

O. P. JINDAL SCHOOL, SAVITRI NAGAR**Annual Examination - (2025 – 2026)****Class: VIII****Subject: Mathematics**

Name: _____

MM: 80**Time: 3Hrs.**

Roll No.: _____

(Fifteen Minutes Extra will be given for reading the Question Paper.)**General Instructions:**

- i. This question paper contains **44** questions. All questions are compulsory.
- ii. This question paper is divided into **4 sections – Sections A,B,C,D and E.**
- iii. **Section A** comprises **16** questions (Q. no.1to 16) of **1** mark each.
- iv. **Sections B** comprises **8** questions (Q. no.17to 24) of **2** marks each.
- v. **Section C** comprises **8** questions (Q. no.25 to 32) of **3** marks each.
- vi. **Section D** comprises **4** questions (Q. no.33 to 36) of **4** marks each.
- vii. **Section E** comprises case-based questions (Q.no.37 to 44) of **1** mark each.
- viii. There is no overall choice. However an internal choice has been provided. You have to attempt only one of the alternatives in all such questions.
- ix. Use of calculator is not allowed.

SECTION A**Choose the correct option:**

- Q1.** What percent of 10 kg is 250 g?
- a) 5% b) 10% c) 25% d) 2.5%
- Q2.** The cost of a pair of roller skates at a shop was ₹450. The sales tax charged was 10%. Find the bill amount.
- a) ₹450 b) ₹550 c) ₹ 495 d) ₹ 400
- Q3.** Find simple interest to be paid on ₹1500 at 5% per annum after 2 years.
- a) ₹150 b) ₹100 c) ₹ 300 d) none of these
- Q4.** Find addition of: $(ab - bc)$, $(bc - ca)$, $(ca - ab)$
- a) 1 b) abc c) $a + b + c$ d) none of these
- Q5.** Find volume of a rectangular box whose length, breadth and height are a , $2b$ and $3c$ respectively.
- a) abc b) $2ab$ c) $6abc$ d) $a + 2b + 3c$
- Q6.** Value of the expression $x^2 + 5x - 5$ at $x = 2$.
- a) 2 b) 10 c) 9 d) -10
- Q7.** The surface area of a brick whose dimensions are $10\text{cm} \times 4\text{cm} \times 3\text{cm}$ is:
- a) 164cm^2 b) 84cm^2 c) 124cm^2 d) 180cm^2

Q8. Find edge of the cube whose volume is 512cm^3 .

- a) 8cm b) 16cm c) 4cm d) 2cm

Q9. The area of a rhombus is 120cm^2 and one of its diagonals is 24 cm. Each side of the rhombus is:

- a) 12cm b) 10cm c) 15cm d) 13cm

Q10. The value of $\left(\frac{2}{3}\right)^0 + \left(\frac{-2}{3}\right)^0 = ?$

- a) 0 b) -1 c) 2 d) $\frac{4}{3}$

Q11. Standard form of 0.0016 cm is

- a) 1.6cm b) $0.16 \times 10^{-2}\text{cm}$ c) $1.6 \times 10^{-3}\text{cm}$ d) 1600cm

Q12. A linear graph is that which is

- a) Always a straight line b) changes over period of time c) curved line d) none of these

Q13. If x and y varies inversely and $x=18$ when $y=8$, find x when $y=16$.

- a) 6 b) 9 c) 8 d) none of these

Q14. $(2x - 32x^3) = ?$

- a) $2(x-4)(x+4)$ b) $2x(1-2x)^2$ c) $2x(1+2x)^2$ d) $2x(1-4x)(1+4x)$

Directions: In the following questions a statement of assertion (A) is followed by a statement of reason (R). Mark the correct choice.

Q15. **Assertion(A)** – Factors of $(a+b)^2$ are $(a-b)(a+b)$

Reason(R) – Factors are that by which the given term should be completely divisible.

- a) Both assertion (A) and reason (R) are true and reason (R) is correct explanation of assertion (A).
b) Both assertion (A) and reason (R) are true and reason (R) is not the correct explanation of assertion (A).
c) Assertion(A) is true but reason (R) is false.
d) Assertion(A) is false but reason (R) is true.

Q16. **Assertion(A)** – $\{(2)^3\}^4 = 2^{12}$

Reason(R) – For any integers a, m and n, we have $\{(a)^m\}^n = a^{mn}$

- a) Both assertion (A) and reason (R) are true and reason (R) is correct explanation of assertion (A).
b) Both assertion (A) and reason (R) are true and reason (R) is not the correct explanation of assertion (A).
c) Assertion(A) is true but reason (R) is false.
d) Assertion(A) is false but reason (R) is true.

SECTION B

Answer the following questions:

Q17. The price of a TV is ₹67200 including 12% VAT. Find the price of TV before VAT added.

Q18. A machinery worth ₹10500 depreciated by 5%. Find its value after one year.

Q19. Add: $2x(z - x - y)$, $2y(-z - y + x)$, $2z(y - x - z)$

OR

Subtract: $3a(a + b + c) - 2b(a - b + c)$ from $4c(-a + b + c)$

Q20. Factorise: $x^3 - 4x$

OR

Factorise: $36a^2 + 108ab + 81b^2$

Q21. The parallel sides of a trapezium are 5 cm and 13 cm and area of it is 180 cm^2 , find the distance between the parallel sides.

Q22. Evaluate: $\frac{8^{-1} \times 5^3}{2^{-4}}$

Q23. By what number should $(-6)^{-1}$ be multiplied so that the product becomes $(9)^{-1}$.

Q24. Find the missing terms if x and y vary inversely proportional.

