

Choose the option to replace the question mark correctly.

10. Dawn : Dusk :: Inauguration : ?

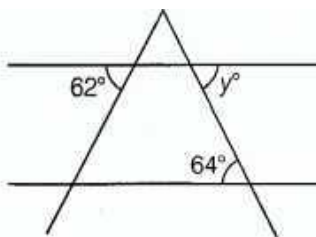
- a. Invitation b. Valediction
c. Repetition d. Organization

11. Novice: Learner :: Harbinger: ?

- a. Messenger b. Thief
c. Pickpocket d. Robber

Olympiad Aptitude Test Mathematics- Grade VII

12. In the given figure, which of the options is correct measure of $\angle y$?



- a) 62° b) 64°
c) Both d) None

13. A certain plant grows $13/5$ inch every week. How long will it take the plant to grow $39/5$ inch?

- a) 3 weeks
b) 3 weeks and 2 days
c) 3 weeks and 4 days
d) 4 weeks

14. Amit bought a furniture set for Rs. 13600 and spent Rs. 400 on its transportation. He sold it for Rs. 16800. Then, his gain percent is equal to

- a) 30% b) 25%
c) 18% d) 20%

15. How much time will it take for an amount of Rs 450 to yield ? 270 with simple interest 20% per annum?

- a) 2 yr b) 3 yr
c) 4 yr d) None of these

16. The steepest part of any walking trail in craters of the Moon National Monument rises 12 yards vertically for every 60 yards travelled horizontally. If one particular part of the trail covers a horizontal distance of 30 yards, then how much of a vertical rise is covered?

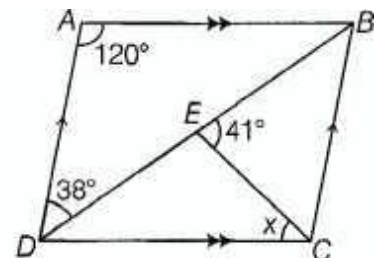
- a) 6 yards b) 12 yards
c) 24 yards d) 30 yards

17. What is the sum which earned interest?

- I. The total simple interest was Rs 8000 after 8 yr.
II. The total of sum and simple interest was double of the sum after 5 yr.

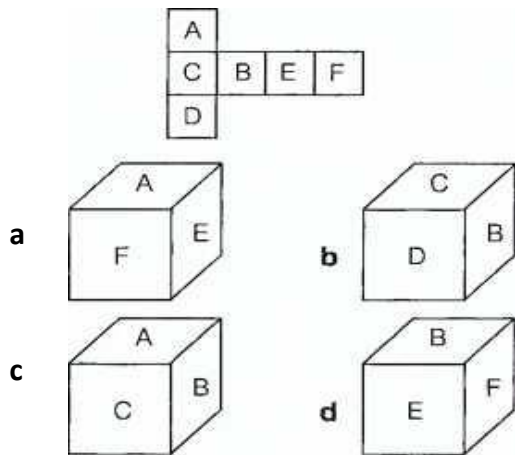
- a) I alone is sufficient while II alone is not sufficient
b) II alone is sufficient while I alone is not sufficient.
c) Both I and II are not sufficient to answer
d) Both I and II are necessary to answer

18. In the given figure, $ABCD$ is a parallelogram. The value of x is



- a) 19° b) 22°
c) 38° d) 42°

19. Which of the following shows the correct solid formed when the given net is folded?



20. Alex, Brownry and Kate share some marbles. Browrry had 40% more marbles than Alex. Kate has $\frac{6}{10}$ what Brownry had. If Kate had 1176 marbles, then how many marbles did they have altogether?

