CTET Paper 2 (Science & Mathematics) Mock Test - 1

Science Section (25 Questions)

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Multiple Choice Questions

1. **Which of the following elements is necessary for the process of respiration?** a) Nitrogen
   b) Hydrogen
   c) Oxygen
   d) Carbon dioxide
2. **What is the main function of the roots in plants?** a) To produce food
   b) To anchor the plant and absorb water
   c) To produce seeds
   d) To attract pollinators
3. **Which type of energy is associated with the motion of objects?** a) Potential energy
   b) Kinetic energy
   c) Thermal energy
   d) Chemical energy
4. **Which organ in the human body is responsible for pumping blood?** a) Lungs
   b) Liver
   c) Brain
   d) Heart
5. **In which part of the plant does the process of transpiration mainly occur?** a) Roots
   b) Stem
   c) Leaves
   d) Flowers
6. **Which gas is produced when vinegar reacts with baking soda?**
   a) Oxygen
   b) Carbon dioxide
   c) Hydrogen
   d) Nitrogen
7. **Which of the following is a characteristic of mammals?** a) Cold-blooded
   b) Laying eggs
   c) Fur or hair
   d) Gills
8. **The water in a pond is an example of:** a) Solid
   b) Liquid
   c) Gas
   d) Plasma
9. **Which type of rock is formed by the accumulation of sediment?** a) Igneous
   b) Metamorphic
   c) Sedimentary
   d) Volcanic
10. **The process of changing a liquid into a gas is called:** a) Melting
    b) Freezing
    c) Evaporation
    d) Condensation
11. **Which part of the flower is primarily responsible for reproduction?** a) Sepals
    b) Petals
    c) Stamen
    d) Pistil
12. **Which animal is known for its ability to change color to blend into its environment?** a) Chameleon
    b) Tiger
    c) Elephant
    d) Whale
13. **What is the primary function of the leaves in plants?** a) To anchor the plant
    b) To absorb water
    c) To carry out photosynthesis
    d) To store nutrients
14. **What type of energy is stored in food?** a) Kinetic energy
    b) Potential energy

c) Chemical energy
d) Mechanical energy

15. **Which of the following is a renewable source of energy?** a) Coal
b) Natural gas
c) Solar energy
d) Nuclear energy

16. **Which part of the human body helps in the digestion of food?** a) Lungs
b) Stomach
c) Kidneys
d) Heart

17. **What type of simple machine is a seesaw?** a) Lever
b) Pulley
c) Wheel and axle
d) Inclined plane

18. **What is the primary purpose of the digestive system?** a) To circulate blood
b) To break down food and absorb nutrients
c) To regulate temperature
d) To protect the body from diseases

19. **Which of the following is an example of a non-metallic element?** a) Iron
b) Copper
c) Oxygen
d) Gold

20. **What is the role of the chloroplast in plant cells?** a) To store nutrients
b) To produce energy
c) To absorb sunlight for photosynthesis
d) To transport water

21. **What is the force that opposes the motion of objects sliding against each other?** a) Friction
b) Gravity
c) Magnetism
d) Tension

22. **Which of the following is a property of acids?** a) Bitter taste
b) Slippery feel

c) Sour taste
d) Turns blue litmus red

23. **The Earth's outermost layer is called the:** a) Mantle
b) Core
c) Crust
d) Lithosphere

24. **Which organ in the human body is responsible for the production of red blood cells?** a) Liver
b) Kidney
c) Bone marrow
d) Spleen

25. **Which process involves the conversion of water vapor into liquid water?** a) Evaporation
b) Condensation
c) Precipitation
d) Transpiration

Mathematics Section (25 Questions)

Multiple Choice Questions

1. **What is the value of 12 + 7 × 2?**
a) 26
b) 28
c) 24
d) 22

2. **Which of the following fractions is in its simplest form?** a) 4/8
b) 6/9
c) 5/7
d) 10/15

3. **What is the area of a square with a side length of 5 cm?** a) 25 cm²
b) 20 cm²
c) 10 cm²
d) 15 cm²

