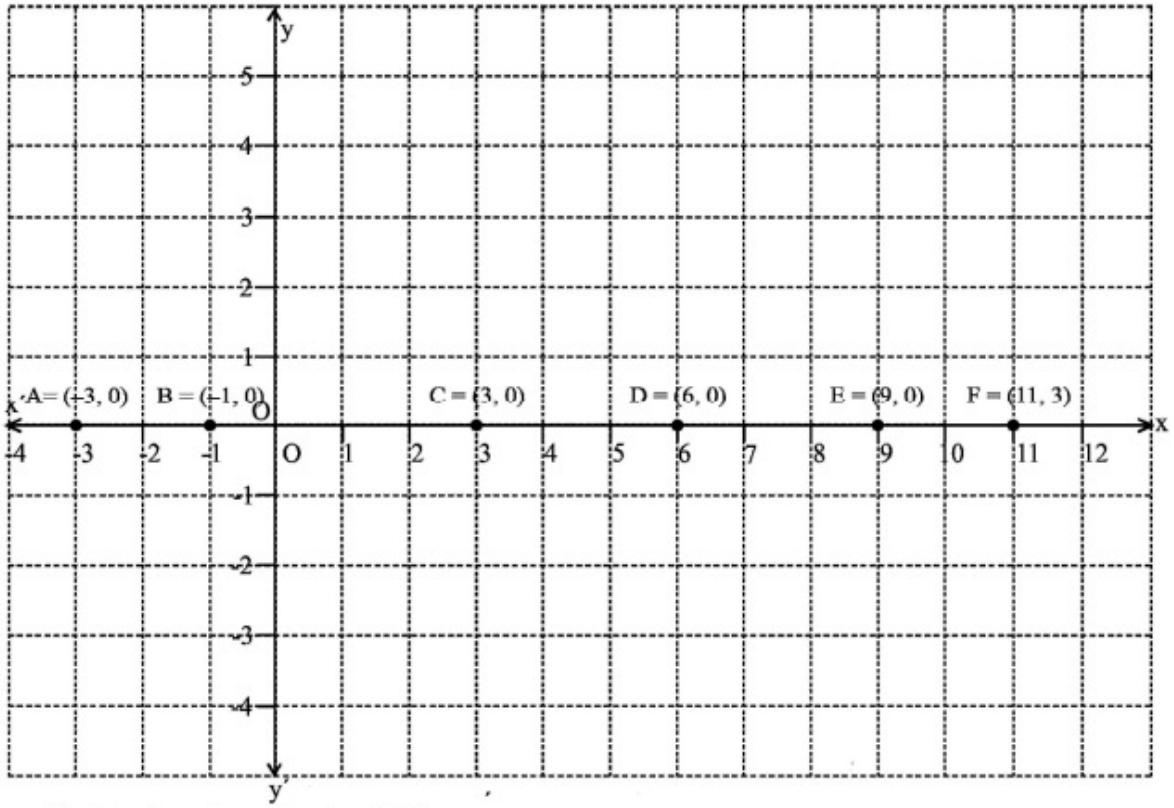


15. Plot the following ordered pairs of number (x, y) as points in the Cartesian plane. Use the scale 1cm = 1 unit on the axes.

x	–3	0	–1	4	2
y	7	–3.5	–3	4	–3

16. In which quadrant or on which axis do each of the points (– 2, 4), (3, – 1), (– 1, 0), (1, 2) and (– 3, – 5) lie? Verify your answer by locating them on the Cartesian plane.

17. Read the given graph and answer the following questions:



(a) Complete the table given below

Point	Location	Coordinates	Abscissa	Ordinates
A				
B				
C				
D				
E				
F				

(b) What are the coordinates of a general point on the x-axis?

