

GREENLAWNS HIGH SCHOOL
TERMINAL EXAMINATION YEAR 2017-2018

SUBJECT : MATHEMATICS
TIME : 2 HOURS

CLASS : VII
MARKS : 80

The paper consists of two sections A and B. Attempt all questions. Write the answers on the answer booklet provided to you.

Show calculations & working wherever required. Be neat in your work.

SECTION A

I Fill in the blanks (Write only the answers) (10)

1. Complement of 75° is _____
2. $\sqrt{289} =$ _____
3. 7.6584 rounded off to the nearest hundredth is _____
4. $0.002 + 2.2 + 0.02$ is _____
5. $7.469 \times 100 =$ _____
6. The largest five digit number using the digits 0, 6, 2, 8 and 4 is _____
7. In a linear pair if one angle measures 45° then the measure of the other angle is _____
8. $(-2.6432) \div (-4) =$ _____
9. The degree of polynomial $7x^2 + 2xy^4z^2 + 3z^6$ is _____
10. The coefficient of xy in $32xyz$ is _____

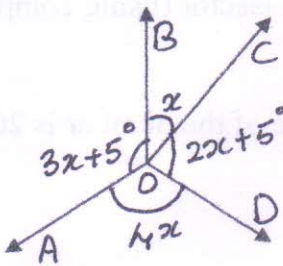
II 1. Evaluate (3)

$$\frac{2}{5} \text{ of } 15$$

$$3 \frac{1}{3} - 2 \frac{1}{2}$$

2. From the sum of $5a^2 - 6ab + 8b^2$ and $a^2 - 13ab - 10b^2$ subtract $3a^2 - ab - 4b^2$ (3)

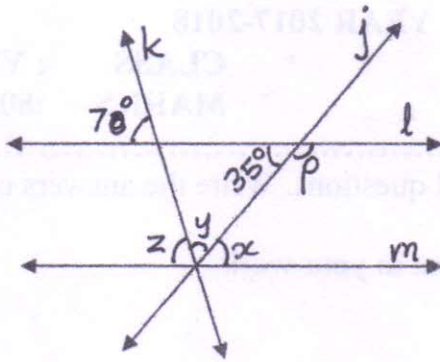
3. With reference to the figure given alongside (4)
find x. Also find
(i) $\angle AOB$
(ii) $\angle AOD$



III 1. Evaluate (3)
 $[(-10) + (+15)] + 20 \div (-5) \times (-2)^2$

2. Express $7 \frac{1}{2} \%$ as (i) a fraction (3)
(ii) a decimal number

3.



In the figure alongside lines l and m (4) are parallel to each other. Find the values of x, y, z and p . Give reasons for your answers.

IV

1. Find the simple interest and amount on ₹3200 at 12% p.a. for 3 years. (3)
2. Mr. Vijay bought a scooter for ₹40,000 and spent ₹6000 on its repairs. If he sold the scooter for ₹51750, find his profit percent in decimal form. (3)
3. Construct $\angle XYZ = 75^\circ$. Bisect the angle and name its bisector. (using compasses & ruler only) (4)

SECTION B

- V
1. Find the HCF of 230, 345 and 506 by division method. (3)
 2. Divide $6x^2 - 11x + 3$ by $2x - 3$ (3)
 3. Out of 1800 students in a school, 40% are girls and the rest are boys. If 25% of the boys and 45% of the girls are vegetarians, then how many students in all are vegetarians. (4)

- VI
1. $A = \{x : x \text{ is a letter in the word VENTILATION}\}$ (4)
 - a. Write Set A in Roster form.
 - b. Is set A a finite or an infinite set.
 - c. State the cardinal number of Set A.
 - d. Is Set $C = \{A, C, T\}$ a subset of set A?

4. Find the square root of 1056.25 by division method. (4)
5. Draw line segment $AB = 7.5$ cm and draw its perpendicular bisector (using compasses & ruler only) (2)

- VII
1. The HCF of two numbers is 23 and their LCM is 1449. If one of the number is 207, find the other number. (2)
 2. Simplify : (4)
 - a. $4 \times 4 + 4 \div 4 - 4$ of 4
 - b. $3 \frac{1}{5} \div (-4)$
 3. Shyam sells a mobile phone for ₹4500 and makes a loss of 10%. At what price must he sell the phone in order to gain 20%. (4)

- VIII
1. Find the cube root of (-5832) by prime factorization method. (3)
 2. Simplify (3)

$$3a + b + \{5a + 2(3a - a - b - 2a) + 3b\}$$
 3. a. Simplify $(x + 5)(2x + 3y)$ (2)
 - c. Express $\frac{7}{6}$ as a recurring decimal. (2)