

SAMPLE PAPER

**'AVIRAL'
TALENT
SEARCH EXAM**

2018



**Let The
World Know
About Your**

Talent



AVIRAL TALENT SEARCH EXAM

ATSE - JUNIOR - 2018

Science, Mathematics & Mental Ability

For Class - V Studying Students

Time : 2 Hr.

M. M. : 320

Roll No :

Date :

Name of Student : _____

Father's Name : _____

Name of School : _____



AVIRAL CLASSES



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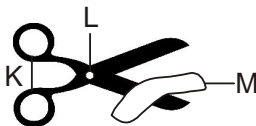
INSTRUCTIONS

1. This question paper contains 80 Questions and Total Max. Marks is 320. Attempt all questions.
2. This question paper contains three Section namely, **Section-1** : Science (Physics, Chemistry & Biology), **Section-2** : Mathematics and **Section-3** : Mental Ability.
3. **Section-1** has 45 questions (15 each from Physics, Chemistry & Biology). **Section-2** has 20 questions and **Section-3** has 15 questions.
4. For each correct answer 4 marks will be awarded and for wrong answer 1 mark will be deducted. No marks will be given for unattempted question.
5. Use only **blue/black pen (avoid gel pen)** for darkening the bubble.
6. The Answer sheet will be checked through computer hence, the answer of the question must be marked by shading the circles against the question by dark **blue/black pen**.
7. Write your name and Roll number carefully on the answer sheet as well as the questions paper.

SECTION - 1 [SCIENCE]

PHYSICS

1. The figure shows a pair of scissors



Which labelled parts represent the fulcrum, effort and load?

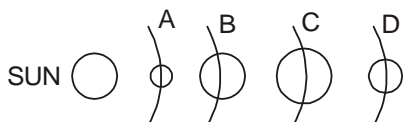
- | | Fulcrum | Load | Efforts |
|-----|---------|------|---------|
| (a) | K | L | M |
| (b) | K | M | L |
| (c) | L | K | M |
| (d) | L | M | K |
2. What is the phase of the moon during which an eclipse of the sun occurs ?
 (a) New moon (b) Full moon
 (c) Crescent (d) Half moon
 3. First satellite of India
 (a) Sputnik-I (b) Aryabhata
 (c) Explorer-I (d) Luna-3
 4. Planet which has the maximum number of moons
 (a) Jupiter (b) Uranus
 (c) Neptune (d) Saturn

5. Which of the following used to increase force
 (a) Inclined plane
 (b) Combination of Pulleys
 (c) Wheel and axle arrangement
 (d) All of the above
6. How many types of levers are there ?
 (a) 1 (b) 2
 (c) 3 (d) 4
7. Lunar eclipse occurs when the
 (a) Sun comes between the earth and the sun
 (b) Moon comes between the earth and the sun
 (c) Earth comes between the moon and the sun
 (d) When the earth and moon collide with each other
8. Which part of the lever supplies the force to move something?
 (a) Load (b) Fulcrum
 (c) Effort (d) All of these
9. The boundaries of tectonic plates where earthquakes most likely to occur ?
 (a) Fault zone (b) epic zone
 (c) focus point (d) lithosphere
10. Planet called evening star
 (a) Earth (b) Venus
 (c) Mars (d) None of the above

For Rough Work Only



11. Which of the senses must be protected when observing a solar eclipse ?
 (a) Touch (b) Taste
 (c) Sight (d) Smell
12. Lunar eclipse occurs on
 (a) Full moon day (b) New moon day
 (c) Both the above (d) None of the above
13. Choose the correct order of planets according to the following diagram



- (a) A-mercury, B-venus, C-earth, D-mars
 (b) A-venus, B-mercury, C-mars, D-earth
 (c) A-mars, B-venus, C-mercury, D-earth
 (d) None of the above
14. The inner most layer of earth is called
 (a) Core (b) Crust
 (c) Mantle (d) Lithosphere
15. Hottest planet in the solar system is
 (a) Mercury (b) Venus
 (c) Mars (d) Sun

