AIR FORCE SCHOOL PANCHWATI
ANNUAL- EXAM (2024-2025)
CLASS – VII
MATHEMATICS

TIME: 2:30 HOURS **MM: 60**

General Instructions:

1. **The question paper consist of four sections: A, B, C and D.**
2. **Section A contains 12 questions 1 mark each.**
3. **Section B contains 5 questions 2 mark each.**
4. **Section C contains 6 questions 3 mark each.**
5. **Section D contains 5 questions 4 marks each.**
6. **There is no negative marking.**
7. **This paper contains 4 pages.**

SECTION –A
(Section A consist of 12 questions 1 mark each)

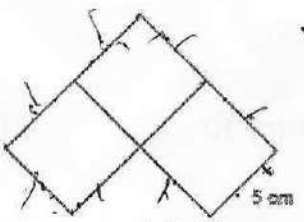
Q.1 If there is a discount of 40% on an article costing Rs7000, then the price after discount is:

(a) Rs4500 (b)Rs4200 (c) Rs4400 (d) Rs4600

Q.2 Which of the following is the greatest rational number?

(a) $\frac{15}{7}$ (b) $\frac{15}{8}$ (c) $\frac{15}{10}$ (d) $\frac{15}{12}$

Q.3 Thefigurebelowismadeupof3squaresofsides5cm.Whatistheperimeterofthe figure?



(a) 5cm (b) 30cm (c) 40cm (d) 50cm

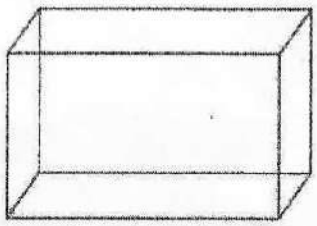
Q.4 aXaX aX aXyXyXyXyXzXz can be written as

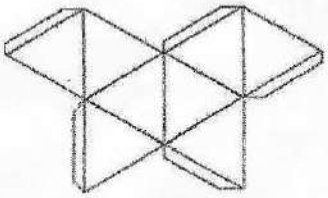
(a) $a^4y^4z^2$ (b)ayz^{10} (c) ay^8xz^2 (d)ayz^8

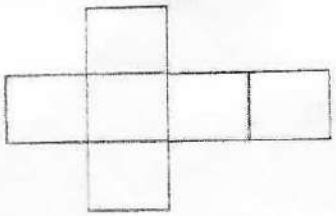
Q.5 A regular hexagon has _____center of rotation.

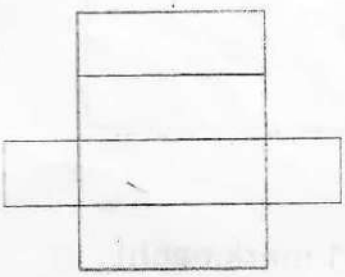
(a) 6 (b)2 (c) 3 (d) 4

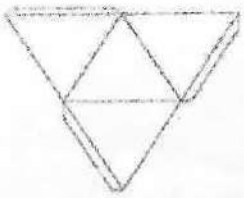
Q.6 Netforthefollowingsolidis:



(a) 

(b) 

(c) 

(d) 

Q.7 -5+9 +(-5)+(-10)+(1)is equal to

(a)13 **(b)**-13 **(c)**-10 **(d)**10

Q.8 In ΔPQR,

(a)PQ – QR > PR **(b)**PQ + QR < PR

(c) PQ – QR < PR **(d)**PQ + PR<QR

Q.9 If k + 7 = 10, the value of 9k – 50 will be

(a)13 **(b)**-23 **(c)**-10 **(d)**20

Q.10 The angles between North and West and South and East are

(a) complementary **(b)** supplementary

(c) both are acute **(d)** both are obtuse

Q.11 Assertion: $(-1)^3 = (-1)$

Reason: (-1) raised to any odd power is (-1)

(a) Both assertion and reason are correct and reason is correct explanation for assertion.

(b) Both assertion and reason are correct and reason is not the correct explanation for assertion.
(c) Assertion is true but reason is false.
(d) Both assertion and reason are false.

Q.12 Assertion: The range of the data 114,115,116,118,119,125,130,141,126,116,113,118,120,and 126 is 100

Reason: The difference between the highest and the lowest value of the data is called range.

(a) Both assertion and reason are correct and reason is correct explanation for assertion.
(b) Both assertion and reason are correct and reason is not the correct explanation for assertion.
(c) Assertion is true but reason is false.
(d) Assertion is false but reason is true.