18. Plot the points (x, y) given in the following table on the plane, choosing suitable units of distance on the axes.

x	–1	2	–4	2	–3
y	0	–5	2	1	2

19. Plot the following points and verify if they lie on a line. If they lie on a line, name it.

(i) (0, 2), (0, 5), (0, 6), (0, 3.5)

(ii) A (1, 1), B (1, 2), C (1, 3), D (1, 4)

(iii) K (1, 3), L (2, 3), M (3, 3), N (4, 3)

(iv) W (2, 6), X (3, 5), Y (5, 3), Z (6, 2)

20. Plot the following points on a graph sheet. Verify if they lie on a line

(a) A(4, 0), B(4, 2), C(4, 6), D(4, 2.5)

(b) P(1, 1), Q(2, 2), R(3, 3), S(4, 4)

(c) K(2, 3), L(5, 3), M(5, 5), N(2, 5)

CLASS IX: CHAPTER - 12
HERON'S FORMULA

1. The sides of a triangular plot are in the ratio of 3 : 5 : 7 and its perimeter is 300 m. Find its area.
(a) $4\sqrt{30}$ (b) $8\sqrt{30}$ (c) $12\sqrt{30}$ (d) $16\sqrt{30}$

2. Find the area of a triangle, two sides of which are 8 cm and 11 cm and the perimeter is 32 cm
(a) $1500\sqrt{3}$ (b) $3000\sqrt{3}$ (c) $4500\sqrt{3}$ (d) $6000\sqrt{3}$

3. Find the area of a triangle two sides of which are 18cm and 10cm and the perimeter is 42cm.
(a) $14\sqrt{11}$ (b) $21\sqrt{11}$ (c) $35\sqrt{11}$ (d) $21\sqrt{11}$

4. Sides of a triangle are in the ratio of 12 : 17 : 25 and its perimeter is 540cm. Find its area.
(a) 6000 (b) 9000 (c) 12000 (d) none of these

5. The height corresponding to the longest side of the triangle whose sides are 42 cm, 34 cm and 20 cm in length is
(a) 15 cm (b) 36 cm (c) 16 cm (d) none of these

6. A park, in the shape of a quadrilateral ABCD, has $\angle C = 90°$, AB = 9 m, BC = 12 m, CD = 5 m and AD = 8 m. How much area does it occupy?
(a) 56.4 m^2 (b) 55.4 m^2 (c) 65.4 m^2 (d) none of these

7. Find the area of a quadrilateral ABCD in which AB = 3 cm, BC = 4 cm, CD = 4 cm, DA = 5 cm and AC = 5 cm.
(a) 15 cm^2 (b) 15.4 cm^2 (c) 15.2 cm^2 (d) none of these

8. If the area of an equilateral triangle is $81\sqrt{3}$ cm^2, then its height is
(a) $9\sqrt{3}$ (b) $3\sqrt{3}$ (c) $12\sqrt{3}$ (d) none of these

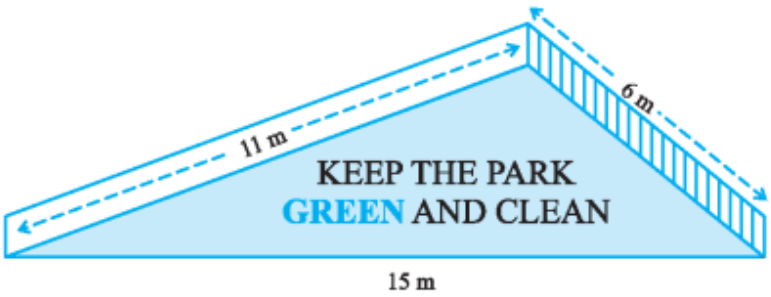
9. A rhombus shaped field has green grass for 18 cows to graze. If each side of the rhombus is 30 m and its longer diagonal is 48 m, how much area of grass field will each cow be getting?
(a) 45 m^2 (b) 48 m^2 (c) 51 m^2 (d) none of these

10. The altitude of a triangular field is one-third of its base. If the cost of sowing the field at Rs 58 per hectare is Rs. 783 then its altitude is
(a) 900 m (b) 600 m (c) 300 m (d) none of these

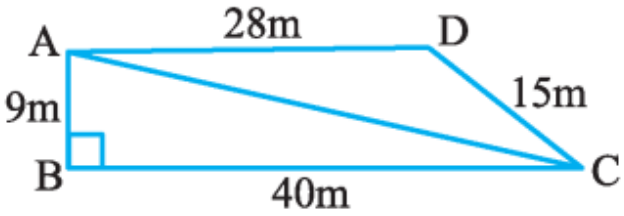
11. A triangle and a parallelogram have the same base and the same area. If the sides of the triangle are 26 cm, 28 cm and 30 cm, and the parallelogram stands on the base 28 cm, find the height of the parallelogram.
(a) 12 cm (b) 15 cm (c) 18 cm (d) none of these