- a) 4300
- b) 4526
- c) 4536
- d) 5656

21. A solid figure has 3 rectangular faces and 2 triangular bases, then the name of the solid figure is

- a) triangular prism
- b) triangular pyramid
- c) rectangular prism
- d) rectangular pyramid

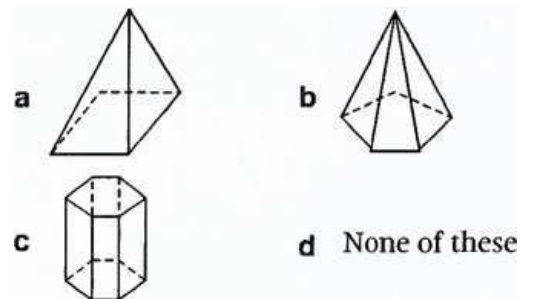
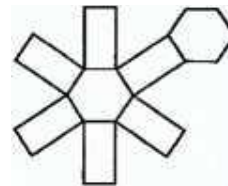
22. Jaikishan bought a plot of land in the outskirts of the city for Rs. 2100000. He built a wall around it for which he spent Rs. 145000. And then he wants to sell it at Rs. 2500000 by making an advertisement in the newspaper which costs him Rs. 5000. Now, find his profit per cent.

- a) 11.11%
- b) 12.25%
- c) 15%
- d) 25%

23. A survey of college students found that $\frac{1}{2}$ of the female students had jobs and $\frac{2}{3}$ of the male students had jobs. It was also found that $\frac{1}{4}$ of the female students worked in fast-food restaurants and $\frac{1}{6}$ of the male students worked in fast-food restaurants. If equal numbers of male and female students were surveyed, then what fraction of the working students worked in fast-food restaurants?

- a) $\frac{1}{14}$
- b) $\frac{5}{24}$
- c) $\frac{3}{7}$
- d) $\frac{2}{7}$

24. Which solid shape will be formed by the given net?



25. Naved sells 2000 apples in a week. He recovers his total cost by selling first 1200 apples. He sells the next 300 apples for a loss of 20% and he sells the last 500 apples for a loss of 40%, what is his overall percentage of profit?

- a) 45%
- b) 35%
- c) 27%
- d) 12.5%

Olympiad Aptitude Test Science- Grade VII

Direction (Q. Nos.26-27) Refer to the table below which shows the composition of 150 g each of four kinds of food.

Food	Protein (g)	Carbohydrate (g)	Fat (g)	Calcium (mg)	Iron (mg)	Vit-A (mg)	Vit-C (mg)
W	40	30	3	324	18	0.03	4.3
X	50	10	4	974	6	0.01	1.9
Y	30	10	6	226	3	0.09	1.5
Z	20	60	2	181	1	0.16	0.2

26. Which food has the highest energy value?

- a. W b. X
c. Y d. Z

27. The haemoglobin content of a person's blood is found to be lower than normal. Which food would be most effective in helping the person improve the condition?

- a. W b. X
c. Y d. Z

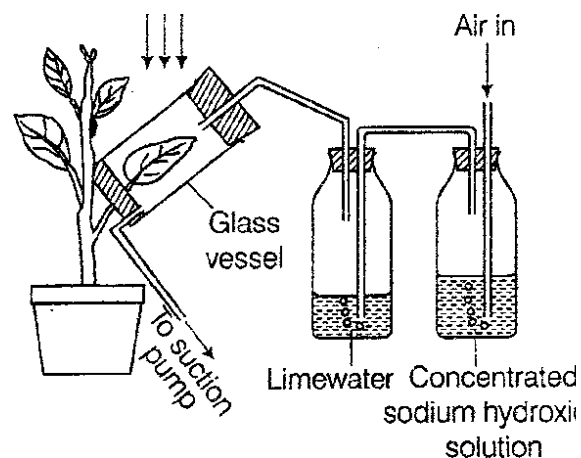
28. Fill in the blanks with the help of options given in the box.

- (i) good (ii) medium (iii) infrared rays
(iv) cold (v) vacuum (vi) ultraviolet rays
(vii) hot (viii) bad (ix) convection
(x) conduction

- I. Heat flows from ___ object to ___ object.
II. Heat is transferred by -----in solids.
III. Heat cannot be transferred by conduction or convection in-----
IV. Air is a conductor of heat.
V. The invisible heat rays which transfer heat are....

