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## Maths

## I. Answer the following questions

5X4 $=20 \mathrm{M}$

1. If $a=3, b=2$ find the value of i. $a^{b}+b^{a} \quad$ ii. $(a+b)^{b}$
2. The angles of a quadrilateral are $x^{0},(x-10)^{0},(x+30)^{0}$ and $2 x^{0}$. Find the angles.
3. In a parallelogram RING if $\mathrm{m} \angle \mathrm{R}=70^{\circ}$, find all the angles.

4. If the length of a diagonal of a rhombus whose area $216 \mathrm{sq} . \mathrm{cm}$ is 24 cm . find the length of the second diagonal?
5. The ratio of the diameters of two circles 3:4. Find the ratio of their circumferences.

## II. Answer the following questions <br> $2 \mathrm{X} 5=10 \mathrm{M}$

1. A path 5 cm wide runs around a square park of side 100 m . find the area of the path abo find the cost of cementing it at the rate of 250 per $10 \mathrm{~m}^{0}$.
2. The measure of two adjacent angles of a parallelogram are in the ratio $3: 2$. Find the angles of the parallelogram.

## Physics

I. Answer the following question

2X4=8M

1. Define the following a) sewage
b) sludge
c. oil and fats
2. Prepare red cabbage juice by boiling piece in water? Use as an indicates and basic solutions?
II. Answer the following question
$2 X 2=4 M$
3. Why are acids not stored in metals contains?
4. Explain the function of bar screed in a waste water treatment plant?
III. Answer the following questions

3X 1=3M

1. What id physical change?
2. Write two examples of acid contain sub lances?
3. Write the formula of water?

## Chemistry

## I. Answer the following questions

5X3=15M

1. A train travels at speed of 180 kmph . How far will it travel in 4 hours?
2. Why do we use mercury in the temperature ? can water be used in stand of mercury? What are the problems in using it?
3. What is advantage of miniature circuit breaker?
