

# CTET Paper 2 (Science & Mathematics) Mock Test

## - 1

### Science Section (50 Questions)

#### Multiple Choice Questions

1. **What is the chemical symbol for gold?** a) Au  
b) Ag  
c) Fe  
d) Pb
2. **Which of the following is not a type of muscle tissue in humans?**  
a) Skeletal  
b) Cardiac  
c) Smooth  
d) Epithelial
3. **What is the process of converting a solid directly into a gas called?**  
a) Melting  
b) Condensation  
c) Sublimation  
d) Evaporation
4. **Which organ in the human body is responsible for filtering blood?**  
a) Liver  
b) Heart  
c) Kidney  
d) Lungs
5. **What type of energy is stored in a compressed spring?** a) Kinetic  
b) Potential  
c) Thermal  
d) Chemical
6. **What is the primary purpose of the plant's xylem?** a) Transport nutrients  
b) Transport water  
c) Store food  
d) Conduct photosynthesis
7. **Which planet is known for its extensive ring system?** a) Venus  
b) Mars  
c) Saturn  
d) Jupiter
8. **Which part of the human body is responsible for producing hormones?** a) Lungs  
b) Kidneys  
c) Glands  
d) Stomach
9. **What do you call the process of a liquid turning into a solid?** a) Freezing  
b) Boiling  
c) Melting  
d) Condensing
10. **Which of the following is an example of a herbivore?** a) Lion  
b) Tiger  
c) Deer  
d) Eagle
11. **The part of the plant where fertilization occurs is the:** a) Stigma  
b) Sepal  
c) Petal  
d) Anther
12. **Which layer of the Earth is the hottest?** a) Crust  
b) Mantle  
c) Outer core  
d) Inner core
13. **What is the name of the process by which plants make their own food?** a) Respiration  
b) Photosynthesis  
c) Digestion  
d) Transpiration
14. **What type of bond holds the atoms together in a water molecule?** a) Ionic  
b) Covalent  
c) Metallic  
d) Hydrogen
15. **Which organ is primarily responsible for regulating blood sugar levels?** a) Liver  
b) Pancreas  
c) Heart  
d) Kidney
16. **What is the primary source of energy for most ecosystems?** a) Wind  
b) Water

- c) Sunlight  
d) Soil
17. **Which of the following is a product of cellular respiration?**  
a) Oxygen  
b) Carbon dioxide  
c) Nitrogen  
d) Methane
18. **What is the primary role of the cell membrane?** a) To store genetic material  
b) To control what enters and leaves the cell  
c) To produce energy  
d) To synthesize proteins
19. **What do we call a substance that speeds up a chemical reaction without being consumed?** a) Reactant  
b) Catalyst  
c) Product  
d) Solvent
20. **Which of the following is an example of an invertebrate animal?** a) Fish  
b) Mammal  
c) Bird  
d) Insect
21. **The process of changing a gas to a liquid is known as:** a) Condensation  
b) Evaporation  
c) Freezing  
d) Melting
22. **Which organ system is responsible for transporting nutrients and oxygen throughout the body?** a) Digestive system  
b) Respiratory system  
c) Circulatory system  
d) Nervous system
23. **Which organ in the human body is responsible for producing bile?**  
a) Pancreas  
b) Liver  
c) Small intestine  
d) Gallbladder
24. **What type of rock is formed from cooled magma or lava?** a) Igneous  
b) Sedimentary  
c) Metamorphic  
d) Fossil
25. **The process by which plants release oxygen into the air is known as:** a) Photosynthesis  
b) Respiration  
c) Transpiration  
d) Fermentation
26. **Which of the following elements is essential for the formation of bones and teeth?** a) Iron  
b) Calcium  
c) Sodium  
d) Potassium
27. **What is the name of the pigment that gives plants their green color?** a) Chlorophyll  
b) Carotene  
c) Anthocyanin  
d) Melanin
28. **What is the primary function of the large intestine?** a) Absorb nutrients  
b) Digest proteins  
c) Absorb water and salts  
d) Produce bile
29. **Which part of the cell contains the genetic material?** a) Cytoplasm  
b) Cell membrane  
c) Nucleus  
d) Ribosome
30. **Which system in the human body is responsible for removing waste products?** a) Circulatory system  
b) Digestive system  
c) Excretory system  
d) Respiratory system
31. **The layer of the Earth where tectonic plates move is called the:**  
a) Lithosphere  
b) Asthenosphere  
c) Mesosphere  
d) Core
32. **Which of the following is a characteristic of reptiles?** a) Warm-blooded  
b) Moist skin

