INDIAN SCHOOL SALALAH

SECOND TERM EXAMINATION, 2017-2018

MATHEMATICS

Time: 3 hrs

CLASS: VIII Max.Marks: 80

General Instructions.

i. This question paper contains 30 questions.

ii. Section A contains 6 questions of 1 mark each, section B contains 6 questions of 2 marks each, section C is of 10 questions of 3 marks each and section D is of 8 questions of 4 marks each.

iii. There is no overall choice. However, an internal choice have been providedfour questions of 3 marks each and three question of 4 marks each.

SECTION.A

Question numbers 1 to 6 carry 1 mark each.

1. Solve: $14x - 8 = 13$
2. Factorise: $10x^2 - 18x^3 + 14x^4$
3. List price of a TV set is ₹ 10,500. If the rate of sales tax is 4%, calculate the total amount for purchasing the TV.
4. Given that $\sqrt{4096} = 64$. Find the value of $\sqrt{4096} + \sqrt{40.96}$.
5. Find the height of a cuboid whose base area is 25cm^2 and the volume is 275 cm^3
6. Find the product: $\left(\frac{10}{3}pq^3\right) \times \left(\frac{6}{5}p^3q\right)$

SECTION.B

Question numbers 7 to 12 carry 2 marks each.

7. Solve: $3(5x + 2) = 4(7 - 3x) + 2$
8. Find the volume of a cube whose surface area is 864 cm^2
9. Find the square root of 3249 by division method.
10. Factorise: $49y^2 + 84yz + 36z^2$
11. Subtract $3xy + 5yz - 7zx$ from $5xy - 2yz - 2zx$.

12. Sohan bought a second hand refrigerator for ₹ 2500, and spent ₹.500 on its repair. If it is sold for a profit of 16%, find the selling price of the refrigerator.

SECTION.C

Question numbers 13 to 22 carry 3 marks each.

13. Express the following numbers in standard form.

i) 0. 000000003904 ii) 17300000 iii) 473.5cm

14. A hall is in the form of a cuboid whose measures are 8 m x 3 m x 4m. Find the area of four walls and ceiling.

15. show that $(4p^2 - 3q)^2 + 48p^2q = (4p^2 + 3q)^2$

OR

Using suitable identities find: i) 196 × 206 ii) 95 × 105

16. Factorise the expression and divide: $\frac{56y^3(y^2 - 7y + 12)}{28y^2(y - 3)}$

OR

Work out the following divisions:

i) $(4y^3 + 5y^2 + 6y) \div 2y$ ii) $10y(6y + 21) \div 5(2y + 7)$

17. A milk tank is in the form of cylinder whose radius is 2 m and length is 7 m. Find the quantity of milk in litres that can be stored in the tank?

18. One of the two digits of a two digit number is three times the other digit. If you interchange the digits of this two-digit number and add the resulting number tothe original number, you get 88. What is the original number?

OR

Amina thinks of a number and subtract $\frac{5}{2}$ from it. She multiplies the result by 8. The result now obtained is 3 times the same number she thought of. What is the number?

19. Find the compound interest on ₹ 8000 for 1½ years at 10 % per annum, interest being payable half yearly.

OR

The cost of a refrigerator is ₹ 9000. Its value depreciatesat the rate of 5% every year. Find its value after two years.

20. Simplify the expression and evaluate as directed.

$3y(2y - 7) + 3(y - 4) - 63$ for $y = -2$.

21. Factorise the following expressions:

i) $4y^2 - 12y + 9$ ii) $ax + bx - ay - by$

22. A picnic is being planned in a school for class VIII. Girls are 60% of the total number of students and 18 in number. Find the number of boys.

SECTION.D

Question numbers 23 to 30 carry 4 marks each.

23. Find the area of a rhombus whose side is 6.5 cm and the altitude is 5 cm. If one of its diagonal is 13 cm long, find the length of the other diagonal.

OR

The area of a trapezium is 540 cm^2. If the ratio of parallel sides is 7: 5 and the distance between them is 18 cm, find the lengths of parallel sides.

24. a) Find the smallest number by which 9408 must be divided so that thequotient is a perfect square.

b) Area of a square plot is 8836 m^2. Find the side of the square plot.

25. Out of 500 students in a school, 40% students read Hindi newspaper, 50% students read English newspaper and remaining students do not read any newspaper. Find

i) What percentages of students do not read any newspaper?

ii) Number of students who read Hindi newspaper.

iii) Number of students who read English newspaper.

iv) What are the advantages of reading newspaper?

26. Find the following products.

i) $(x + 7y)(2x - y)$

ii) $(a + 2b - 3c)(a + b - c)$

27. Factorise the following expressions.

a) $x^2 + 6x - 16$

b) $p^4 - 81$

28. By selling a watch for ₹ 2700, Aman loses 10%. Find for how much Aman bought the watch and for how much should he sell the watch to gain 7%?

OR

Anil borrowed ₹ 18000 from Rakesh at 8% per annum simple interest for 2 years. If Anil borrowed this sum at 8% per annum compound interest, what extra amount would he hast to pay?

29. The denominator of a fraction exceeds its numerator by 4. If the numerator and denominator are both increased by 3, the new fraction becomes $\frac{4}{5}$. Find the original fraction.

OR

Bansi has 3 times as many two rupees as he has five rupees notes. If he has in all a sum of ₹77, how many coins of each denomination does he have?

30. Find the value of : $\frac{2^{-4} \times 15^{-3} \times 125}{5^2 \times 10^{-4}}$

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