

O. P. JINDAL SCHOOL, SAVITRI NAGAR
Half Yearly Examination (2019 – 2020)

Class: VII

MM: 80

Subject: Mathematics

Time: 3 Hrs.

Name: _____

Class / Section: _____

Roll No.: _____

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

- (i) All questions are compulsory.
(ii) The question paper consists of 40 questions divided into four sections A, B, C and D.
(iii) Section A contains 20 questions of 1 mark each. Section B contains 6 questions of 2 marks each. Section C contains 8 questions of 3 marks each. Section D contains 6 questions of 4marks each.
(iv) 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.
(v) Use of calculators is not permitted.

Section A

Question numbers 1 to 20 carries 1 mark each.

Choose the correct option:

- Q1. Reciprocal of $1\frac{2}{3}$ is
a) $\frac{5}{3}$ b) $\frac{3}{5}$ c) $1\frac{3}{2}$ d) $1\frac{2}{3}$
- Q2. Which of the expression is equal to -30?
a) -5×6 b) $(-60) \div (-2)$ c) -30×-1 d) none
- Q3. Multiplicative inverse of: $-\frac{6}{5}$
a) $-\frac{6}{4}$ b) $-\frac{5}{6}$ c) 1 d) -1
- Q4. Which polynomial has the highest degree?
a) $7x - 59$ b) $1 - y^2$ c) $3xy^2 - xy^2$ d) $519x^3y$
- Q5. The solution of the equation $ax + b=0$ is
a) $\frac{a}{b}$ b) $-b$ c) $-\frac{b}{a}$ d) $\frac{b}{a}$
- Q6. $(9^2)^2 \div 9^3$
a) 9 b) 81 c) 729 d) 6561
- Q7. If $12 : 17 = x : 68$, find x
a) 12 b) 17 c) 36 d) 48

Q20. Find the ratio of: 25m to 50 km

Section B

Question numbers 21 to 26 carries 2 marks each.

Q21. Find mean proportion of: 0.06 and 0.24

Q22. Evaluate by using suitable property: $19 \times (-25) \times (-4) \times (-8)$

OR

Evaluate by using suitable property: -45×103

Q23. Express: $\frac{3}{7}$ as fraction with denominator 343.

Q24. Find the value of the polynomial: $7a^2 - (-2)a + 5$ at $a = -1$

OR

Evaluate: $3ab + ac$, if $a = 1$, $b = -2$ and $c = -1$

Q25. Simplify for x: $(5^2)^3 \times 5^x = 625$

Q26. Write in ascending order: $\frac{1}{4}$, $\frac{4}{5}$, 0 , $\frac{-7}{10}$, -0.8

Section C

Question numbers 27 to 34 carries 3 marks each.

Q27. By what must $2\frac{17}{54}$ be multiplied to get $-4\frac{31}{36}$?

Q28. Evaluate: $10 + (-40) \div 8 \times (-3)$

Q29. Ravi earns ₹840000 a year and spends ₹63000 a year. Find in simplest form the ratio of

a) Ravi's income to his savings b) Saving to his expenditure

Q30. The number is multiplied by 2, and 8 is added to the product, the result is 50, find the number.

Q31. Solve: $\frac{4z+3}{3} + \frac{1}{3} = \frac{3z-1}{2}$

OR

Solve: $8 + 2(5m - 8) + 3(m + 2) = 12 + 4(2m - 1)$

Q32. Arrange in order of decreasing order in x and find the value of the polynomial at $x = -3$:

$8x^2 - 3x - 12 + 6x^2$

OR

What must be added in $c^2 + 2bc - b^2$ to get $9b^2 - 3c^2$

Q33. If $2^{2n-1} = 8^{3-n}$, then find the value of n.

OR

Evaluate: $\left[7^\circ + 25^\circ + \left(\frac{-2}{11}\right)^\circ\right] \times [(-3)^2]^2$

Q34. The product of two numbers is $-23\frac{1}{3}$. If one of the numbers is $-8\frac{1}{6}$, find the other number.

Section D

Question numbers 35 to 40 carries 4 marks each.

Q35. An elevator descends into a mine shaft at the rate of 6m/min. If the descent starts from 10 m above ground level, how long will it take to reach -350 m?

Q36. Ravindra is 144 cm tall. That is $\frac{9}{10}$ as tall as his elder brother. How tall is Ravindra's elder brother?

OR

A pile of 160 sheets is 6.08 cm high. Find in mm the thickness of one sheet.

Q37. Express as decimal correct to 2 decimal places: $\frac{14}{125}$

Q38. Subtract the sum of $x^2 - 2xy + y^2$ and $x^2 + 3xy + y^2$ from $x^2 - 6xy + 4y^2$.

Q39. Rakesh is now 3 times as old as his younger brother Pinku, but in 3 more years he will be only twice as old as Pinku will be then. How old are they now?

OR

Find two consecutive odd numbers whose sum is 56.

Q40. The sides of a triangle are in the ratios, 7 : 5 : 9. If the perimeter is 42 cm, find the length Of each side.
