





## SAMPLE TEST PAPER

## JEE | NEET | OLYMPIADS | BOARDS

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#### Section- A Science

This section contains **30 Multiple Choice Questions**. Each question has four options out of which **ONLY ONE** is correct.

1.	The climate of a place depends on

- (a) latitude
- (b) altitude
- (c) distance from the sea
- (d) all of these
- Fennec adapt to the desert climate with the help of

   (a) long ears
  - (b) being nocturnal in nature
  - (c) both (A) & (B)
  - (d) none of these
- 3. The basic unit of speed is:
  - (a) km/min
  - (b) m/min
  - (c) km/h
  - (d) m/s
- 4. Which of the following relations is correct?(a) Speed = Distance × Time

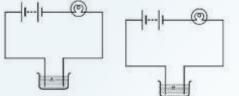
(b) Speed = 
$$\frac{Dis \tan ce}{Time}$$
  
(c) Speed =  $\frac{Time}{Dis \tan ce}$   
(d) Speed =  $\frac{1}{Dis}$ 

- 5. A weak current can be detected by replacing electric bulb in an electric tester with :
  - (a) LED
  - (b) A coil wound over a compass needle
  - (c) CFL
  - (d) Both (A) and (B)
- 6. In lateral inversion:
  - (a) Image is upside down
  - (b) Image bends laterally
  - (c) Left of an object appears right of an image
  - (d) Image gets inverted
- 7. Which of these does not conduct electricity?
  - (a) Brass spoon
    - (b) Silver jewellery
    - (c) Steel tumbler
    - (d) Plastic jug
- 8. An electric cell can generate electric current in a:
  - (a) Open circuit
  - (b) Closed circuit
  - (c) Both of these
  - (d) None of these
- 9. The process of returning back of light ray from a shining surface is called:
  - (a) Reflection
  - (b) Refraction
  - (c) Inversion

(d) Lateral inversion

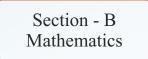
- 10. Evaporation of water from the soil surface is due to heat from:
  - (a) Sun
  - (b) Earth
  - (c) Moon
  - (d) Fire
- 11. Maximum-minimum thermometer are used to measure
  - (a) humidity
  - (b) maximum and minimum temperature
  - (c) rainfall
  - (d) wind
- 12. Humidity is measured by using
  - (a) Thermometer
  - (b) Rain gauge
  - (c) Hygrometer
  - (d) All of these
- 13. Rain gauge is used to measure
  - (a) humidity
  - (b) rainfall
  - (c) temperature
  - (d) all of these
- 14. The process of changing water into ice is called
  - (a) Sublimation
  - (b) Evaporation
  - (c) freezing
  - (d) precipitation
- 15. The process of falling down of water in the form of rain, snow or hail is called
  - (a) Sublimation
  - (b) Evaporation
  - (c) Condensation
  - (d) Precipitation
- 16. How much water is lost approximately through transpiration by wheat plants that give one kilogram of wheat ?
  - (a) 5 litres
  - (b) 50 litres
  - (c) 500 litres
  - (d) 5000 litres
- 17. Water freezes at \_\_\_\_\_to a solid state called snow or ice
  - (a) 0°C
  - (b)  $-1C^{0}$
  - (c) 1°C
  - (d) 100°C
- A tester is used to check the conduction of electricity through two liquids, labelled A and B. It is found that the bulb of the tester glows

brightly for liquid A while it glows very dimly for liquid B. You would conclude that