- c) Scales  
d) Live births
33. **The process by which a solid turns into a liquid is called:** a) Freezing  
b) Melting  
c) Condensing  
d) Boiling
34. **Which organ is primarily responsible for producing insulin?** a) Stomach  
b) Liver  
c) Pancreas  
d) Intestine
35. **What type of organism is known for its ability to photosynthesize?** a) Bacteria  
b) Fungus  
c) Plant  
d) Animal
36. **Which of the following is not a form of energy?** a) Thermal  
b) Kinetic  
c) Gravitational  
d) Mass
37. **What do we call the movement of water from the roots to the leaves in plants?** a) Photosynthesis  
b) Respiration  
c) Transpiration  
d) Absorption
38. **Which type of cell division is involved in growth and repair?** a) Mitosis  
b) Meiosis  
c) Fertilization  
d) Binary fission
39. **The process of converting sunlight into chemical energy is called:** a) Respiration  
b) Photosynthesis  
c) Fermentation  
d) Digestion
40. **Which of the following organs is part of the respiratory system?** a) Liver  
b) Heart  
c) Lungs  
d) Stomach
41. **What is the primary function of white blood cells?** a) Carry oxygen  
b) Clot blood  
c) Fight infections  
d) Transport nutrients
42. **Which part of the plant is primarily involved in reproduction?** a) Roots  
b) Stem  
c) Leaves  
d) Flowers
43. **The energy stored in food is a form of:** a) Kinetic energy  
b) Potential energy  
c) Thermal energy  
d) Chemical energy
44. **What is the term for the gradual change in species over time?** a) Evolution  
b) Extinction  
c) Adaptation  
d) Mutation
45. **Which of the following is an example of an adaptation in animals?** a) Camouflage  
b) Photosynthesis  
c) Respiration  
d) Digestion
46. **Which part of the brain is responsible for controlling balance and coordination?** a) Cerebrum  
b) Cerebellum  
c) Medulla  
d) Thalamus
47. **What is the term for the amount of matter in an object?** a) Volume  
b) Density  
c) Mass  
d) Weight
48. **Which of the following is not a function of the skeletal system?** a) Protection  
b) Blood production  
c) Movement  
d) Digestion
49. **What is the role of the diaphragm in the respiratory system?** a) To filter air  
b) To produce sound

- c) To aid in breathing  
 d) To exchange gases
50. **Which of the following is a non-renewable energy source?** a)  
 Solar energy  
 b) Wind energy  
 c) Natural gas  
 d) Hydropower

### Mathematics Section (50 Questions)

#### Multiple Choice Questions

- What is the value of  $15 \div 3 \times 2$ ?  
 a) 10  
 b) 8  
 c) 6  
 d) 12
- What is the area of a circle with a radius of 7 cm? (Use  $\pi \approx 3.14$ )  
 a) 153.86 cm<sup>2</sup>  
 b) 154 cm<sup>2</sup>  
 c) 140 cm<sup>2</sup>  
 d) 160 cm<sup>2</sup>
- What is the perimeter of a rectangle with length 8 cm and width 5 cm? a) 26 cm  
 b) 30 cm  
 c) 36 cm  
 d) 40 cm
- If a triangle has angles of 50 degrees and 60 degrees, what is the third angle? a) 70 degrees  
 b) 80 degrees  
 c) 90 degrees  
 d) 100 degrees
- What is the value of  $(7 + 2)^2 - 5$ ?  
 a) 58  
 b) 64  
 c) 54  
 d) 72
- What is the volume of a cube with side length 4 cm? a) 64 cm<sup>3</sup>  
 b) 48 cm<sup>3</sup>  
 c) 32 cm<sup>3</sup>  
 d) 16 cm<sup>3</sup>
- If the cost of 5 apples is \$10, what is the cost of 12 apples at the same rate? a) \$24  
 b) \$20
- Which of the following is a prime number? a) 21  
 b) 22  
 c) 23  
 d) 25
- What is the median of the numbers 2, 5, 7, 10, and 12? a) 7  
 b) 10  
 c) 5  
 d) 12
- What is the circumference of a circle with diameter 10 cm? (Use  $\pi \approx 3.14$ ) a) 31.4 cm  
 b) 30 cm  
 c) 28 cm  
 d) 25 cm
- If a number is divided by 4 and the result is 8, what is the number? a) 32  
 b) 36  
 c) 24  
 d) 28
- What is the value of  $4 \times (6 - 2)$ ?  
 a) 16  
 b) 20  
 c) 24  
 d) 12
- What is the sum of the first 10 positive integers? a) 55  
 b) 45  
 c) 50  
 d) 60
- The area of a parallelogram is given by base  $\times$  height. If the base is 8 cm and the height is 5 cm, what is the area? a) 40 cm<sup>2</sup>  
 b) 45 cm<sup>2</sup>  
 c) 50 cm<sup>2</sup>  
 d) 55 cm<sup>2</sup>
- What is the smallest prime number greater than 10? a) 11  
 b) 13  
 c) 17  
 d) 19
- If the angles of a triangle are in the ratio 2:3:4, what is the measure of the largest angle? a) 60 degrees