12. Area of equilateral triangle of side a unit is
(a) $\frac{\sqrt{3}}{2}a^2$ (b) $\frac{\sqrt{3}}{4}a^2$ (c) $\frac{\sqrt{3}}{2}a$ (d) none of these

13. There is a slide in a park. One of its side walls has been painted in some colour with a message "KEEP THE PARK GREEN AND CLEAN". If the sides of the wall are 15 m, 11 m and 6 m, find the area painted in colour.



14. Students of a school staged a rally for cleanliness campaign. They walked through the lanes in two groups. One group walked through the lanes AB, BC and CA; while the other through AC, CD and DA. Then they cleaned the area enclosed within their lanes. If AB = 9 m, BC = 40 m, CD = 15 m, DA = 28 m and $\angle B = 90^\circ$, which group cleaned more area and by how much? Find the total area cleaned by the students (neglecting the width of the lanes).



15. Sanya has a piece of land which is in the shape of a rhombus. She wants her one daughter and one son to work on the land and produce different crops. She divided the land in two equal parts. If the perimeter of the land is 400 m and one of the diagonals is 160 m, how much area each of them will get for their crops?

16. Find the area of a triangle, two sides of which are 8 cm and 11 cm and the perimeter is 32 cm.

17. A triangle has sides 35 cm, 54 cm and 61 cm long. Find its area. Also find smallest of its altitudes.

18. The sides of a triangular plot are in the ratio 3 : 5 : 7 and its perimeter is 300 m. Find its area.

19. A triangle and a parallelogram have the same base and the same area. If the sides of the triangle are 26 cm, 28 cm and 30 cm, and the parallelogram stands on the base 28 cm, find the height of the parallelogram.

20. A rhombus shaped field has green grass for 18 cows to graze. If each side of the rhombus is 30 m and its longer diagonal is 48 m, how much area of grass field will each cow be getting?

CLASS IX: CHAPTER - 14
STATISTICS

1. Class mark of class 150 – 160 is
(a) 150 (b) 160 (c) 155 (d) none of these.

2. Average of numbers: 10, 8, 9, 7, 8 is
(a) 8.4 (b) 7.4 (c) 4.8 (d) 8.2.

3. Mean of first 10 natural numbers is
(a) 6.5 (b) 5.5 (c) 7.5 (d) 8.5.

4. The heights (in cm) of 9 students of a class are as follows:
155, 160, 145, 149, 150, 147, 152, 144, 148
Find the median of this data.
(a) 150 (b) 147 (c) 149 (d) 148

5. The points scored by a Kabaddi team in a series of matches are as follows
17, 2, 7, 27, 15, 5, 14, 8, 10, 24, 48, 10, 8, 7, 18, 28
Find the median of the points scored by the team.
(a) 12 (b) 15 (c) 24 (d) 28

6. Find the mode of the following marks (out of 10) obtained by 20 students:
4, 6, 5, 9, 3, 2, 7, 7, 6, 5, 4, 9, 10, 10, 3, 4, 7, 6, 9, 9
(a) 4 (b) 7 (c) 10 (d) 9

7. 5 people were asked about the time in a week they spend in doing social work in their community. They said 10, 7, 13, 20 and 15 hours, respectively. Find the mean (or average) time in a week devoted by them for social work.
(a) 12 (b) 13 (c) 14 (d) none of these.