CHEMISTRY

16. The greenhouse effect is due to excess of which of the gases in air
 (a) Carbon monoxide (b) Nitrogen
 (c) Carbon dioxide (d) Nitrogen dioxide
17. Name a gas that is used for filling meteorological balloons
 (a) Hydrogen (b) Helium
 (c) Nitrogen (d) None of these
18. Change of a substance from solid state directly to the gaseous state is called
 (a) Freezing (b) Condensation
 (c) vaporization (d) Sublimation

19. Which of the following conditions are necessary for the process of rusting
 (a) Air (b) Water
 (c) Boiled water (d) Both (a) and (b)
20. Which of the following substances are soluble in water ?
 (a) Flour (b) Talcum powder
 (c) Copper sulphate (d) Common salt
21. The component of air that controls combustion
 (a) Oxygen (b) Nitrogen
 (c) Hydrogen (d) Argon
22. Which of the following statement is true ?
 (a) Respiration is oxidation of food
 (b) Respiration is a physical process
 (c) Respiration is inhalation of oxygen
 (d) All of these
23. Name a gas that is chemically inert
 (a) Hydrogen (b) Neon
 (c) Nitrogen (d) Chlorine
24. The 'C' in CNG stands for
 (a) Common (b) Chemical
 (c) Compressed (d) Commercial
25. Which of the following is not a gas ?
 (a) Calcium (b) Chlorine
 (c) Hydrogen (d) Neon
26. The gas released during photosynthesis -
 (a) Carbon dioxide (b) Carbon monoxide
 (c) Oxygen (d) Chlorine
27. By which of the following processes is water-vapour added to the air
 (a) evaporation (b) condensation
 (c) sublimation (d) freezing
28. Change of a substance from solid state to liquid state is
 (a) Melting (b) Boiling
 (c) Freezing (d) Condensation

For Rough Work Only



29. A reddish brown powdery substance that often forms over objects made of iron
 (a) $\text{Fe}(\text{OH})_2$ (b) L P G
 (c) Carbon dioxide (d) Rust
30. A which of the following is a fossil fuel ?
 (a) Wood (b) Oxygen
 (c) Coal (d) Paper

BIOLOGY

31. Protective foods are
 (a) Carbohydrates & fats
 (b) Proteins and fats
 (c) Proteins & Vitamins
 (d) Vitamins & Minerals
32. Deficiency of vitamin D causes
 (a) Scurvy (b) Rickets
 (c) Beri-beri (d) Night-blindness
33. Carbohydrates consists of
 (a) Amino acids (b) Fatty acids
 (c) Sugars (d) None of these
34. Which of the following is the correct match of a nutrient mineral element and its one rich source ?
 (a) Calcium - Potato
 (b) Sodium - Citrus fruits
 (c) Iodine - Dairy milk
 (d) Potassium - Banana
35. Animals which eat all kinds of food both from plants and animals are
 (a) Carnivores (b) Herbivores
 (c) Omnivores (d) Both (a) and (b)
36. Frog respire through
 (a) Skin (b) Gills
 (c) Both (a) & (b) (d) None of these
37. Fats are made up of
 (a) Fatty acids and sugars
 (b) Amino acids
 (c) Fatty acids and glycerol
 (d) None of these