X	8	-----	16	-----	80
Y	-----	4	5	2	-----

SECTION C

Q25. Out of her total monthly salary, Sheena spends 30% on house rent and 60% of the rest on household expenditure. If she saves ₹10500, what is her total monthly salary?

OR

By what percent is ₹2000 less than ₹2400? Is it the same as the percent by which ₹2400 is more than ₹2000?

Q26. Simplify the expression and find the value at $x = -1$ and $y = -2$.

$$(1.5x - 4y)(1.5x + 4y + 3) - 4.5x + 12y$$

Q27. The radius and height of a cylinder are in the ratio 7 : 2. If the volume of the cylinder is 8316 cm^3 , find the total surface area of the cylinder.

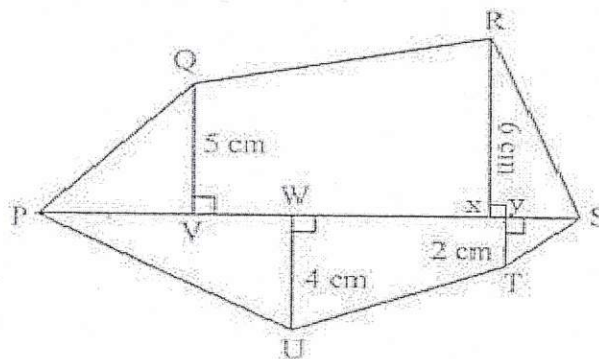
OR

A suitcase with measures $80 \text{ cm} \times 48 \text{ cm} \times 24 \text{ cm}$ is to be covered with a tarpaulin cloth. How many metres of tarpaulin of width 96 cm is required to cover 100 such suitcases?

- Q28. (i) Express 1.596×10^{-5} in usual form.
(ii) Find the value of x , if $(2^{3x-1} + 10) \div 7 = 6$
- Q29. If a box of sweets is divided among 24 children, they will get 5 sweets each. How many would each get, if the number of the children is reduced by 4?
- Q30. If the weight of 10 sheets of thick paper is 40 grams, how many sheets of the same paper would weigh $1\frac{1}{2}$ kilograms.
- Q31. Factorise: (i) $3x^5 - 48x^3$ (ii) $y^2 - 21y + 90$
- Q32. Divide: $4m(m^2 - 14m - 32) \div (2m^2 + 4m)$

SECTION D

- Q33. Find the area of polygon PQRSTU shown in the given figure, if $PS = 11$ cm, $PY = 9$ cm, $PX = 8$ cm, $PW = 5$ cm, $PV = 3$ cm, $QV = 5$ cm, $UW = 4$ cm, $RX = 6$ cm, $TY = 2$ cm.



- Q34. The difference between the compound interest, compounded annually and the simple interest on a certain sum for two years at 15% per annum is ₹180. Find the sum.
- Q35. The following table gives the distances travelled by a car at various time-intervals. Study the table and draw a linear graph.

Time	6 a.m	7 a.m	8 a.m	9 a.m
Distance(in km)	40	80	120	160

From this graph, answer the questions given below:

- (i) How much distance did the car cover during the period from 7:30 a.m to 8 a.m?
(ii) What was the time when the car had covered a distance of 100 km, since its start?
- Q36. A garrison of 900 men had provisions for 42 days. However, a reinforcement of 500 men arrived. For how many days will the food last now? If food last in 63 days then how many men depart from reinforcement?

OR

A train is moving at a uniform speed of 75 km/hr.

- (i) How far will it travel in 24 minutes?
(ii) In how much time will it cover 180 km?

SECTION E

Read the passage given below and answer the questions accordingly.

(I) Tanya had some sweets which she distributed among her four friends A, B, C and D. She gave x sweets to A. To B, she gave 10 sweets less than twice of those she gave to A. To C, she gave 4 sweets more than 4 times of those she gave to A. To D, she gave $(x + 12)$ sweets more than those she gave to A. Tanya still had 10 sweets left

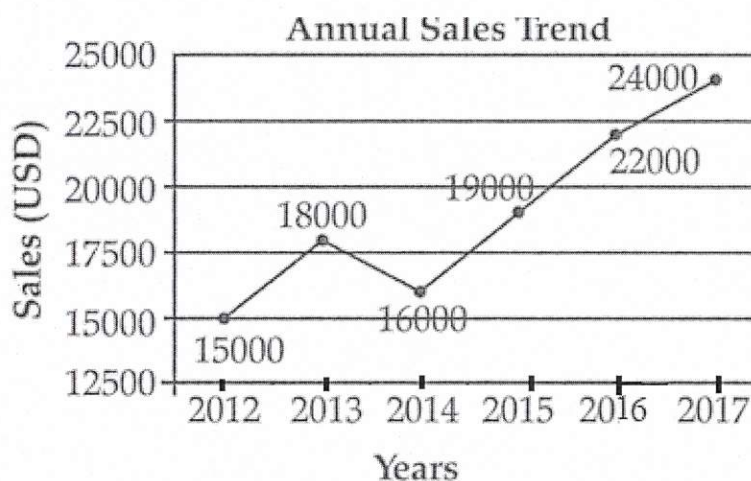
Q37. If C got 28 sweets, how many sweets did A got?

Q38. How many sweets did D got if A got 8 sweets?

Q39. Who got more sweets D or B and how much?

Q40. How many sweets B got if A got 12 sweets?

(II) The given line graph shows the annual sales of car for past six years. On basis of given information in graph answer the following questions:



Q41. What was the sale of car in year 2015?

Q42. How many cars are sold between year 2013 and 2012?

Q43. In which year the sales of car depreciated and by how much?

Q44. In which year the sale was minimum and in which year it was maximum and what is the difference between them?