8. The width of each of five continuous classes in a frequency distribution is 5 and the lower class limit of the lowest class limit of the lowest class is 10. The upper class limit of the highest class is:
(a) 35 (b) 15 (c) 25 (d) 40

9. Let m be the midpoint and 'l' the upper class limit of a class in a continuous frequency distribution. The lower class limit of the class is
(a) 2m + 1 (b) 2m – 1 (c) m - 1 (d) m – 21

10. The class marks of a frequency distribution are given as follows: 15, 20,25, …… The class corresponding to the class mark 20 is
(a) 12.5 – 17.5 (b) 17.5 – 22.5 (c) 22.5 – 27.5 (d) 27.5 – 32.5

11. In the class intervals 10 – 20, 20 – 30, the cumber 20 is included in.
(a) 10 – 20 (b) 20 – 30 (c) both the interval (d) none of these intervals

12. The mean of 5 numbers is 30. If one number is excluded, their mean becomes 28. The excluded number is
(a) 28 (b) 30 (c) 35 (d) 38.

13. The median of the observations, arranged in increasing order is 26. Find the value of x.

10, 17, 22, $x + 2$, $x + 4$, 30, 36, 40

14. Find the mode of 14, 25, 14, 28, 18, 17, 18, 14, 23, 22, 14, 18.

15. Find the mean salary of 60 workers of a factory from the following table:

Salary (Rs)	Number of workers
3000	16
4000	12
5000	10
6000	8
7000	6
8000	4
9000	3
10000	1
Total	**60**

16. 100 surnames were randomly picked up from a local telephone directory and frequency distributions of the number of letters in the English alphabet in the surnames was found as follows:

Number of letters	Number of surnames
1 – 4	6
4 – 6	30
6 – 8	44
8 – 12	16
12 – 20	4

(i) Draw a histogram to depict the given information.
(ii) Write the class interval in which the maximum number if surnames lie.

17. In a mathematics test given to 15 students, the following marks (out of 100) are recorded:
41, 39, 48, 52, 46, 62, 54, 40, 96, 52, 98, 40, 42, 52, 60
Find the mean, median and mode of this data.

18. A family with a monthly income of Rs 20,000 had planned the following expenditures per month under various heads: Draw a bar graph for the given below data.

Heads	**Expenditure (in thousand rupees)**
Grocery	4
Rent	5
Education of children	5
Medicine	2
Fuel	2
Entertainment	1
Miscellaneous	1

19. The value of π upto 50 decimal places is given below:
3.14159265358979323846264338327950288419716939937510 (i) Make a frequency distribution of the digits from 0 to 9 after the decimal point. (ii) What are the most and the least frequently occurring digits?

20. The following observations have been arranged in ascending order as 29, 32, 48, 50, x, $x + 2$, 72, 78, 84, 95. If the median of the data is 63, find the value of x.

SCIENCE

BIOLOGY

Syllabus:-

The fundamental unit of life -Cell

M**ULTIPLE CHOICE QUESTIONS**

1. The rough ER is so named because it has an abundance of

(a) mitochondria (b) Golgi bodies (c) lysosomes (d) ribosomes.

2. The plant cells are more rigid than the animal cells due to

(a) cell wall (b) lysosome (c) plastids (d) both (a) and (b

3. Animal cell lacks

(a) mesosome (b) ribosome (c) vacuole. (d) lysosome

4. Which of the following organelles in the cell is referred to as the suicidal bags or disposal units?

(a) Lysosomes (b) Peroxisomes (c) Glyoxysomes (d) None of these

5. Within chloroplasts, light is captured by

(a) thylakoids within grana (b) grana within cisternae

(c) cisternae within grana (d) grana within thylakoids.

ASSERTION /REASONING

Assertion & Reason Type Questions:-

Read the Assertion and Reason carefully to mark the correct option out of the options given below:
(A) Both Assertion and Reason are true and Reason is the correct explanation of Assertion.
(B) Both Assertion and Reason are true but Reason is not the correct explanation of Assertion.
(C) Assertion is true but Reason is false.
(D) Assertion is false but Reason is true.
ASSERTION:- Mitochondria are known as powerhouse of the cell
REASON:-mitochondria are used to bring about energy generating activities of the cell
ASSERTION:- All cells contain genetic materials in the form of DNA.
REASON:-jeans are self replicating units and are located on the chromosomes.
ASSERTION:-Plant cell does not burst on account of endosmosis when kept in hypotonic solution.

REASON:-Plant cell possesses large vacuoles that remove excess water entering the cell and prevent it from bursting.