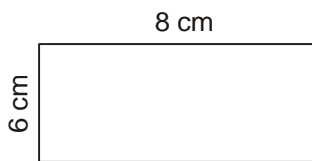
38. Ozone layer of atmosphere protects the living organisms from
 (a) High temperature
 (b) Harmful radiations of sun
 (c) Hail & snow (b) Water pollution
39. Water harvesting is
 (a) Collection of river water
 (b) Harvesting of water from tube wells
 (c) Collection of rain water in storage tanks or in the soil to recharge ground water
 (d) All of the above
40. Raw material used by plants for photosynthesis is
 (a) CO_2 only
 (b) CO_2 and sunlight
 (c) H_2O and sunlight
 (d) CO_2 , H_2O and sunlight
41. For healthy bone and teeth we need to take
 (a) Vitamin D (b) Vitamin A
 (c) Vitamin E (d) Vitamin K
42. Select the incorrect match
 (a) Carbohydrates - Bread
 (b) Proteins - Pulses
 (c) Vitamins - Fruits and vegetables
 (d) Minerals - Meat
43. Soil erosion is caused due to
 (a) Strong winds
 (b) Heavy rains
 (c) Keeping the fields fallow for long time
 (d) All of these
44. Acid rain is
 (a) The rain of acids
 (b) Evaporation of acids from the industries
 (c) Rain water containing acids
 (d) None of the above
45. Building block of all living organisms is
 (a) Tissue (b) Cell
 (c) Air (d) Water

For Rough Work Only



SECTION - 2 [MATHEMATICS]

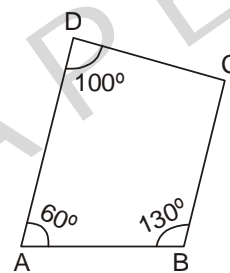
46. $4752719 - 4424897 = ?$
 (a) 472969 (b) 327822
 (c) 374499 (d) None
47. A silk saree cost Rs. 2428. What is the cost of 134 sarees?
 (a) 269620 (b) 469254
 (c) 523465 (d) 325352
48. $2\frac{1}{4} - 1\frac{1}{2} = ?$
 (a) $\frac{4}{5}$ (b) $\frac{5}{4}$
 (c) $\frac{6}{7}$ (d) $\frac{3}{4}$
49. What will be the area of a bed of length 4.7 m and breadth 3.2 m
 (a) 17.42 m^2 (b) 16.64 m^2
 (c) 15.04 m^2 (d) None of these
50. The perimeter of the given figure is



- (a) 14 cm (b) 24 cm
 (c) 28 cm (d) 30 cm
51. 24325 cm expressed in metres is
 (a) 24.32 m (b) 2432.5 m
 (c) 243.25 m (d) None of these
52. Base of $\triangle ABC$ is 9 cm and height is 4 cm then its area = ?
 (a) 9 cm^2 (b) 18 cm^2
 (c) 30 cm^2 (d) 36 cm^2

53. The next design in the pattern
 (a) (b)
 (c) (d) None of these

54. Product of 24613 and 124 is.....
 (a) 3054016 (b) 3053015
 (c) 3052012 (d) None of these
55. Which is the only number which is neither prime nor composite
 (a) 3 (b) 2
 (c) 1 (d) 0
56. $7.921 \times 0 = ?$
 (a) 7.921 (b) 0
 (c) 7921 (d) 792.1
57. Multiplicative inverse of $5\frac{1}{3}$ is
 (a) $\frac{3}{16}$ (b) $\frac{1}{3}$
 (c) $\frac{16}{3}$ (d) None of these
58. From the given figure $\angle C = ?$



- (a) 60° (b) 70°
 (c) 80° (d) 90°
59. How many seconds in 1 hr
 (a) 2400 secs (b) 3600 secs
 (c) 1800 secs (d) None of these
60. Write the CXLIX in Hindu-Arabic numeral
 (a) 171 (b) 149
 (c) 150 (d) 210

For Rough Work Only



61. Find the HCF if the product of two numbers is 720 and their LCM is 36.
- (a) 10 (b) 30
(c) 20 (d) 40
62. The smallest number that is divisible by 20, 25 & 30
- (a) 100 (b) 200
(c) 300 (d) 400
63. $6\frac{3}{5} \div 1\frac{4}{7} = ?$
- (a) $4\frac{2}{5}$ (b) $5\frac{1}{2}$
(c) $2\frac{1}{5}$ (d) $4\frac{1}{5}$
64. How many bricks of size 15cm x 6cm x 3cm will be needed to build a wall of size 45cm x 12cm x 5cm
- (a) 15 (b) 20
(c) 10 (d) 25
65. Mr. Nath drank 2.750L of water in the morning 1.05 L in the evening, and 0.785 L of water at night. How much water did he drink altogether
- (a) 4.585 (b) 4.590
(c) 4.375 (d) 4.495

