

Reso-NET
Resonance National Entrance Test
ACADEMIC SESSION : 2018-19
FOR STUDENTS MOVING TO CLASS-IX/WISDOM

Time : 1½ Hr.

SAMPLE TEST PAPER

Max. Marks : 210

GENERAL INSTRUCTIONS

1. Question paper contains 70 questions of Mathematics (1 to 25), Physics (26 to 35), Chemistry (36 to 45), Biology (46 to 55) & Mental Ability (56 to 70), each question carry 3 mark.
2. Blank papers, clip boards, log tables, slide rule, calculators, mobile or any other electronic gadgets in any form is not allowed.
3. Write your Name and Roll No. in the space provided in the bottom of this booklet.
4. Before answering the paper, fill up the required details in the blank space provided in the answer sheet.
5. Do not forget to mention your roll number neatly and clearly in the blank space provided in the answer sheet.
6. There is no negative marks for wrong answer.
7. No rough sheets will be provided by the invigilators. All the rough work is to be done in the blank space provided in the question paper.
8. In case of any dispute, the answer filled in the OMR sheet available with the institute shall be final.
9. Any correction/objection in Answer Key will be accepted/entertained within 24 hrs. of exam conduction. No correction/objection will be accepted after the time.

MARKING CRITERIA

No. of Questions	Type	Marks		
		Correct	Incorrect	Blank
1-70	Only one correct	Q. No. 1 to 70 (3 Mark each)	NO NEGATIVE MARKS	0

IMPORTANT

PROCEDURE OF FILLING UP THE ANSWERS IN OMR SHEET

Wrong Filling

- (A)  (C) (D) Tick mark
- (A)  (C) (D) Cross mark
- (A)  (C) (D) Half filled or semi dark
-  (B) (C) (D) Light filled

Right Filling

- (A)  (C) (D) Fully darken with HB Pencil
- (A)  (C) (D) Fully darken with HB Pencil
- (A)  (C) (D) Fully darken with HB Pencil
-  (B) (C) (D) Fully darken with HB Pencil

Name : _____ Roll No. : _____

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Syllabus of Reso NET

FOR STUDENTS STUDYING IN CLASS-VIII IN 2017-18

Mathematics :

- ❖ Squares & Square Roots
- ❖ Cubes & Cube Roots
- ❖ Linear equation in one variable
- ❖ Quadrilaterals
- ❖ Playing with numbers
- ❖ Algebraic expressions
- ❖ Algebraic identities
- ❖ Exponents and powers
- ❖ Percentage and its applications
- ❖ Compound interest
- ❖ Direct n inverse variations
- ❖ Visualising solid shapes
- ❖ Mensuration
- ❖ Introduction to graph
- ❖ Statistics
- ❖ Probability

Physics :

- ❖ Force
- ❖ Pressure
- ❖ Friction
- ❖ Sound wave
- ❖ Electricity
- ❖ Light
- ❖ Earthquakes
- ❖ Rain, Thunder and Lightning
- ❖ Night Sky

Chemistry :

- ❖ Synthetic fibres and plastics
- ❖ Metals and non-metals
- ❖ Coal & Petroleum
- ❖ Combustion and Flame

Biology :

- ❖ Crop production & management
- ❖ Micro-Organism friend & foe
- ❖ Conservation of plants & animals
- ❖ Cellular level of organization
- ❖ Reproduction in Animal
- ❖ Pollution of Air & Water
- ❖ Reaching the Age of Adolescence

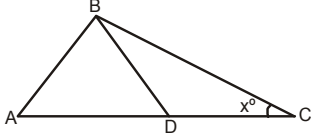
Mental Ability :

- ❖ Number Series
- ❖ Alphabet Series
- ❖ Letter Repeating Series
- ❖ Missing term in figure
- ❖ Mathematical Operations
- ❖ Coding-Decoding
- ❖ Direction Sense
- ❖ Ranking & Ordering-Test
- ❖ Blood Relation
- ❖ Sitting Arrangement
- ❖ Puzzle Test
- ❖ Venn Diagram
- ❖ Dice Test
- ❖ Analogy & Classification
- ❖ Non Verbal Series, Analogy, Classification

