Dr.K.K.R GOWTHAM EDUCATIONAL INSTITUTIONS :: A.P & T.S

Class: 8-S **Marks: 100**

Sub: Maths, PHYSICS, CHEMISTRY **Time: 2 ½ Hrs**

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Maths

I Choose the correct answer 50x2=100M

1. a. Express $1.\overline{62}$ in the p/q form

   b. Find three rational numbers between $\frac{3}{5}$ and $\frac{2}{3}$

2. Find the value of $\sqrt{7}$ upto 4 decimal places by long division method.

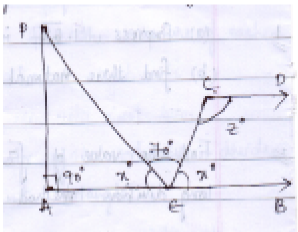
3. If the polynomials $x^3 + ax^2f + 5$ and $x^3 - 2x^2 + a$ are divided by (x+2) leaves the same remainder then find the value of 'a'.

4. Divide the polynomial $2x^4 – 4x^3 – 3x – 1$ by (x-1) by long division method & verify the remainder with zero of the divisor.

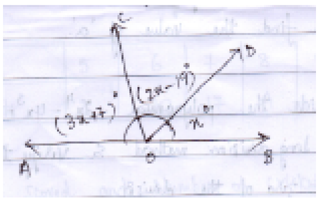
5. a. Write three un-depend terms of geometry

   b. Write two euclid's postolater.

6. In the adjacent figure AB|| CD. Find the values of x, y & z.



7. In the adjacent figure, $\overline{AB}$ is a straight line. Find the value of x and also find $\angle AoC$, $\angle C0D$ & $\angle B0D$

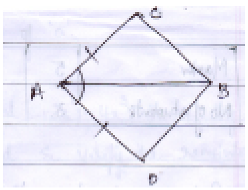


8. Are the positions of (5, -8) and (-8,5) is same? Justify your answer

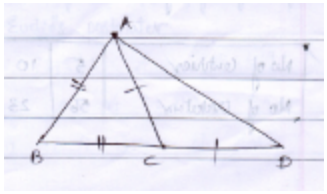
9. Plot the points A(2,2), B(6,2), c(8,5) and d(4,5) in a graph sheet. Join all the points to make it a parallelogram find its area.

10. The sum of a two digit number and the number obtained by reversing the order of its digits is 121. If the digit in unit's and ten's place are 'x' and 'y' respectively write the linear equation for the above.

11. ABCD is a quadrilateral, AC = AD and AB bisects $\angle A$. Show that $\Delta ABC \cong \Delta ABC$ What can you say about BC and BD?



12. In the adjacent figure, AB = BC and AC = CD prove that $\angle BAD : \angle ADB = 3 : 1$



13. The four angler of a quadrilateral are in the ratio 1 : 2 : 3 : 4. Find the measure of each angle of the quadrilateral.

14. Show that the diagonals of a rhombus divide it into four congluent triangle.

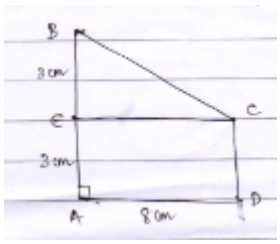
15. If the mean of the following data is 7.5, then find the value of A

Molar	5	6	7	8	9	10
No. of studnets	3	10	17	A	8	4

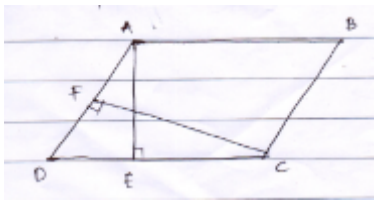
16. Centuries scored and number of cricketers in the world are given below. Find the median and Mode of the data

No. of centories	5	10	15	20	25
No. of cricketers	56	23	39	13	8

17. Find the area of the trapezium ABCD as given in the figure in which ADCE is a rectangle (Hint ABCD has two parts)



18. ABCD is a parallelogram AE is perpendicular on DC and CF is perpendicular on AD. If AB = 10cm, AE = 8cm and CF = 12 cm. Find AD.



19. If x = 2 - α, and y = 2 + α is a solution of the equation 3x-2y+6 = 0 find the value of α. Find two more solutions of the equation.

20. Simplify $\sqrt[4]{81} - 8\sqrt[3]{343} + 15\sqrt[5]{32} + \sqrt{225}$

Physics

5x2=10M

21. "She moves at a constant speed in a constant direction". Rephrase the same sentence in fewer words using concepts related to motion?
22. Why is it necessary to bend knees while jumping from greater height?
23. Why will a sheet of paper fall slower than one that is changed into ball form?
24. Why thrust is a vector quantity? But pressure is taken as scalar?
25. Why are the ceilings of concert halls curved?

5x4=20M

26. A car covers half the distance at a speed of 50 km/h. and the other half at 40km/h. Find the average speed of the car?
27. State Newton's second laws of motion and Derive expression for force?
28. How do you find the centre of any irregular object?
29. A boy weighing 350 N runs up a flight of 30 steps each 20cm height in 5 sec.Calculate the power expended?
30. How are multiple reflections of sound helpful to doctors and engineers?

Chemistry

3x4=12M

31. Balance the following chemical equations

    a. $C_6H_{12}O_6 \rightarrow C_2H_6OH + CO_2$

    b. $Fe + O_2 \rightarrow Fe_2O_3$

    c. $NH_3 + Cl_2 \rightarrow N_2H_4 + NH_4Cl$

    d. $Na + H_2O \rightarrow NaOH + H_2$

32. What is the difference b/w displacement and double displacement reactions? Write equations for these reactions?
33. What do you mean by corrosion and rancidity? How can you present it?

4x2=8M

34. What do you mean by precipitation reaction?
35. Why does respiration considered as an exothermic reaction? and explain?
36. What is chemical reaction? and how many types are chemical reaction are present? Write its halves?
37. Name the reactions taking place in the presence of sunlight?

5x1=5M

38. What is chemical equation?
39. What is product?
40. Which substances are written in left side in a chemical equation.
41. What is oxidation reaction?

5M

42. Match the following

1. $2AgNO_3 + Na_2CrO_4 \rightarrow Ag_2CrO_4 + 2NaNO_3$	[ ]	a. Combination reactions
2. $2NH_3 \rightarrow N_2 + 3H_2$	[ ]	b. decomposition reactions

3. $C_2H_4 + H_2O \rightarrow C_2H_6O$	[ ]	c. displacement reactions
4. $Fe_2O_3 + 3CO \rightarrow 2F_2 + 3CO_2$	[ ]	d. double displacement Reactions