SECTION - 3 [MENTAL ABILITY]

66. Wimbledon Trophy : Tennis :: Ranji Trophy : ?
- (a) Hockey (b) Cricket
(c) Football (d) Badminton
67. Which one does not belong to the group ?
- (a) Sweet (b) Cold
(c) Sour (d) Bitter
68. 'Cub' is related to 'Tiger' and 'Kitten' to
- (a) Dog (b) Cat
(c) Duck (d) None of these
69. Complete the series
A, Z, C, X, E, V, G, ?
- (a) I (b) T
(c) U (d) W
70. Find out the odd one
- (a) Saturn (b) Neptune
(c) Earth (d) Moon
71. Arrange the words given below in a meaningful manner
- (1) Night (2) Evening
(3) Morning (4) Day
- (a) 3, 2, 1, 4 (b) 1, 2, 3, 4
(c) 3, 4, 2, 1 (d) 2, 3, 4, 1
72. Choose the correct water image of the following figure.

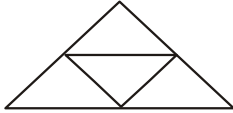


- (a)
- (b)
- (c)
- (d)

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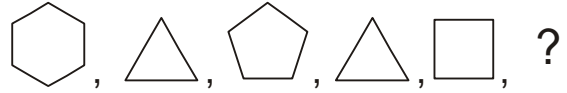




73. Choose the odd one out
 (a) Delhi (b) Bombay
 (c) Banaras (d) Calcutta
74. Complete the following series
 32, 16, 8, 4, ?
 (a) 1 (b) 8
 (c) 2 (d) 0
75. How many triangles are there in the following figure



- (a) 5 (b) 6
 (c) 4 (d) 7
76. 'Rose' is related to 'flower' so 'Onion' is related to ____
 (a) Plant (b) Food
 (c) Vegetable (d) Soil
77. Choose the odd pair
 (a) Cup-tea (b) Bottle-wine
 (c) Pitcher-water (d) Ball-bat

78. 'Heart' is related to 'Blood' in the same way as 'Lung' is related to
 (a) Body (b) Chest
 (c) Air (d) Respiration
79. Painter : Gallery :: Scientist : ?
 (a) School (b) Class
 (c) Laboratory (d) Office
80. Complete the following series



- (a)  (b) 
- (c)  (d) 

For Rough Work Only



ANSWER KEY

**SECTION-1
SCIENCE**

PHYSICS

1. (D)
2. (A)
3. (B)
4. (A)
5. (D)
6. (C)
7. (C)
8. (C)
9. (A)
10. (B)
11. (C)
12. (A)
13. (A)
14. (A)
15. (B)

CHEMISTRY

16. (C)
17. (B)
18. (D)
19. (D)
20. (D)
21. (B)
22. (A)
23. (B)
24. (C)
25. (A)
26. (C)
27. (A)
28. (A)
29. (D)
30. (C)

BIOLOGY

31. (D)
32. (B)
33. (C)
34. (D)
35. (C)
36. (C)
37. (C)
38. (B)
39. (C)
40. (D)
41. (A)
42. (D)
43. (D)
44. (C)
45. (B)

**SECTION-2
MATHEMATICS**

46. (B)
47. (D)
48. (D)
49. (C)
50. (C)
51. (C)
52. (B)
53. (C)
54. (C)
55. (C)
56. (B)
57. (A)
58. (B)
59. (B)
60. (B)
61. (C)
62. (C)
63. (D)
64. (C)
65. (A)

**SECTION-3
MENTAL ABILITY**

66. (B)
67. (B)
68. (B)
69. (B)
70. (D)
71. (C)
72. (C)
73. (C)
74. (C)
75. (A)
76. (C)
77. (D)
78. (C)
79. (C)
80. (B)