- (a) liquid A is a better conductor than liquid B.
- (b) liquid B is a better conductor than liquid A.
- (c) both liquids are equally conducting
- (d) conducting properties of liquid cannot be compared in this manner.
- 19. Silicon is a :
  - (a) Conductor
  - (b) Insulator
  - (c) Semiconductor
  - (d) Superconductor
- 20. Water occurs in the atmosphere in how many forms?
  - (a) One
  - (b) Two
  - (c) Three
  - (d) Four
- 21. What will happen when diaphragm relaxes and curves upwards?
  - (a) Air is forced out of the lungs
  - (b) The rib cage goes up and outward
  - (c) The volume of the thoracic cavity increases
  - (d) Air pressure inside the thoracic cavity decreases
- 22. When we inhale, we breathe in air into the lungs. What do we breathe out when we exhale?
  - (a) Only oxygen gas
  - (b) Only hydrogen gas
  - (c) Air that has more oxygen than inhaled air
  - (d) Air that has more carbon dioxide than inhaled air
- 23. Which one of the following structures closes the respiratory passage during ingestion of food?
  - (a) Larynx
  - (b) Epiglottis
  - (c) Hard palate
  - (d) Soft palate
- 24. The covering of lungs is called
  - (a) Pericardium
    - (b) Pleural membrane
    - (c) Perichondrium
    - (d) Peritoneum
- 25. The narrowest and most numerous tubes of lungs are termed as
  - (a) Bronchus
  - (b) Alveoli
  - (c) Bronchioles
  - (d) Hilum

- 26. Which of the following will lead to a reduction in the availability of ground water ?
  - (a) Plantation
  - (b) Rain water harvesting
  - (c) Constructing more lakes
  - (d) Building accrete roads
- 27. Cotton bolls are which part of the plant?
  - (a) Flower
  - (b) Fruit
  - (c) Stem
  - (d) Root
- 28. Earth worm takes oxygen from the soil through:
  - (a) Lungs
  - (b) Gills
  - (c) Moist skin
  - (d) Spiracles
- 29. Oxygen and carbon dioxide are replaced in nature through:
  - (a) Photosynthesis
  - (b) Respiration
  - (c) Both (A) and (B)
  - (d) None of these
- 30. Sugar is obtained from
  - (a) sugarcane
  - (b) beetroot
  - (c) Both a and b
  - (d) none

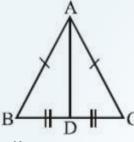


This section contains **20 Multiple Choice Questions**. Each question has four options out of which **ONLY ONE** is correct.

31. Solve : 2x+1 = 8x (a) 1 (b) 3 (c)  $\frac{-1}{3}$ (d)  $\frac{1}{2}$ 32. Which of the following is not equal to y6? (a)  $[y^{2/3}]^9$ (c) 3 y18 (d)  $[y^{1/3}]^{12}$ 33.  $16^{\frac{1}{2}} \div 16^{\frac{1}{2}} = ?$ (a) 250 (b) 256 (c) 255 (d) 200 34. Find the value of p so that  $\left(\frac{4}{5}\right)^3 \div \left(\frac{4}{5}\right)^{-3} = \left(\frac{4}{5}\right)^{3p}$ . (a) 3 (b) 0 (c) 2 (d) 1 35. The value of  $3\sqrt[3]{2} \times 7\sqrt[3]{6} \times 5\sqrt[3]{18}$ (a) 545 (b) 500 (c) 630 (d) 400 36. The value of  $\left(\frac{x^{a^2}}{x^{b^2}}\right)^{\frac{1}{a+b}} \cdot \left(\frac{x^{b^2}}{x^{c^2}}\right)^{\frac{1}{b+c}} \cdot \left(\frac{x^{c^2}}{x^{a^2}}\right)^{\frac{1}{c+a}}$  is (a) 0 (b) 1 (c) 2 (d) 3 37. Given that -0.3k + 2.1 = 0.4k, the value of k = (a) 21 (b) 7 (c) 3 (d) -1

- 38. If  $\frac{1}{7} + \frac{x}{7} = 3$ , then the value of x =
  - (a) 20
  - (b) 7
  - (c) 3
  - (d) 1
- Three-fourths of a number is 60 more than its onethird. The number is
  - (a) 108
  - (b) 84
  - (c) 144
  - (d) 116
- If 10 is added to four times a certain number, the result is 5 less than five times the number. Find the number.
  - (a) 10
  - (b) 15
  - (c) 20
  - (d) 25
- There were only two candidates in an election. One got 62% votes and was elected by a margin of 144 votes. The total number of votes were
  - (a) 500
  - (b) 600
  - (c) 700
  - (d) 800
- 42. A quadrilateral can have
  - (a) 4 acute angles
  - (b) 4 obtuse angles
  - (c) 3 obtuse angles
  - (d) 2 right angles and 2 obtuse angles
- A regular polygon is
  - (a) equilateral
  - (b) equiangular
  - (c) both (A) & (B)
  - (d) none of these
- 44. If PQRS is a parallelogram, then  $\angle P \angle P$  is
  - (a)  $0^0$
  - (b) 90°
  - (c) 180°
  - (d) 360°
- 45. In a Δ ABC, If AB + BC = 10 cm, BC + CA = 12 cm, CA + AB = 16 cm, then the perimeter of the triangle is :
  - (a) 19 cm
  - (b) 17 cm
  - (c) 28 cm
  - (d) None of these

