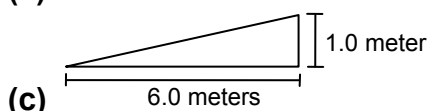
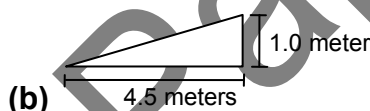
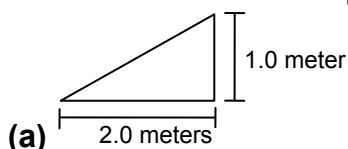


**PHYSICS****CHOOSE THE CORRECT SINGLE OPTION:**

01. A passing motorcycle causes distortion or disturbance with reception of signal in radio and T.V. The cause of this is  
(a) The spark plug fitted in the engine produces electro-magnetic signals due to sparking  
(b) The vehicle's metal parts block/distort the radio waves  
(c) The intense sound waves effect the small electronic devices of the receptor  
(d) Modern motor-cycles are fitted with electric ignition system which produces radio waves
02. Which of the following are produced by a moving electric charge?  
(1) Electric field      (2) Magnetic field      (3) Gravitational field  
(a) 1 and 3      (b) 2 and 3      (c) 1 and 2      (d) 2 only
03. When a glass rod is rubbed against silk  
(a) Glass rod loses electrons and becomes positively charged  
(b) Silk loses electrons and becomes positively charged  
(c) Glass rod loses electrons and becomes negatively charged  
(d) Silk loses electrons and becomes negatively charged
04. If a bimetallic strip is heated, it will  
(a) Bend towards the metal with higher thermal coefficient of expansion  
(b) Not bend at all  
(c) Twist itself into a helix  
(d) Bend towards the metal with lower thermal expansion coefficient
05. Mercury is used in the liquid thermometer because  
(a) It is shiny and expands quickly      (b) It expands slowly  
(c) It does not expand      (d) None of these
06. 273.0 K is equal to  
(a) 0°C      (b) 100°C      (c) 0° F      (d) 100°F
07. The SI unit of temperature is  
(a) Kelvin      (b) Celcius      (c) Fahrenheit      (d) None of these
08. The motion in which all points of the body move through the same distance in the same time is  
(a) Curvilinear motion      (b) Rectilinear motion  
(c) Translatory motion      (d) None of these
09. The hands of clock, the spokes of wheel are examples of  
(a) Rotatory motion      (b) Revolutionary motion  
(c) Oscillatory motion      (d) None of these
10. Which of these is a translatory motion?  
(a) Circular motion      (b) Rotational motion  
(c) Oscillatory motion      (d) None of these
11. Pressure is defined as  
(a) Force per unit area      (b) Force × Area  
(c) Force × Distance      (d) None of these

12. Weight of an object is \_\_\_\_ the force exerted by the Earth on that body.  
 (a) Less than      (b) More than      (c) Equal to      (d) None of these
13. Which of these is not non-renewable source of energy?  
 (a) Biomass      (b) Uranium      (c) Petrol      (d) None of these
14. A waterfall has  
 (a) Potential energy      (b) Kinetic energy      (c) Both (a) and (b)      (d) None of these
15. In an ideal machine, which of the following is true?  
 (a) Work input is less than work output      (b) Work input is greater than work output  
 (c) Work input is equal to work output      (d) None of these
16. A sea-saw on the playground is a  
 (a) Lever      (b) Inclined plane      (c) Pulley      (d) None of these
17. Atmospheric pressure \_\_\_\_ with the altitude.  
 (a) Decreases      (b) Increases  
 (c) Remains the same      (d) None of these
18. Bottle opener is an example of  
 (a) Lever      (b) Pulley      (c) Screw      (d) All of these
19. Which of these inclined planes would be most easy to use to move an object upward?



(d) None of these

20. The physical quantity dependent on direction is  
 (a) force      (b) mass      (c) volume      (d) density



## CHEMISTRY

### CHOOSE THE CORRECT SINGLE OPTION:

21. Liquids flow from a higher to a lower level. Which liquid can climb up the walls of the glass vessel in which it is kept?  
 (a) Liquid helium      (b) Alcohol      (c) Water      (d) Liquid nitrogen
22. Rubber is very soft. Therefore, it is vulcanised and used in tyres. Vulcanised rubber resists:  
 (a) Drops of acid rain      (b) Cold temperatures  
 (c) Jerking movement      (d) Wear and tear due to friction
23. Which of the following is not a natural dye of either vegetable or animal origin?  
 (a) Tyrian purple      (b) Indigo      (c) Saffron      (d) Azo dye
24. Which of the following is a super-cooled liquid?  
 (a) Glass      (b) Ammonia      (c) Ice cream      (d) Wood
25. Methane gas is an organic fuel obtained from the sources mentioned here. Pick the false one?  
 (a) Coal gas      (b) Molasses      (c) Natural gas      (d) Sewage
26. The odourless, poisonous gas mixed with smoke that arises from burning coal is:  
 (a) Carbon monoxide      (b) Nitrogen      (c) Carbon dioxide      (d) Methane