1. If a and b are positive integers such that $a^b = 125$, then $(a - b)^{a+b-4}$ is equal to
(A) 25. (B) 16.
(C) 28. (D) 30.
2. The sum of the digit of a number $10^n - 1$ is 3798. The value of n is :
(A) 422 (B) 431
(C) 501 (D) 673
3. If $x = 0.50$, then the value of the expression

$$\left\{ (1+x+x^2) + \frac{x^3}{1-x} \right\}$$
is :
(A) 4 (B) 2
(C) 1.50 (D) 1
4. If $ABC \times CBA = 65125$, where A, B and C are single digits, then $A + B + C = ?$
(A) 18 (B) 15
(C) 8 (D) 7
5. There are four prime numbers written in ascending order. The product of the first three is 385 and that of the last three is 1001. The last number is :
(A) 11 (B) 13
(C) 17 (D) 19
6. The difference of compound interest and simple interest on an amount at the rate of 12% per annum for 2 years is Rs. 90, then the amount will be :
(A) Rs. 2500 (B) Rs. 6250
(C) Rs. 12500 (D) Rs. 12000
7. One-third of a tank is filled with water. When 100 liters of water is added, exactly half of it is filled. What is the total capacity of the tank, in liters ?
(A) 300 (B) 400
(C) 500 (D) 600
8. A shopkeeper fixes the marked price of a item 35% above its cost price. Then the percentage of discount allowed to gain 8% is :
(A) 43% (B) 30%
(C) 20% (D) 31%
9. A 400 m long train is running at the speed of 60 km per hour. It crosses a bridge of length 800 m in -
(A) $6\frac{2}{3}$ seconds (B) 20 seconds
(C) 2 seconds (D) 72 seconds
10. If a rectangular paper of length 6cm and width 3 cm is rolled to form a cylinder with height equal to the width of the paper, then its base radius is-
(A) $\frac{6}{\pi}$ cm (B) $\frac{3}{\pi}$ cm
(C) $\frac{3}{2\pi}$ cm (D) $\frac{9}{2\pi}$ cm
11. The yearly changes in the population of a city for 4 successive years are respectively, 25% increase, 25% increase, 25% decrease, 25% decrease. What is the net nearest change over 4 years ?
(A) 12% decrease (B) No change
(C) 10% increase (D) 12% increase
12. The price of wheat falls by 16%. By what nearest percentage a person can increase the consumption of wheat so that his overall budget does not change ?
(A) 16% (B) 18%
(C) 18.5% (D) 19%
13. A dishonest dealer professes to sell his goods at cost price. But he uses a false weight and thus gains $6\frac{18}{47}\%$. For a kg, he uses a weight of :
(A) 947 gms (B) 940 gms
(C) 953 gms (D) 960 gms
14. If $A : B = 1\frac{1}{2} : 3\frac{1}{2}$; $B : C = 5\frac{1}{4} : 7\frac{1}{2}$, then $A : B : C$ is :
(A) 5 : 7 : 12 (B) 5 : 7 : 10
(C) 3 : 7 : 10 (D) 3 : 7 : 12
15. Of the 1000 inhabitants of a town, 60% are males of whom 20% are literate. If of all the inhabitants, 25% are literate, then what percent of the females of the town are literate ?
(A) 22.5 (B) 32.5
(C) 27.5 (D) 37.5

(Space For Rough Work)