46. In the following figure, If AB = AC and BD = DC, then ADC =



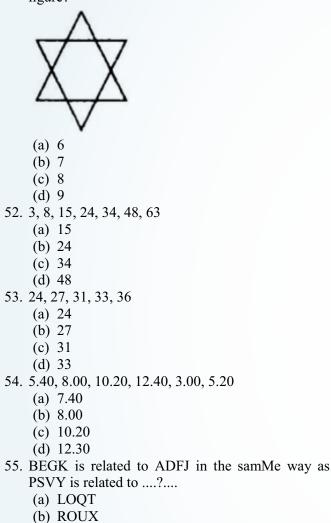
- (a) 60
- (b)  $120^{\circ}$
- (c)  $90^{\circ}$
- (d)  $45^{\circ}$
- 47. If two sides of an isosceles triangles are 3 cm and 8 cm, then the length of the third side is :
  - (a) 3 cm
  - (b) 8 cm
  - (c) 3 cm or 8 cm
  - (d) 5 cm

- 48. The three angles of a triangle are in the ratio 1:2:1, then the greatest angle is :
  - (a)  $45^{\circ}$
  - (b)  $90^{\circ}$
  - (c)  $60^{\circ}$
  - (d)  $120^{\circ}$
- 49. An exterior angle of a triangle is \_\_\_\_\_ the sum of its interior opposite angles
  - (a) Greater than
  - (b) Less than
  - (c) Equal to
  - (d) Greater or equal to
- 50. In a PQR, PQ = PR and Q is twice that of Q =
  - P. Then
  - (a)  $72^{\circ}$
  - (b)  $36^{\circ}$
  - (c)  $144^{\circ}$
  - (d)  $108^{\circ}$



This section contains **10 Multiple Choice Questions**. Each question has four options out of which **ONLY ONE** is correct.

51. How many triangles are there in the following figure?



- (c) OTUZ
- (d) ORUX

- 56. A's father's mother-in-law's only daughter's son is B. How is A related to B?
  - (a) Brother
  - (b) Sister
  - (c) Nephew
  - (d) Cannot be determined
- 57. A person starts towards South direction. Which of the following orders of direction will lead him to East direction ?
  - (a) Right, Right Right
  - (b) Left, Left, Left
  - (c) Left, Right, Right
  - (d) Right, Left, Right
- 58. Mohit walks 6 km to the East and turns to the South and walk 5 km. Again he turns to the East and walks 6 km. Next, he turns northwards and walks 10 km. How far is he from his starting point?
  - (a) 5 km
  - (b) 12 km
  - (c) 13 km
  - (d) 17 km
- 59. BLOCKED : YOLXPVW : : ? : OZFMXS
  - (a) LAUNCH
  - (b) DEBATE
  - (c) LABOUR
  - (d) RESULT
- 60. Ashok is facing North. He turns 45 degrees in the clockwise direction and then turns 90 degrees in the anticlockwise direction. Finally, he turns back. Which direction is he facing now ?
  - (a) South-East
  - (b) South-West
  - (c) North-East
  - (d) North-West



## **ANSWER KEY**

Que.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Ans.	d	с	d	а	d	с	d	b	а	а	b	с	b	с	d	с	а	a	с	с
Que.	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Ans.	а	d	b	b	с	d	b	c	c	a	d	d	b	c	c	b	c	a	c	b
Que.	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
Ans.	b	с	с	а	а	с	b	b	b	а	а	с	c	a	d	d	а	с	d	а