27. Chromium is used in making:  
(a) Stainless steel (b) Mosaic-floor grinders  
(c) Electrodes (d) Bronze
28. Various methods are adopted for protecting iron from rust. Which of the following statements is false?  
(a) Chrome plating looks good  
(b) Ordinary tin plating is cheap but not reliable  
(c) Zinc plating is more permanent than chrome plating  
(d) Zinc protects iron but does not protect itself
29. When on heating, a solid becomes vapour without forming any liquid, it is said to have sublimed. Which of the following sublimes on heating?  
(a) Salt (b) Iodine (c) Iron (d) Calcium
30. Everyday many new chemicals are being made. However, some chemicals are so basic that they are used in almost every industry. Which of the following is the most important industrial chemical?  
(a) Alcohol (b) Sulphuric Acid (c) Nitric acid (d) Acetone
31. Topaz, opal, agate and onyx are precious and beautiful stones found in nature. All these are different forms of:  
(a) Silica (b) Soda (c) Carbon (d) Lime
32. The Smallest particle of an element is  
(a) An Atom (b) A molecule (c) Substance (d) None of these
33. Tick the wrong statement.  
(a) Solids are attracted by magnet (b) Liquids are attracted by magnet  
(c) Gases are attracted by magnet (d) None of these
34. The method used to remove a solvent to leave a solid behind is  
(a) Distillation (b) Sublimation (c) Filtration (d) Combustion
35. All natural changes are  
(a) Slow changes (b) Fast changes  
(c) Desirable change (d) Both (a) and (b)
36. Converting milk into cheese is  
(a) Irreversible change (b) Reversible change  
(c) Periodic change (d) None of these
37. Photosynthesis is a  
(a) Physical change (b) Chemical change  
(c) Reversible change (d) None of these
38. During all changes, physical or chemical, mass is  
(a) Gained (b) Conserved (c) Loss (d) None of these
39. Oil in water is a  
(a) Homogeneous mixture (b) Heterogeneous mixture  
(c) Both (a) and (b) (d) None of these
40. Formation of biogas from cow dung is  
(a) Slow change (b) Periodic change  
(c) Reversible change (d) Physical change

□□□

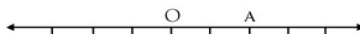
# MATHEMATICS

## CHOOSE THE CORRECT SINGLE OPTION:

41. If the number 56\_795 is divisible by 3, then the digit in the blank among the following is \_\_\_\_.

- (a) 5                      (b) 0                      (c) 1                      (d) 6

42. In the figure below, if point O represents zero on the number line, then point A represents \_\_\_\_.



- (a) -2                      (b) +2                      (c) +3                      (d) -3

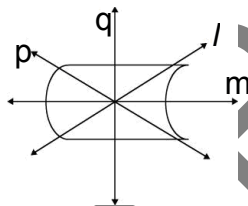
43.  $9\frac{1}{8}$  can be expressed as an improper fraction as \_\_\_\_.

- (a)  $\frac{17}{9}$                       (b)  $\frac{72}{8}$                       (c)  $\frac{10}{8}$                       (d)  $\frac{73}{8}$

44. The perimeter of an isosceles triangle is 25 cm and the length of one of the sides is 5 cm. The lengths of the other two equal sides are \_\_\_\_.

- (a) 5 cm and 5 cm                      (b) 10 cm and 10 cm  
(c) 7.5 cm and 7.5 cm                      (d) 15 cm and 15 cm

45. In the figure below, the mirror line or the axis of symmetry is \_\_\_\_.



- (a) line q                      (b) line p                      (c) line l                      (d) line m

46. The supplementary angle of  $\frac{1}{2}$  of  $120^\circ$  is \_\_\_\_.

- (a)  $130^\circ$                       (b)  $120^\circ$                       (c)  $60^\circ$                       (d)  $100^\circ$

47. Which of the following pair of fractions are equivalent fractions?

- (a)  $\frac{1}{4}, \frac{4}{6}$                       (b)  $\frac{15}{45}, \frac{30}{60}$                       (c)  $\frac{5}{12}, \frac{10}{12}$                       (d)  $\frac{6}{24}, \frac{3}{12}$

48. Kirti and Tina go for a morning walk. Kirti goes around a rectangular field of length 275 m and breadth 125 m. Tina goes around a square field of side 225 m. The correct statement among the following is \_\_\_\_.

