INDIAN SCHOOL SALALAH

SECOND TERM EXAMINATION, 2018-19

Subject: Mathematics **Time allowed: 3 hours**

Class: VIII **Max. Marks: 80**

GENERAL INSTRUCTIONS

a) All the questions are compulsory.

b) This question paper consists of 30 questions.

c) Section A contains 6 questions of 1 mark each. Section B contains 6 questions of 2 marks each. Section C contains 10 questions of 3 marks each. Section D contains 8 questions of 4 marks each.

SECTION A

Question numbers 1 to 6 carry 1 mark each.

1. Find the one's digit in the square of 764.
2. Multiply $7xy^2$ by $3x^2y^2$
3. Factorise : $7y - 14y^4$
4. Solve the equation $3y - 5 = 2y + 1$
5. What is the minimum interior angle possible for regular polygon?
6. Find the value of $\left(\frac{2}{3}\right)^{-5}$

SECTION B

Question numbers 7 to 12 carry 2 marks each.

7. Two numbers are in the ratio 5: 8 and their sum is 182. Find the numbers.
8. Find the square root of 9216 by long division method.
9. Two coins are tossed simultaneously. Find the probability of getting
   a. Two heads b. no head
10. Find the number of sides of a regular polygon having each interior angle equal to 150^0.
11. Evaluate: $\frac{8^{-1}\times 3}{2^{-4}}$
12. Find the product: $(a - 5)(3a + 2)$

SECTION C

Question numbers 13 to 22 carry 3 marks each.

13. Solve the equation: $\frac{7y+4}{y+2} = \frac{-4}{3}$

14. Find the least number which must be subtracted from 6248 to make it a perfect square. Also find the square root of the resulting number.

15. Factorise: a) $x^2 + 11x - 42$ b) $x^2 - 16$

16. Factorise: a) $121b^2 - 88bc + 16c^2$

    b) Find the common factors of $12y$ and 36.

17. Construct a quadrilateral ABCD with AC = 7 cm, BD = 9 cm, AB = 8 cm, BC = 6 cm and AD = 6 cm.

18. The marks of 40 students in a Mathematics test are given below.

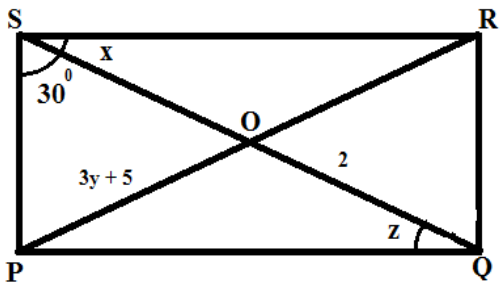
56	42	63	60	43	51	47	62	48	40
50	62	53	56	40	48	56	53	50	42
55	52	48	46	45	54	52	50	47	44
54	55	60	63	58	55	60	58	53	40

Using tally marks make a frequency distribution table with intervals as 40-45, 45-50 and so on.

19. Using identities evaluate: a) 102×103 b) $78^2 - 22^2$

20. Find the value of n , so that $7^{2n+1} \div 49 = 7^3$

21. In the given figure PQRS is a rectangle. Find the value of x, y and z if $\angle QSP = 30^0$, $OP = 3y+5$ and $OQ = 2$ cm.



22. The measures of two adjacent angles of a parallelogram are in the ratio 3:2 .Find the measures of each angle of the parallelogram.

SECTION D

Question numbers 23 to 30 carry 4 marks each.

23. 8649 students were sitting in a lecture room in such a manner that there were as many students in the row as there were rows in the lecture room. How many students were there in each row of the lecture room?

24. Find : $16xy(4x^2 - 1) \div 8x(2x + 1)$

25. Construct a rhombus BEST in which BS = 5.6 cm and ET = 6.8 cm. Measure the side of the rhombus.

26. The following table shows the data showing number of newspapers read by the people of a town .Draw a Pie chart to represent the data.

Name of the newspaper	Hindustan	Danik Jagran	Prabhat Khabar	Times	Daily News
Number of people (in %)	30 %	20%	10 %	15 %	25 %

27. The following table shows the growth chart of a child.

Height (in cm)	75	90	110	120	135
Age (in years)	2	4	6	8	10

a) Draw a line graph for the data shown in table and answer the following question.

b) What is the height at the age of 5 years?

28. Show that $(3x + 7)^2 - 84x = (3x - 7)^2$

29. a) Write a Pythagorean triplet whose one member is 16.

b) Observe the following pattern;

$1 = \frac{1(1+1)}{2} = 1$

$1 + 2 = \frac{2(2+1)}{2} = 3$

$1+2+3 = \frac{3(3+1)}{2} = 6$

$1+2+3+4 = \frac{4(4+1)}{2} = 10$

Using the above pattern find the value of the following:

a) 1 +2+3+4+5+……+15

b) 1 +2+3+4+5+……+20

30. Anjali's father is 26 years younger than Anjali's grandfather and 29 years older than Anjali. The sum of the ages of all the three is 135 years .What is the age of each one of them?

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