ANGEL'S PUBLIC SCHOOL

SAMPLE PAPER

FINAL EXAMINATION SESSION 2019 – 20

CLASS – VIII

TIME: 3 HRS **SUBJECT: MATHEMATICS** **M.M:80**

Name _____ **Roll no. _____**

General Instructions

(a)The question paper is divided into 4 sections A , B , C and D.

(b)Section A comprises 10 questions of 1 mark each.

(c) Section B comprises 10 questions of 2 marks each.

(d) Section C comprises 6 questions of 4 marks each. Attempt any 5.

(e) Section D comprises 7questions of 5 marks each. Attempt any 6.

SECTION – A

1. 0 is not _____.

(a) a natural number (b) a whole number (c) an integer (d) a rational number

2. Which of the following is a perfect square number?

(a) 2222 (b) 32543 (c) 888 (d) 1000

3. Find the length of the side of a square whose area is 100 cm^2.

(a) 5 cm (b) 10cm (c) 100 cm (d) 4 cm

4. How many terms are there in the expressions $4a - 7ab + 3b + 12$?

(a) 1 (b) 2 (c) 3 (d) 4

5. The value of $x^2 - 2x + 1$ when $x = 1$ is_____.

(a) 1 (b) 2 (c) –2 (d) 0

6. The area of a rhombus is 60 cm^2. One of its diagonal is 10 cm. The other diagonal is_____.

(a) 6 cm (b) 12 cm (c) 3 cm (d) 24 cm.

7. In 10^2, the base is _____.

(a)1 (b) 0 (c) 10 (d)100

8. The value of 0.07×10^{10} is_____.

(a) 700000000 (b) 7000000 (c) 7000 (d) 7

9. The common factor of 10ab, 30bc, 50ca is_____.

(a) 10 (b) 30 (c) 50 (d) abc

10. The value of $(0.68)^2 - (0.32)^2$ is_____.

(a) –1 (b) 0 (c)1 (d) 0.36

SECTION – B

11. Find the square root of 1296.

12. Find the square root of 1764, using prime factorization method.

13. Find the least number that must be added to 1300, so as to get a perfect square.

14. Simplify: $(2x+5)^2 - (2x - 5)^2$

15. In a building there are 24 cylindrical pillars. The radius of each pillar is 28 cm and the height is 4 cm. Find the total cost of painting the curved surface area of all the pillars at the rate of Rs. 8 per m^2.

16. Simplify and express the result in power notation with a positive exponent: $(-4)^5 \div (-4)^{-8}$.

17. Write three properties of a rectangle.

18. Divide: $(3y^8 - 4y^6 + 5y^4) \div y^4$

19. Express the following numbers in the standard form: 0.00000000000067

20. Find the height of a cuboid whose base area is $180cm^2$ and volume is 900 cm^3.

SECTION – C

21. A box of sweets is divided among 24 students, they will get 5 sweets each. How many would each get, if the number of the students is reduced by 4?

22. Explain, how square is a rhombus and a rectangle.

23. Draw a line passing through (2,3)and (3,2). Find the coordinates of the points at which this line meets the x–axis and y–axis.

24. If 15 workers can build a wall in 48 hours, how many workers will be required to do the same work in 30 hours?

25. A gardener has 1000 plants. He wants to plant these in such a way that the number of rows and the number of columns remain the same. Find the minimum number of more plants he needs for this.

26. Simplify (i) $(a^2.- b)^2$ (ii) $(2x + 5)^2 – (2x - 5)^2$

SECTION – D

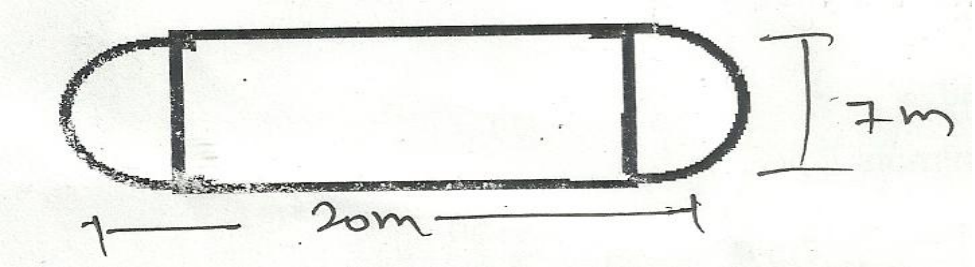
27. Solve: $\frac{3}{7} + (-\frac{6}{11}) + (-\frac{8}{21}) + (\frac{5}{22})$

28. Ajit can ride a scooter constantly at a speed of 30kms/ hour. Draw a time–distance graph for this situation. Use it to find the following.

(a) The time taken by Ajit to ride 75 km. **(b)** The distance covered by Ajit in 3.5 hours.

29. Simplify 3x(4x-5)+3 and find its values for x =3 and x = $\frac{1}{2}$

30. The shape of a garden is rectangular in the middle and semi–circular at the ends as shown in the diagram below. Find the area and the perimeter of the garden.



31. (a) Simplify: (a + b)(2a–3b + c)– (2a – 3b)c

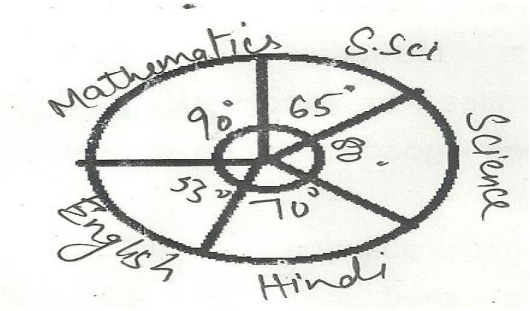
(b) Show that: $(\frac{4}{3}m - \frac{3}{4}n)^2 + 2mn = \frac{16}{9}m^2 + \frac{9}{16}n^2$

32. The pie chart below gives the marks scored in an examination by a student in Hindi, English, Mathematics, Social Science and Science. If the total marks obtained by the student were 540. Answer the following questions.

(a) In which subject did the student score 105 marks?

(b) How many more marks were obtained by the student in Mathematics than in Hindi?

(c) Examine whether the sum of the marks obtained in social Science and Mathematics is more than that in Science and Hindi.



33. Factorize.

(a) $p^2+8p+16$ **(b)** a^4-b^4