16. The smallest number by which 1188 should be divided to make it a perfect cube is
(A) 11. (B) 44.
(C) 40. (D) 20.
17. If $\frac{5x}{4} + \frac{6-x}{8} = \frac{6(x+3)}{3} - \frac{1}{6}$, then $x = ?$
(A) $-\frac{121}{22}$ (B) $\frac{121}{12}$
(C) $\frac{212}{21}$ (D) $-\frac{122}{21}$
18. Number of vertices in a triangular prism is
(A) 6. (B) 8.
(C) 10. (D) 4.
19. You are given the five numbers p, q, r, s, t. If the average of p and t is 7, and if the average of q, r and s is 12, what is the average of all five number ?
(A) 5 (B) 9.5
(C) 10 (D) 19
20. The simplest form of $\sqrt[3]{\frac{0.027}{0.008}} + \sqrt{\frac{0.09}{0.04}}$ is :
(A) 0.5 (B) 1.5
(C) 0.05 (D) None of these
21. Sum of the digit of a two digit number is 9. The number obtained by interchanging the digit exceed the given number by 27, the number is—
(A) 81 (B) 45
(C) 36 (D) 27
22. If $a^x = b$, $b^y = c$ and $c^z = a$, then the value of xyz is :
(A) 0 (B) 1
(C) $x + y + z$ (D) abc
23. A, B and C can complete a work, working alone in 10, 15 and 20 days respectively. If all of them work together to complete the work, what fraction of the work would have done by B ?
(A) $\frac{4}{13}$ (B) $\frac{1}{2}$
(C) $\frac{1}{3}$ (D) $\frac{6}{13}$
24. Number of prime numbers ≤ 90 is -
(A) 23 (B) 22
(C) 24 (D) 25
25. In the diagram, If $AB = AD = BD = DC$ then $x^\circ =$
- 
- (A) 30 (B) 35
(C) 45 (D) 60
26. Sharper knives cut fruits easily because :
(A) the area of contact is more
(B) the area of contact is less
(C) they shine more
(D) none of these
27. A thunder clap is heard 5.5 sec later than the lightning flash. The distance of the flash is (velocity of sound in air is 330 m/s)
(A) 1780 m. (B) 1815 m.
(C) 3560 m. (D) 300 m.
28. How much force is required to lift mass of 100g :
(A) 10 N (B) 1 N
(C) 100 N (D) 1000 N
29. If the pressure produced by a force over an area of 100 cm^2 is 30 Pa, then calculate the force applied.
(A) 0.3 N (B) 0.4 N
(C) 0.5 N (D) 0.6 N
30. Atmospheric pressure exerted on earth is due to the :
(A) gravitational pull
(B) revolution of earth
(C) rotation of earth
(D) uneven heating of earth
31. In which case friction is less:
(A) square block on straight line motion
(B) spherical ball in straight line motion
(C) both (A) and (B)
(D) None of these
32. Earthquakes are generally followed by :
(A) rain (B) after shocks
(C) thunder (D) lightning

(Space For Rough Work)

33. Ultrasonic waves are :
 (A) Low frequency waves
 (B) High frequency waves
 (C) High energy waves
 (D) Both (A) and (C) are correct
34. We see different objects around us due to of light. :
 (A) Reflection (B) Diffraction
 (C) Polarisation (D) Refraction
35. The pressure of atmosphere on earth is around:
 (A) 100 K Pa (B) 0 K Pa
 (C) 50 K Pa (D) none of these
36. Which of the following substance is used for white washing buildings ?
 (A) Sodium chloride
 (B) Potassium hydroxide
 (C) Calcium hydroxide
 (D) Calcium sulphate
37. Antimony and arsenic belong to the category of -
 (A) metals (B) metalloids
 (C) non - metals (D) minerals
38. Which of the following is a ferrous alloy ?
 (A) Solder (B) Invar
 (C) Brass (D) Magnalium
39. Which of the following is not obtained from fractional distillation of petroleum ?
 (A) Paraffin wax (B) Asphalt
 (C) Coal gas (D) Petroleum gas
40. Which one of the following substances does not contain carbon ?
 (A) Sugar (B) Limestone
 (C) Wood (D) Sand
41. The calorific values of wood, bituminous coal, natural gas and charcoal vary in order -
 (A) Wood > Bituminous coal > Natural gas > Charcoal
 (B) Wood > Bituminous coal > Charcoal > Natural gas.
 (C) Natural gas > Charcoal > Bituminous coal > Wood
 (D) Natural gas > Bituminous coal > Wood > Charcoal.
42. Which of the following statements regarding pure water is correct ?
 (A) Pure water is a bad conductor of electricity.
 (B) Pure water has maximum density at 4°C and minimum at 0°C.
 (C) Pure water is neutral to litmus.
 (D) All are correct
43. The flame of candle has three zones. The outer zone is blue, the middle zone is yellow and the inner zone is black. Which is correct regarding this ?
 (A) The outer zone is least hot
 (B) The middle zone is hottest
 (C) The inner zone is least hot
 (D) All the zones have same temperature
44. Which of the following on burning does not produce a flame ?
 (A) Candle wick
 (B) A wick dipped in kerosene oil
 (C) Charcoal
 (D) Camphor
45. Which of the following is not a product of incomplete combustion ?
 (A) Carbon monoxide (B) Carbon dioxide
 (C) Water (D) Heat
46. A unicellular micro-organism is
 (A) protozoa. (B) mould.
 (C) mushroom. (D) rhizopus.
47. Syphilis is caused by -
 (A) HIV
 (B) *Trapaonema palidum*
 (C) *Mycobacterium tuberculosis*
 (D) None of these
48. *Lactobacillus* bacteria are responsible for the formation of
 (A) cake. (B) curd.
 (C) bread. (D) pasteries.
49. Small pox vaccine was discovered by
 (A) Alexander Fleming. (B) Edward Jenner.
 (C) Louis Pasteur. (D) Robert Koch.
50. The colour that chromoplast gives to a plant is
 (A) red. (B) yellow.
 (C) Brown (D) All of the above