- (a) Both Kirti and Tina covers equal distance in each round.  
(b) Kirti covers 100 m more distance than Tina in each round.  
(c) Tina covers 100 m more distance than Kirti in each round.  
(d) Tina covers 50 m more distance than Kirti in each round.

49. In which of the following situations do we use approximation?

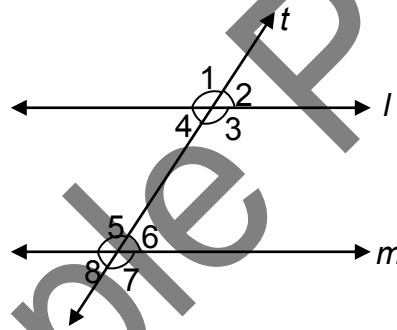
- (i) The number of people watching a particular television show.  
(ii) The number of people travelling between two destinations per day.  
(iii) The number of students in a class.  
(iv) The number of people participating in a procession.

- (a) (i), (ii)                      (b) (ii), (iii)                      (c) (iii), (iv)                      (d) (i), (ii), (iv)

50. The sum of two integers is -401. If one of them is -90, then the other number is \_\_\_\_.

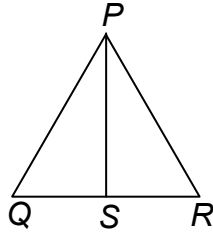
- (a) -311                      (b) 491                      (c) -491                      (d) -391

51. A toy is placed in front of a mirror at a distance of 80 cm from it, then the reflected image is formed at a distance of \_\_\_\_ cm from the mirror.  
 (a) 40 (b) 80 (c) 100 (d) 160
52. Which of the following pairs of primes is not a pair of twin primes?  
 (a) 3, 5 (b) 5, 7 (c) 7, 11 (d) 11, 13
53. While playing a game Anita lost Rs 80 in the first game, Rs 40 in the second game and Rs 25 in the third game. Also, she gained Rs 50 in the fourth game and Rs 70 in the fifth game. Her net loss or gain was \_\_\_\_.  
 (a) Rs.45 (b) Rs.35 (c) Rs.25 (d) Rs.20
54. A car covers a distance of 89.1 km in 2.2 hours. The average distance covered by it in 1 hour is \_\_\_\_.  
 (a) 40.5 km (b) 41.5 km (c) 15.5 km (d) 55.5 km
55. The total monthly salary of 4 men and 2 women is Rs. 46,000. If a woman earns Rs. 500 more than a man, then the monthly salary of a woman is \_\_\_\_.  
 (a) Rs.6500 (b) Rs. 7500 (c) Rs. 8000 (d) Rs. 9000
56. In the figure below,  $l \parallel m$  and  $t$  is a transversal such that  $\angle 1 = 100^\circ$ , then the value of  $\angle 5 =$  \_\_\_\_.



- (a)  $125^\circ$  (b)  $100^\circ$  (c)  $105^\circ$  (d)  $130^\circ$
57. In the figure below, the measure of angle  $x$  is \_\_\_\_.
- 
- (a)  $60^\circ$  (b)  $90^\circ$  (c)  $40^\circ$  (d)  $45^\circ$
58. A bag contains 50 paise, Rs 1 and Rs 2 coins in the ratio of 2 : 3 : 4, if the total value of the coins is Rs 24, then the number of Rs 2 coins in the bag is \_\_\_\_.  
 (a) 5 (b) 6 (c) 8 (d) 3
59. The following are the steps for construction of a triangle ABC, in which  $AB = 5$  cm,  $BC = 4.1$  cm and  $CA = 6$  cm.  
 (i) Join A and B, A and C.  
 (ii) Draw a line segment BC of length 4.1 cm.  
 (iii) With B as centre and radius 5 cm draw an arc.  
 (iv) With C as centre and radius 6 cm draw an arc to cut the previous arc at A.  
 The proper order of steps for construction is \_\_\_\_.  
 (a) iv, ii, i, iii (b) iii, i, iv, ii (c) ii, iii, iv, i (d) ii, i, iii, iv

60. In the figure below,  $PQ = PR$ , so which of the following additional information is required to show that  $\triangle QPS \cong \triangle RPS$  by SAS congruence condition?



- (a)  $\angle Q = \angle R$   
 (b)  $\angle QPS = \angle RPS$   
 (c)  $\angle PSQ = \angle PSR$   
 (d)  $\angle P = \angle Q$

□□□

### Answer Key

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

□□□