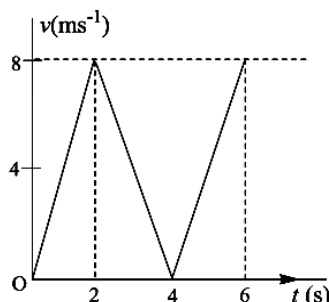


SAFE HANDS, AKOLA

SAMPLE PAPER FOR ENTRANCE TEST

Students of Std. 9th and going to Std. 10th

01. The $v - t$ graph for a particle is as shown. The distance travelled in the first four second is



- (A) 12 m (B) 16 m
(C) 20 m (D) 24 m

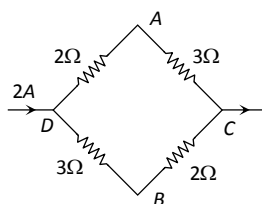
02. If a train travelling at 72 kmph is to be brought to rest in a distance of 200 metres, then its retardation should be

- (A) 20 ms^{-2} (B) 10 ms^{-2}
(C) 2 ms^{-2} (D) 1 ms^{-2}

03. A bullet moving with a velocity of 100 m/s can just penetrate two planks of equal thickness. The number of such planks penetrated by the same bullet, when the velocity is doubled, will be –

- (a) 4 (b) 6
(c) 8 (d) 10

04. A current of 2 A flows in a system of conductors as shown. The potential difference ($V_A - V_B$) will be



- (a) + 2V (b) + 1V (c) - 1 V (d) - 2 V

05. A convex mirror has a focal length f . A real object is placed at a distance f in front of it from the pole produces an image at

- (a) Infinity (b) f
(c) $f/2$ (d) $2f$

06. The boiling Point of alcohol is 78°C . What is this temperature in kelvin scale?

- (A) 373K (B) 351K
(C) 375K (D) 78K

07. Which of the following contains the largest number of molecules?

- (A) 0.2 mol H_2 (B) 8 g H_2
(C) 17g of H_2O (D) 6 g of CO_2

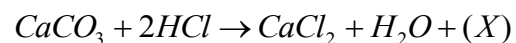
08. 'Pb' is the symbol for which element?

- (A) Lead (B) Hydrogen
(C) Potassium (D) Phosphorous

09. The Acid used in making of Vinegar is

- (a) Formic acid (b) acetic acid
(c) sulphuric acid (d) nitric acid

10. Which gas is released in the following reaction?



What is X in the above reaction?

- (a) Hydrogen (b) Oxygen
(c) Carbon dioxide (d) Carbon monoxide

11. Common cold is not cured by antibiotics because it is caused by a
- (a) Gram negative bacterium
 - (b) virus
 - (c) Gram positive bacterium
 - (d) because it is not an infectious disease
12. The use of Rhizobium has helped to
- (a) reduce the use of chemical fertilizers
 - (b) increase phosphorous content of the soil
 - (c) increase root surface area for water absorption
 - (d) increase photosynthesis in plant
13. Which tissue is responsible for the increase in the length of the plant ?
- (a) Lateral meristem
 - (b) Apical meristem
 - (c) Intercalary meristem
 - (d) Cambium
14. In hierarchial classification, class occupies a place between
- (A) Kingdom and phylum
 - (B) Order and family
 - (C) Phylum and order
 - (D) Family and genus
15. Oxytocin causes contraction of uterus during parturition. It is secreted by
- (a) Thyroid gland
 - (b) Ovary
 - (c) Adrenal gland
 - (d) Pituitary gland
16. The graph of linear equation $2x-y=4$ cuts x-axis at
- (A) (2,0)
 - (B) (-2,0)
 - (C) (0,-4)
 - (D) (0,4)

17.

$$\cos(40^\circ + \theta) - \sin(50^\circ - \theta) + \frac{\cos^2 40^\circ + \cos^2 50^\circ}{\sin^2 40^\circ + \sin^2 50^\circ} =$$

- (A) 1 (B) 0
(C) -1 (D) 2

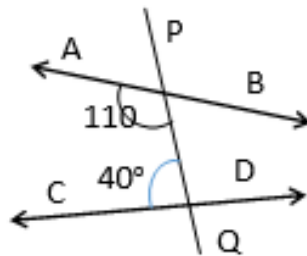
18. The height and radius of a cone are 3cm and 4cm respectively .Its curved surface area is

- (A) $62\frac{6}{7}cm^2$ (B) $57\frac{3}{4}cm^2$
(C) $6cm^2$ (D) $12m^2$

19. Find value of $36x^2 + 49y^2 + 84xy$, when $x = 3$, $y = 6$

- (A) 3600 (B) 2500
(C) -100 (D) 300

20. In adjoining figure (not to scale) according to Euclid's 5th postulate the line the lines AB and CD are



- (A) parallel and intersect on left side of PQ
(B) non parallel and intersect on right side of PQ
(C) non parallel and will intersect on left side of PQ
(D) parallel and will never intersect

21. Age of father is 7 years more than 3 times the present age of his son. It can be expressed in the linear equation as

- (a) $x-3y-7 = 0$ (b) $x+3y+7 = 0$
(c) $x+3y-7 = 0$ (d) $x-3y+7 = 0$

22. $\frac{x}{7} + \frac{y}{3} = 5$; $\frac{x}{2} - \frac{y}{9} = 6$. Find $y-x$
- (a) 5 (b) -5
(c) 4 (d) -4
23. Let A and B be two sets such that $n(A) = 5$ and $n(A \cup B) = 9$ and $n(A \cap B) = 2$ then $n(B)$ equals –
- (A) 6 (B) 12
(C) 17 (D) 2
24. In a school there are 20 teachers who teach Mathematics or Physics. Of these, 12 teach Mathematics and 4 teach both Physics and Mathematics. How many teach Physics?
- (A) 12 (B) 4
(C) 8 (D) 16
25. In Circle O is the centre and AB is the chord, if $OA = 5$ cm, and $OC = 3$ cm then find length of AB
- (A) 4cm (B) 6cm
(C) 8cm (D) 16cm

ANSWER KEY

1	B
2	D
3	C
4	B
5	C
6	B
7	B
8	A
9	B
10	C

11	B
12	A
13	B
14	C
15	D
16	A
17	A
18	A
19	A
20	C

21	A
22	B
23	A
24	A
25	C