SHORT ANSWER TYPE QUESTIONS:-

1. GIVE ANY TWO SIMILARITIES BETWEEN MITOCHONDRIA AND PLASTIDS.
2. WHICH ORGANELLE HELPS A PLANT CELL TO MAINTAIN ITS TURGIDITY. HOW?
3. DEFINE OSMOSIS. IN WHAT TWO WAYS IT IS DIFFERENT FROM DIFFUSION?
4. WHAT ARE THE TWO CONDITIONS REQUIRED FOR OSMOSIS?
5. NAME A CELL ORGANELLE FOUND ONLY IN A PLANT CELL AND NAME ITS TYPES.

HOTS

1. You generally add salt into the vegetables during the cooking process after adding salt vegetables release water. What mechanism is responsible for this?

2.A person takes a concentrated

solution of salt after sometime, he starts vomiting. What is the phenomenon responsible for such a situation? Explain.

ACTIVITY

Two beakers A and B that contain plain water and concentrated sugar solution respectively. Equal number of dry raisins are kept in them for a few hours and then taken out

A. Explain the reason for the difference in the physical appearance of raisins which were taken out of the two beakers
B. On the basis of above observation categorise the two solutions as hypotonic and hypertonic .

CONCEPT MAP OF STRUCTURE OF CELL ON A3 SHEET.

MODEL:- working model (Any one)

- Hydraulics.
- Solar energy
- Different types of Pollution
- Biological models
- Waste management
- Natural disasters Proofing buildings
- Chemistry related
- Physics related Model
- Hydroponics

Note :-Complete fair notebook

Learn full chapter.

PHYSICS

Reasoning questions
1. Velocity can be zero but speed can never be zero give reason
2. Uniform circular motion is an accelerated motion give reason
Difference based questions
3. Differentiate between scalars and vectors
4. Differentiate between speed and velocity
5. Differentiate between uniform circular motion and uniform linear motion
Activity based questions
6.Collect the collect the velocity time data for the uniformly accelerated motion hence lot the graph between velocity and time use the graph to obtain the acceleration and distance covered in different interval of times
Hots
7. Discuss two cases when displacement is zero but distance is not zero
8. Discuss the example with the uniform speed and variable velocity
Derivation based question
9.Using VT graph derive the three equations of motion
Enhancing Mathematical Skills

10. Solve any three questions involving the use of equations of motion

11. Prepare prepare the formula sheet of all the formulas used in the chapter motion on A 4 sheet

12. WRITE THE UNITS OF ALL THE PHYSICAL QUANTITIES INVOLVED IN THE CHAPTER MOTION.

13. WHAT IS ACCELERATION DUE TO GRAVITY IS IT A UNIFORM ACCELERATION OR NON UNIFORM ACCELERATION

14. DRAW A TABLE SHOWING THE APPLICATIONS OF DIFFERENT GRAPHS

15. WRITE ANY THREE QUESTIONS INVOLVING THE CHANGE OF SPEED FROM KM PER HOUR TO METRE PER SECOND

16. WRITE THE THREE QUESTIONS INVOLVING THE CHANGE OF SPEED FROM METRE PER SECOND TO KILOMETRE PER HOUR

ASSERTION REASON

17.ASSERTION…. DISTANCE IS ALWAYS POSITIVE

REASON……DISTANCE IS THE TOTAL LENGTH OF A PATH COVERED

18. ASSERTION……DISTANCE IS GREATER THAN OR EQUAL TO DISPLACEMENT

REASON….. DISPLACEMENT IS THE SHORTEST DISTANCE BETWEEN THE INITIAL AND THE FINAL POINT

19. ASSERTION …….Circular Motion is accelerated motion

REASON …… Direction of velocity changes at every point on circle

18. SOLVE ANYONE QUESTION INVOLVING THE CALCULATION OF AVERAGE SPEED AND AVERAGE VELOCITY.

MULTIPLE CHOICE QUESTIONS

19. WHICH OF THE FOLLOWING IS A VECTOR

a)MASS b)DISTANCE c)SPEED d)ACCELERATION

20. Which of the following quantity is path dependent

a)MASS b)DISTANCE c) Velocity d)ACCELERATION

21. AN OBJECT IS SAID TO BE IN MOTION

a) when the position changes with time b) when the position remain same with time

c) both options are correct d) motion is a relative terms

22 what is the source of centripetal force when moon revolves around the earth

a)Gravitational force b)Electro magnetic force

c)Nuclear force d)Friction

23.Uniform circular motion is a

a) accelerated motion b) unaccelerated motion

c) constant velocity motion d) linear motion

GRAPH BASED QUESTIONS

24. DRAW THE VT GRAPH FOR UNIFORM RETARDATION

. PREPARE A MODEL ON THE ANY TOPIC IN YOUR SYLLABUS(PHYSICS)