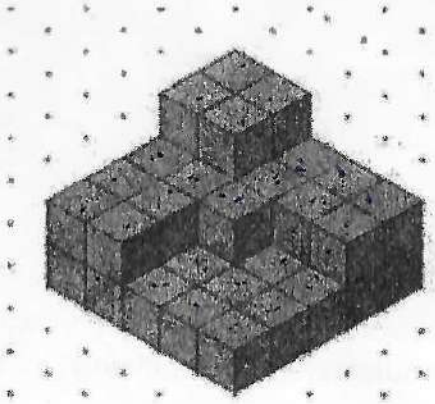
SECTION – B
(Section B contains 6 questions 2 mark each)

Q.13 Simplify and find the value of: $3(a+b)- 2(2a-b)+4a-7$ at $a = -2$ and $b = 4$

Q.14 If $5^{2x+1} \div 25 = 125$, find the value of x.

Q.15 Give an example of an alphabet which has 2 lines of symmetry as well as rotational symmetry of order 2.

Q.16 Count the number of unit cubes in the following solid.

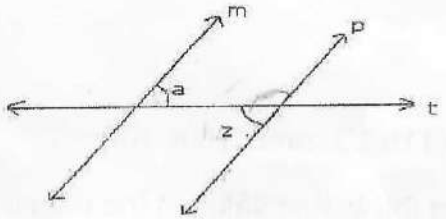


Q.17 Find the mean of first six multiples of 4.

SECTION – C
(Section C contains 4 questions 3 mark each)

Q.18 If $\frac{2x-1}{3} = \frac{x+2}{2}$, then find the value of x.

Q.1 a)In the figure below, lines m and p are parallel; t is a transversal. If<a =57° ,then find angle z.



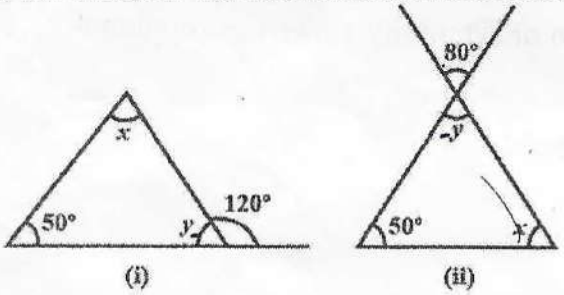
b) Two adjacent angle formed on a line are equal find the measure of these angles.

Q.2 A farmer sold $\frac{3}{5}$ of his $56\frac{1}{2}$ tons of hay. How many tons of hay did he sell?

Q.2. Express the following numbers in exponent form.
(i)343000. (ii)2048.

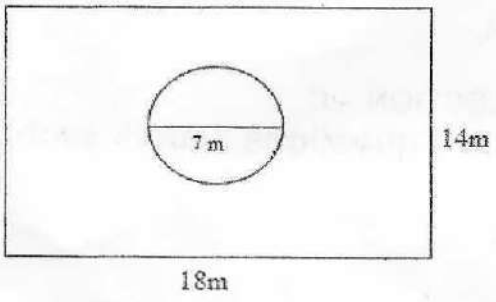
Q2. Simplify the expression and find its value when a= 5 and b = -3
$2(a^2 + ab) + 3 - ab$

Q2. Find the value of the unknown x in the following diagram.



SECTION – D
(Section D contains 5 questions 4 marks each)

Q.2 Thegivenfigurerepresentsarectangularlawnwithacircularfountaininthecentre. Thedimensionsofthelawnare18m× 14 mandthediameterofthefountainis7m. Find the area of the lawn excluding the flower bed area.



Q.25 simplify:

(i) $\frac{a^2 \times a^3 \times b^3 \times b^4}{a^5 \times b^2}$

(ii) $\left(\frac{a^3}{b^4}\right)^2 \times \left(\frac{b^2}{a^3}\right)^3$

Q.26 a) The cost of an object is increased by 12%. If the current cost is ₹ 896, what was its original cost?

b) ₹ 9000 becomes ₹ 18000 at simple interest in 8 years. Find the rate per cent per annum

Q.27 (i) Sarah goes to the market to buy some fruits. She buy x kg of apples at Rs. 2 per kg and y kg of oranges at Rs. 3 per kg. she spends a total of Rs. 20 . express this situation using algebraic expression.

(ii) A garden bed is designed with equal sides. The total length of the wire used to fence the garden bed is 40 m . express this situation using algebraic expression.

Q28 Subtract the sum of $-\frac{5}{6}$ and $\frac{-1}{5}$ from the sum $2\frac{2}{3}$ and $-6\frac{2}{5}$.