4. **The sum of two angles is 90 degrees. What type of angles are they?** a) Complementary
b) Supplementary
c) Vertical
d) Adjacent

5. **What is the value of 3 × (4 + 5) ÷ 3?** a) 9
b) 12
c) 7
d) 10

6. **If a triangle has sides of length 6 cm, 8 cm, and 10 cm, what type of triangle is it?** a) Equilateral
   b) Isosceles
   c) Scalene
   d) Right-angled
7. **What is the value of $2^3 \times 3^2$?** a) 24
   b) 36
   c) 48
   d) 72
8. **If a rectangle has an area of 30 cm² and a width of 5 cm, what is the length?** a) 6 cm
   b) 10 cm
   c) 8 cm
   d) 12 cm
9. **What is the result of adding 3.5 and 2.75?** a) 6.25
   b) 6.05
   c) 7.25
   d) 6.75
10. **Which of the following is a prime number between 10 and 20?** a) 12
    b) 15
    c) 17
    d) 18
11. **What is the product of the first five positive integers?** a) 120
    b) 60
    c) 100
    d) 90
12. **What is the value of $50 - 2 \times 7$?** a) 36
    b) 34
    c) 44
    d) 42
13. **Which of the following is not a factor of 36?** a) 4
    b) 8
    c) 9
    d) 12
14. **What is the average of the numbers 5, 10, 15, and 20?** a) 15
    b) 20
    c) 25
    d) 10
15. **The perimeter of a triangle with sides 3 cm, 4 cm, and 5 cm is:** a) 12 cm
    b) 15 cm
    c) 10 cm
    d) 8 cm
16. **Which of the following shapes has only one pair of parallel sides?** a) Rectangle
    b) Square
    c) Trapezium
    d) Parallelogram
17. **What is the value of $5^2 - 3 \times 2$?** a) 19
    b) 22
    c) 15
    d) 12
18. **If $7 \times x = 49$, what is the value of x?** a) 7
    b) 14
    c) 5
    d) 9
19. **What is the perimeter of a square with each side measuring 9 cm?** a) 36 cm
    b) 45 cm
    c) 18 cm
    d) 27 cm
20. **The sum of the angles in a pentagon is:** a) 360 degrees
    b) 540 degrees
    c) 180 degrees
    d) 300 degrees
21. **What is the decimal equivalent of 3/4?** a) 0.75
    b) 0.70
    c) 0.80
    d) 0.60
22. **What is the product of 9 and 11?**
    a) 99
    b) 100
    c) 90
    d) 91
23. **If a circle has a radius of 7 cm, what is its area? (Use $\pi \approx 3.14$)** a) 153.86 cm²
    b) 154 cm²
    c) 140 cm²
    d) 160 cm²
24. **Which of the following is the smallest whole number?** a) 0
    b) 1
    c) -1
    d) -2

25. **What is the square root of 64?** a)
    6
    b) 8
    c) 7
    d) 9

Answer Key

Science Section

1. c) Oxygen
2. b) To anchor the plant and absorb water
3. b) Kinetic energy
4. d) Heart
5. c) Leaves
6. b) Carbon dioxide
7. c) Fur or hair
8. b) Liquid
9. c) Sedimentary
10. c) Evaporation
11. d) Pistil
12. a) Chameleon
13. c) To carry out photosynthesis
14. c) Chemical energy
15. c) Solar energy
16. b) Stomach
17. a) Lever
18. b) To break down food and absorb nutrients
19. a) Friction
20. b) Cellulose
21. a) Friction
22. c) Sour taste
23. c) Crust
24. c) Bone marrow
25. b) Condensation

Mathematics Section

1. d) 26
2. c) 5/7
3. a) 25 cm²
4. a) Complementary
5. a) 12
6. d) Right-angled
7. a) 72
8. a) 6 cm
9. a) 6.25
10. c) 17
11. a) 120
12. b) 36
13. b) 8
14. a) 15
15. b) 12 cm
16. c) Trapezium
17. a) 19
18. a) 7
19. a) 36 cm
20. b) 540 degrees
21. a) 0.75
22. a) 99
23. a) 153.86 cm²
24. a) 0
25. b) 8