- b) 80 degrees  
c) 90 degrees  
d) 120 degrees
17. **What is the value of  $9^2 - 3^2$ ?** a) 72  
b) 54  
c) 81  
d) 45
18. **What is the mode of the following set of numbers: 3, 7, 3, 9, 7, 5, 3?** a) 3  
b) 7  
c) 9  
d) 5
19. **What is the surface area of a cube with edge length 6 cm?** a) 216 cm<sup>2</sup>  
b) 216 cm<sup>3</sup>  
c) 96 cm<sup>2</sup>  
d) 72 cm<sup>2</sup>
20. **What is the value of  $3 \times (2 + 4) \div 2$ ?** a) 9  
b) 12  
c) 15  
d) 18
21. **What is the value of  $100 - (4 \times 5)$ ?**  
a) 80  
b) 60  
c) 70  
d) 90
22. **What is the ratio of 15 to 25 in its simplest form?** a) 3:5  
b) 1:2  
c) 5:3  
d) 2:3
23. **What is the value of  $7^2 + 5 \times 3$ ?** a) 64  
b) 56  
c) 52  
d) 73
24. **What is the perimeter of a triangle with sides of 5 cm, 7 cm, and 8 cm?** a) 20 cm  
b) 22 cm  
c) 18 cm  
d) 25 cm
25. **If a train travels 120 km in 3 hours, what is its average speed?**  
a) 40 km/h  
b) 45 km/h  
c) 50 km/h  
d) 60 km/h
26. **What is the value of  $2 \times 3 + 4 \times 5$ ?** a) 26  
b) 32  
c) 28  
d) 30
27. **If  $3x = 12$ , what is the value of  $x$ ?**  
a) 4  
b) 5  
c) 3  
d) 6
28. **What is the sum of the angles in a quadrilateral?** a) 360 degrees  
b) 180 degrees  
c) 270 degrees  
d) 300 degrees
29. **What is the value of  $5^3$ ?** a) 125  
b) 100  
c) 150  
d) 75
30. **What is the area of a rectangle with length 12 cm and width 8 cm?** a) 96 cm<sup>2</sup>  
b) 100 cm<sup>2</sup>  
c) 80 cm<sup>2</sup>  
d) 70 cm<sup>2</sup>
31. **What is the smallest even number greater than 0?** a) 1  
b) 2  
c) 3  
d) 4
32. **What is the value of 20% of 150?**  
a) 30  
b) 25  
c) 35  
d) 40
33. **What is the next number in the sequence 2, 4, 8, 16, ...?** a) 32  
b) 24  
c) 20  
d) 28
34. **What is the cube root of 27?** a) 3  
b) 6  
c) 9  
d) 27
35. **What is the value of  $(8 + 6) \div 2$ ?**  
a) 7  
b) 8