(Space For Rough Work)

51. Proper management of the environment is important so that:
 (A) humans can continue to live
 (B) the balance of nature can be preserved
 (C) animals would not become extinct
 (D) plants would not become extinct
52. Euglena is a unicellular organism possessing
 (A) cilia. (B) flagella.
 (C) bristles. (D) pseudopodia.
53. The animal in which internal fertilisation takes place is
 (A) toad. (B) frog.
 (C) fish. (D) pigeon.
54. Zygote develops to form a/an
 (A) egg. (B) embryo.
 (C) ova. (D) sperms.
55. An organism that does not reproduce sexually is a
 (A) virus. (B) human.
 (C) fish. (D) lion.

Directions : (56 to 57) Find the missing terms :

56. 2, 3, 10, 15, 26, ?, 50
 (A) 32 (B) 33
 (C) 34 (D) 35

57.

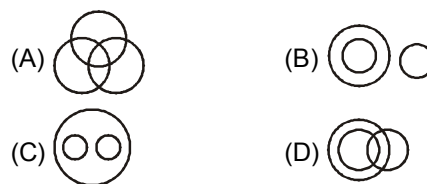
25	17	41
32	83	11
26	?	31

- (A) 26 (B) 25
 (C) 34 (D) 38
58. mq _ sqm _ qssq _ m _ ssqmm _ s
 (A) qsmsq (B) qmsmq
 (C) smmqq (D) sqmss
59. **PROMOTION** in a certain code is written as **QSP 86** how will you code **DEMOTION** ?
 (A) DE 98 (B) EF 98
 (C) EF 86 (D) EG 89

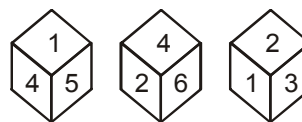
60. In a row of girls, Mradula is **18th** from the right and Sanjana is **18th** from the left. If both of them exchange their position, Sanjana becomes **25th** from the left, how many girls are there in the row ?
 (A) 40 (B) 41
 (C) 42 (D) 35
61. Which interchange of signs will make the following equation true ?
 $12 - 3 \times 2 \div 18 + 6 = 9$
 (A) $\div, -$ (B) $\div, +$
 (C) $\times, -$ (D) $+, -$
62. In a row of five persons, A is to the immediate left of B. E is on the right side of A who has D on his left side. If C is third to the left of B than who are sitting on the two ends of the row ?
 (A) C and E (B) A and D
 (C) B and C (D) C and A

Direction : (63) Which of the Venn diagrams given in the alternatives best represents the relation between the given items ?

63. Mothers, Engineers, Females



64. Three positions of the same dice are given below. Observe the figures carefully and tell which number will appear on the face opposite the number 1 ?



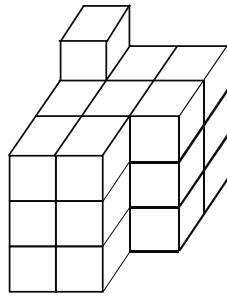
- (A) 4 (B) 6
 (C) 5 (D) 3
65. How many triangles are there in the following figure ?