COMPLETE YOUR NOTEBOOKS TILL LAWS OF MOTION

CHEMISTRY

I. Choose the correct option from the following

1. CO_2 can be easily liquified and even solidified because

(a) It has weak forces of attraction

(b) It has comparatively more force of attraction than other gases

(c) It has more intermolecular space

(d) It is present in atmosphere.

2. Which of the following has heighest kinetic energy?

(a) Particles of ice at 0 °C

(b) Particles of water at 0 °C

(c) Particles of water at 100 °C

(d) Particles of steam at 100 °C

3. Bose-Einstein Condensate have

(a) Very low kinetic energy

(b) Low kinetic energy

(c) High kinetic energy

(d) Highest kinetic energy.

4. Which of the following is most suitable for summer?

(a) Cotton

(b) Nylon

(c) Polyester

(d) Silk.

5. Which of the following is incorrect about plasma?

(a) Fluorescent tube and neon sign bulbs consist of plasma.

(b) The gas gets ionised when electrical energy flows through it.

(c) It consists of super-energetic and super-excited particles.

(d) The plasma glows with colour which does not depend upon nature of gas.

6. The colour of vapours formed on sublimation of iodine solid is

(a) Purple (violet)

(b) Colourless

(c) Yellow

(d) Orange

7. Under which of the following conditions we can boil water at room temperature?

(a) At low pressure
(b) At high pressure
(c) At very high pressure
(d) At atmospheric pressure

8. Which of the following is not endothermic process?

(a) Fusion
(b) Vapourisation
(c) Temperature
(d) Insoluble heavy impurities

9. Which of the following does not affect rate of evaporation?

(a) Wind speed
(b) Surface area
(c) Temperature
(d) Insoluble heavy impurities

10. Kinetic energy of molecules is directly proportional to

(a) Temperature

(b) Pressure

(c) Both (a) and (b)

(d) Atmospheric pressure

II. Answer the following question

1.Explain why solids have fixed shape but liquids and gases do not have fixed shape.

2. Why is it advisable to use pressure cooker at higher altitudes?

3. What are fluids?

4. Why is water liquid at room temperature?

5. Cotton is solid but it floats on water. Why?

6. Why are solids generally denser than liquids and gases?

7. With the help of an example, explain

how diffusion of gases in water is essential?

8.Convert the following temperatures to the Celsius scale.

(a) 293 K

(b) 470 K.

9. Give reason for the following observations.

(a) Naphthalene balls disappear with time without leaving any solid.

(b) We can get the smell of perfume sitting several metres away.

10. Arrange the following substances in increasing order of forces of attraction between the particles water, sugar, oxygen.

SOCIAL SCIENCE

HOLIDAY'S HOMEWORK

CLASS 9

Sub: social science

1. **Complete mapwork on the mapskill:-**

   History

   Ch 1 French Revolution

   On the mapskill Locate/label/identify;

   Bordeaux
   Nantes
   Paris and Marseille

Geography

Ch 1 India: size & location

- India - States with Capitals
- Tropic of Cancer, Standard Meridian (Location and Labelling)
- Neighbouring countries of India

Ch 2 physical features of India

- Mountain Peaks – K2, KanchanJunga, AnaiMudi

2. Prepare a small model on any one of these topics:-

1. Different land forms of India
2. Types of forests in India
3. Disaster management

3. Write the answer of the following questions in your social science notebooks:-

In the questions given below, there are two Statements marked as Assertion (A) and Reason (R). Read the Statements and Choose the correct option: Options are:
(A) Both (A) and (R) are true and (R) is the correct explanation of (A).
(B) Both (A) and (R) are true but (R) is not the correct explanation of (A).
(C) (A) is correct but (R) is wrong.
(D) (A) is wrong but (R) is correct.