- c) 9  
d) 10
36. **If a circle has a circumference of 31.4 cm, what is its radius? (Use  $\pi \approx 3.14$ )** a) 5 cm  
b) 6 cm  
c) 4 cm  
d) 7 cm
37. **What is the perimeter of a square with side length 10 cm?** a) 40 cm  
b) 30 cm  
c) 50 cm  
d) 60 cm
38. **What is the average of the numbers 5, 15, 25, and 35?** a) 20  
b) 22.5  
c) 25  
d) 30
39. **What is the value of  $6 \times (7 - 3)$ ?**  
a) 24  
b) 30  
c) 36  
d) 40
40. **What is the median of the numbers 8, 12, 15, 19, and 22?** a) 12  
b) 15  
c) 19  
d) 22
41. **If a number is increased by 20% and the result is 60, what was the original number?** a) 50  
b) 45  
c) 48  
d) 55
42. **What is the volume of a cylinder with radius 3 cm and height 5 cm? (Use  $\pi \approx 3.14$ )** a) 141.3 cm<sup>3</sup>  
b) 188.4 cm<sup>3</sup>  
c) 282.6 cm<sup>3</sup>  
d) 314 cm<sup>3</sup>
43. **What is the value of 15% of 200?**  
a) 30  
b) 25  
c) 20  
d) 35
44. **What is the difference between the largest and smallest numbers in the set: 12, 7, 15, 9?** a) 8  
b) 6  
c) 7  
d) 5
45. **If a book costs \$18 and is on sale for 25% off, what is the sale price?** a) \$13.50  
b) \$15.00  
c) \$14.50  
d) \$16.00
46. **What is the product of 8 and 9?**  
a) 72  
b) 81  
c) 63  
d) 90
47. **What is the area of a triangle with base 10 cm and height 12 cm?** a) 60 cm<sup>2</sup>  
b) 72 cm<sup>2</sup>  
c) 80 cm<sup>2</sup>  
d) 100 cm<sup>2</sup>
48. **What is the sum of the first 5 even numbers?** a) 20  
b) 30  
c) 25  
d) 15
49. **What is the value of 4<sup>3</sup>?** a) 64  
b) 16  
c) 32  
d) 48
50. **What is the length of the hypotenuse in a right-angled triangle with sides of 6 cm and 8 cm?** a) 10 cm  
b) 12 cm  
c) 14 cm  
d) 8 cm

## Answer Key

### Science Section

1. a) Au
2. d) Epithelial
3. c) Sublimation
4. c) Kidney
5. b) Potential
6. b) Transport water
7. c) Saturn
8. c) Glands
9. a) Freezing

- |                               |                              |
|-------------------------------|------------------------------|
| 10. c) Deer                   | 19. d) 96 cm <sup>2</sup>    |
| 11. d) Anther                 | 20. a) 9                     |
| 12. d) Inner core             | 21. a) 80                    |
| 13. b) Photosynthesis         | 22. a) 3:5                   |
| 14. b) Covalent               | 23. a) 64                    |
| 15. b) Pancreas               | 24. b) 20 cm                 |
| 16. c) Sunlight               | 25. d) 40 km/h               |
| 17. b) Carbon dioxide         | 26. a) 26                    |
| 18. c) Fight infections       | 27. a) 4                     |
| 19. b) Transpiration          | 28. a) 360 degrees           |
| 20. d) Insect                 | 29. a) 125                   |
| 21. a) Condensation           | 30. a) 96 cm <sup>2</sup>    |
| 22. c) Circulatory system     | 31. b) 2                     |
| 23. b) Liver                  | 32. a) 30                    |
| 24. a) Igneous                | 33. a) 32                    |
| 25. a) Photosynthesis         | 34. a) 3                     |
| 26. b) Calcium                | 35. a) 7                     |
| 27. a) Chlorophyll            | 36. a) 5 cm                  |
| 28. c) Absorb water and salts | 37. a) 40 cm                 |
| 29. c) Nucleus                | 38. b) 22.5                  |
| 30. c) Excretory system       | 39. c) 36                    |
| 31. b) Asthenosphere          | 40. b) 15                    |
| 32. c) Scales                 | 41. a) 50                    |
| 33. b) Melting                | 42. a) 141.3 cm <sup>3</sup> |
| 34. c) Pancreas               | 43. a) 30                    |
| 35. c) Plant                  | 44. a) 8                     |
| 36. d) Mass                   | 45. a) \$13.50               |
| 37. a) Protection             | 46. a) 72                    |
| 38. c) To aid in breathing    | 47. a) 60 cm <sup>2</sup>    |
| 39. c) Natural gas            | 48. a) 20                    |
|                               | 49. a) 64                    |
|                               | 50. a) 10 cm                 |

### Mathematics Section

1. a) 10
2. a) 153.86 cm<sup>2</sup>
3. a) 26 cm
4. b) 70 degrees
5. c) 54
6. a) 64 cm<sup>3</sup>
7. a) \$24
8. c) 23
9. a) 7
10. a) 31.4 cm
11. a) 12
12. c) 24
13. a) 55
14. a) 40 cm<sup>2</sup>
15. a) 11
16. b) 80 degrees
17. a) 72
18. a) 3