- (A) 25 (B) 20
 (C) 31 (D) 29

(Space For Rough Work)

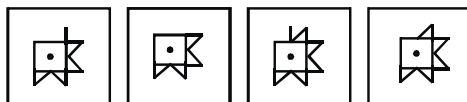
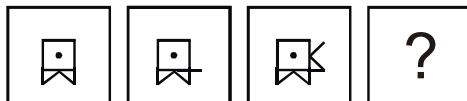
66. How many cubes are there whose we can see only one surface ?



- (A) 1
(C) 3
(B) 2
(D) 4

Directions : (67) In the following question, some figures are given in a sequence. Find out the figure from the alternatives, which will come in place of the question mark to continue the sequence.

67.

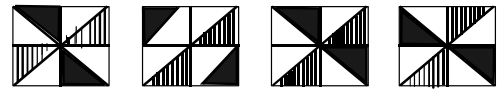
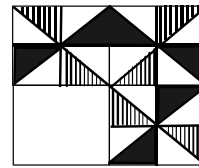


- (A) (B) (C) (D)

68. Mohan was born on August 22. Arvind is younger than Mohan by 10 days. This year independence day falls on Tuesday. On which day Arvind birthday fall ?

- (A) Tuesday
(C) Thursday
(B) Wednesday
(D) Friday

69. Choose the correct alternative figure, which completes the pattern given in the figure.



- (A) (B) (C) (D)

70. Showing the lady in the park, Vineet said, "She is the daughter of my grand father's only son. "How is Vineet related to that lady?

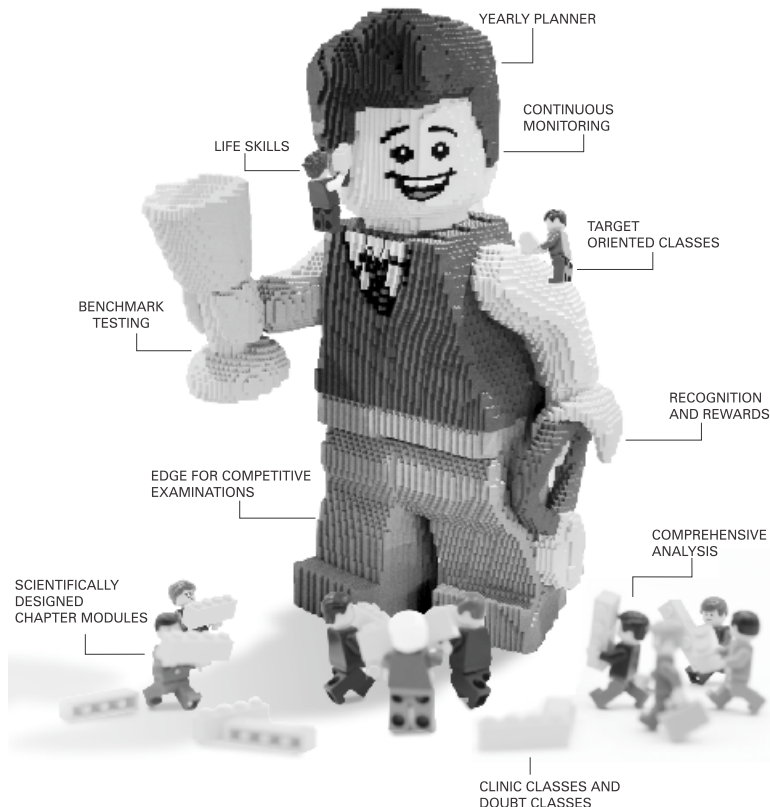
- (A) Brother
(C) Father
(B) Cousin
(D) Uncle

ANSWER KEY

Ques.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Ans.	B	A	B	C	B	B	D	C	D	B	A	D	B	C	B
Ques.	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Ans.	B	D	A	C	D	C	B	A	C	A	B	B	B	A	A
Ques.	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
Ans.	B	B	B	A	A	C	B	B	C	D	C	D	C	C	B
Ques.	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
Ans.	A	B	B	B	D	B	B	D	B	A	D	A	C	C	C
Ques.	61	62	63	64	65	66	67	68	69	70					
Ans.	B	A	D	B	D	D	D	D	A	A					

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