1. **Assertion (A):** India Shares its land boundaries with Pakistan and Afghanistan in the northwest.
   Reason (R): China, Tibet, Nepal and Bhutan in the South and Myanmar and Bangladesh in the West.
2. **Assertion (A):** India lies entirely in the Northern hemisphere.
   Reason (R): The Tropic of Cancer ($23^0$30'N) divides the Country into almost two equal parts.
3. **Assertion:** The French Revolution had a significant impact on the world.
   Reason: The French Revolution inspired people in other countries to demand democracy and equality.

4. **Read the source given below and answer the questions that follow:**

On the morning of 14 July 1789, the city of Paris was in a state of alarm. The king had commanded troops to move into the city. Rumours spread that he would soon order the army to open fire upon the citizens. Some 7,000 men and women gathered in front of the town hall and decided to form a peoples' militia. They broke into a number of government buildings in search of arms. Finally, a group of several hundred people marched towards the eastern part of the city and stormed the fortress-prison, the Bastille, where they hoped to find hoarded ammunition. In the armed fight that followed, the commander of the Bastille was killed and the prisoners released – though there were only seven of them. Yet the Bastille was hated by all because it stood for the despotic power of the king. The fortress was demolished and its stone fragments were sold in the markets to all those who wished to keep a souvenir of its destruction. The days that followed saw more rioting both in Paris and the countryside. Most people were protesting against the high price of bread. Much later, when historians looked back upon this time, they saw it as the beginning of a chain of events that ultimately led to the execution of the king in France, though most people at the time did not anticipate this outcome.

Answer the following MCQs by choosing the most appropriate option:

1. On 14th July, 1789 the people of the _____ estate attacked the Bastille prison and freed all the prisoners signalling the start of the _____.

   1. first, civil war
   2. fourth, Russian war
   3. second, movement
   4. third, revolution

2. Which of the following statement is incorrect?

   1. The Bastille was the fortress-prison.
   2. The Bastille stood for the democratic power of the king.
   3. On the morning of 14 July 1789, the people of Paris stormed Bastille
   4. All are correct

3. In the question given below, there are two statements marked as Assertion (A) and Reason (R). Read the statements and chose the correct option:

Assertion (A): The people of France storm the Bastille.
Reason (R): They were hopeful to find King Louis XIV and commander of the Bastille there.

1. Both A and R are correct and R is the correct explanation of A.
2. Both A and R are correct but R is not the correct explanation of A.
3. A is correct but R is wrong.
4. Both A and R are wrong.

4. What was the immediate cause of rioting in Paris?

1. Atrocities by the commander
2. The high price of bread
3. The killing of women and children
4. All of these

5. In the question given below, there are two statements marked as Assertion (A) and Reason (R). Read the statements and chose the correct option:
Assertion (A): Pakistan not considered a democratic country even after having elections
Reason (R): Despite elections to the national and provincial assemblies, the final powers rested with General Musharraf and military officers.

1. Both A and R are true and R is the correct explanation of A.
2. Both A and R are true but R is not the correct explanation of A.
3. A is correct but R is wrong.
4. A is wrong but R is correct.
5.

6. The Constituent Assembly adopted the Constitution of India on
(a) 26 January 1950
(b) 26 November 1949
(c) 26 January 1949
(d) 15 August 1947

7. Apartheid in South Africa was discrimination on the basis of
(a) gender
(b) religion
(c) race
(d) economic status

8. The Indian Constitution came into effect on
(a) 26 January 1949
(b) 26 January 1950

(c) 26 January 1952

(d) 26 November 1950

9. The most abundant factor of production is

(a) labour

(b) land

(c) machinery

(d) all of the above

10. 'Operation Flood' is related to :

(a) control flood

(b) produce fish

(c) milk production

(d) grain production

11. Consumption of chemical fertilisers is highest in which state of India?

(a) Punjab

(b) Haryana

(c) Rajasthan

(d) Himachal Pradesh