KOTHARI INTERNATIONAL SCHOOL, NOIDA

TERM END ASSESSMENT, 2023-2024

GRADE 7 SUBJECT: MATHEMATICS

SET: B SECTION B (SUBJECTIVE QUESTIONS)

DAY & DATE: Tuesday, 23.2.24 **TIME ALLOWED: 2 hr 40 Mins.**

NAME: _____ **MAXIMUM MARKS: 60**

GENERAL INSTRUCTIONS:

1. This question paper consists of 4 pages and 22 questions.

2. It is compulsory to attempt all the questions.

3. Show steps/working wherever necessary.

Do as directed: -

Q1. Solve: **2M**

(i) $\frac{29}{4} - \frac{30}{7}$

(ii) $-3\frac{2}{13} - (\frac{-8}{26})$

Q2. Which shape encloses more area, a triangle of height 10 cm and base 8 cm or a parallelogram of height 10 cm and base 8 cm? **2M**

Q3. Find a number such that one fourth of the number is 3 more than 7. **2M**

Q4. Simplify: **2M**

(i) $3^8 \div 3^2 \times 3^4$

(ii) $\frac{125 \times 5^3 \times a^4}{10^3 \times a^4}$

Q5. What rate gives Rs. 280 as interest on a sum of Rs. 56,000 in two years? **2M**

Q6. If z = 10, find the value of $z^3 - 2(z+5)$ **2M**

Q7. Write the faces and edges and vertices of following shapes: **2M**

a. Triangular Prism

b. Square Pyramid

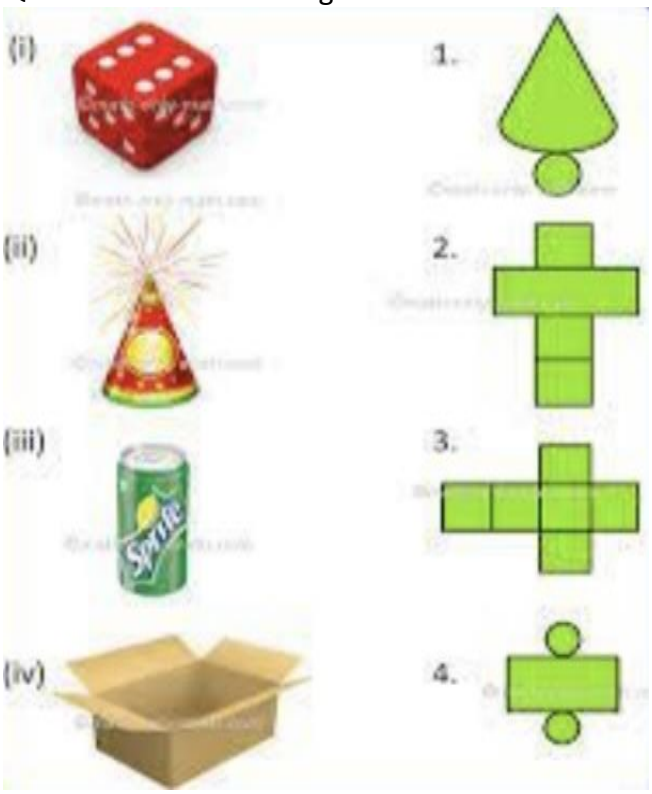
Q8.

If $\frac{p}{q} = \left(\frac{3}{2}\right)^2 \div \left(\frac{9}{4}\right)^0$, find the value of $\left(\frac{p}{q}\right)^3$.

Q9. One of the exterior angles of a triangle is 80^0 and the interior opposite angles of it are in the ratio 4 : 4. Find the angles of the triangle **2M**

Q10. In an isosceles triangle, the base angles are equal. If the vertex angle is 80^0, find the base angle of the triangle. **2M**

Q11. Match the following: **2M**



Q12. In triangle XYZ, the measure of angle X is 30° greater than the measure of angle Y and angle Z is a right angle. Find the measure of ∠Y. **3M**

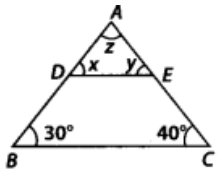
Q13. How many times a wheel of radius 28 cm must rotate to cover a distance of 352 m? **3M**

Q14. Arrange the following in decreasing order. **3M**

(2×2^2), $(3^2 \times 3^0)$, $(2^2 \times 5^2)$, $(2^2)^3$

Q15. By selling a book for ₹ 50, a shopkeeper suffers a loss of 10%. Find the cost price of the book. **3M**

Q16. In ΔABC, DE || BC . Find the values of x,y and z. **3M**



Q17. The area of a square is 100 cm^2. Find the circumference (in cm) of the largest circle cut of it. **3M**

Q18. Each symbol given below represents an algebraic expression. **4M**

△ $= 2x^2 + 3y$, ○ $= 5x^2 + 3x$, □ $= 8y^2 - 3x^2 + 2x + 3y$

The symbols are then represented in the expression

△ + ○ − □

Solve the expression which is represented by the above symbols.

Q19. Pizza factory has come out with two kinds of pizzas. A square pizza of side 45 cm costs Rs. 150 and a circular pizza of diameter 50 cm costs Rs. 160. Which pizza is a better deal? **4M**

OR

Charlotte took a wire and bent it to form a circle of radius 14 cm. Then she bent it into a rectangle with one side 24 cm long. What is the length of the wire? Which shape encloses more area, the circle or the square?

Q20. Harry bought a toy car for ₹ 900 and later sold it to Archie at a profit of 5 percent. Archie used it for a period of two years and later sold it to Bunny at a loss of 20 percent. For how much did Bunny get it? **4M**

Q21. In our earth 36141900 square km of area is covered with water and 148647000 square km of area is covered with land. **4M**

a. Write area of water in standard form. (1)

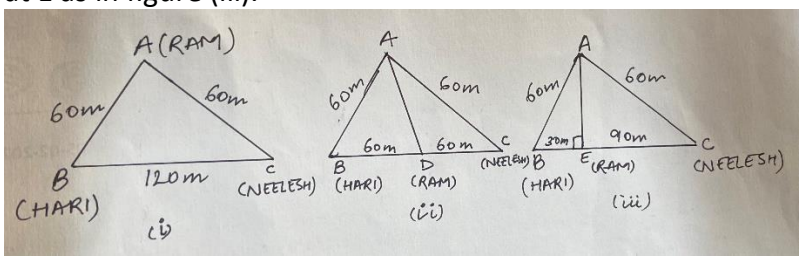
b. Write area of land in standard form. (1)

c. Which has greater area and by how much? (2)

Q22. Case Study: (Attempt any one of the following) **4M**

Triangles: Three friends Ram, Hari & Neelesh are standing at position A, B & C respectively as shown in figure (i). Ram wants to join the line passing through Hari & Neelesh, Hari suggest Ram to move along

AD & take the position at D as in figure (ii). Neelesh suggest Ram to move along AE & take the position at E as in figure (iii).



a. In figure (ii) AD is _____ (median/altitude).
b. In figure (iii) AE is _____ (median/altitude).
c. State true or false for the following and justify your answer:
   i. ABD is isosceles.
   ii. BE = EC
   iii. ABC is right angled.

OR

Jayanti takes shortest route to her home by walking diagonally across a rectangular park. The park measures 60 metres × 80 metres. How much shorter is the route across the park than the route around its edges?

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