- | | | | | |
|--------------|-------|------|--------|-------|
| I | II | III | IV | V |
| a(i), (ii) | (iv) | (vi) | (ix) | (x) |
| b(ii), (iv) | (v) | (iv) | (x) | (ix) |
| c(vii), (iv) | (x) | (v) | (viii) | (iii) |
| d(ii), (i) | (iii) | (iv) | (vi) | (vii) |

Direction (Q. Nos.29 -30) Refer to the diagram below which shows an experimental set-up.



29. Which of the following is the conclusion of the above experiment?

- a. Plants release carbon dioxide in respiration.
b. Plants release oxygen in photosynthesis.
c. Plants require carbon dioxide for photosynthesis.
d. Plants require oxygen for respiration

30. If the above experiment is successful, which of the following can probably be observed when the leaf is tested?

- a. A brick-red precipitate will be obtained with Benedict's test.
b. A white emulsion will be obtained with ethanol emulsion test.
c. The iodine solution will turn bluish black.
d. The iodine solution will remain brown.

31. Which of the following statement(s) is/are incorrect?

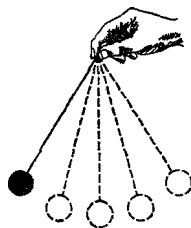
- I. Plants produce excretory product like resins, gums, etc.
II. Water evaporates through the stomata by the process of transpiration.
III. Gaseous exchange in plants take place through stomata.

- iv. Transpiration is a process in plants that allow it to grow.
- v. CO₂ passes out through the stomata during photosynthesis.
- vi. A suction pull is needed to pass the food through phloem.

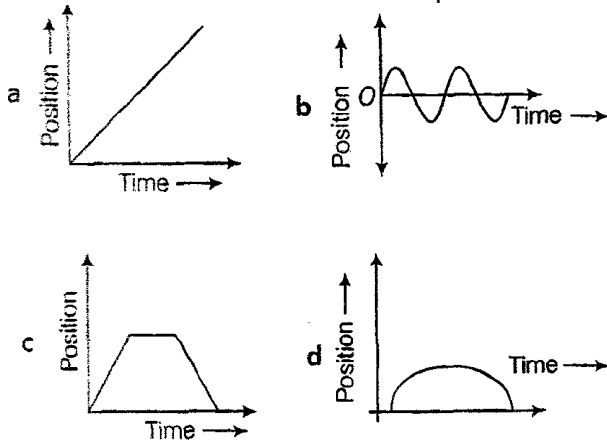
Codes

- a I, II and III
- b IV, V and VI
- c I, III and V
- d II, IV and VI

32. A pendulum is swung periodically as shown in the figure below:



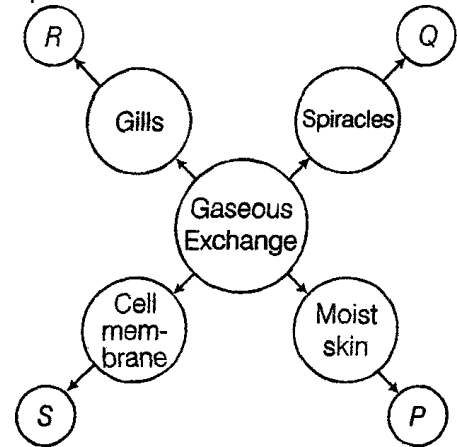
Which of the following position time graph best describes the motion of the pendulum?



33. Which of the following changes will occur when a person is doing vigorous exercise?

	Depth of breathing	Rate of breathing	% O ₂ in inhaled air
a	Increases	Increases	Increases
b	Decreases	Constant	Increases
c	Increases	Increases	Constant
d	Decreases	Constant	Constant

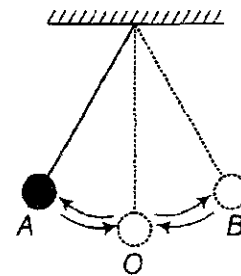
34. Observe the figure given below and identify P, Q, R and S by analysing the options that follow.



Codes

- | | | | | |
|----|---------|-------------|---------|------------|
| | P | Q | R | S |
| a. | Pigeon | Cockroach | Tadpole | Earthworm |
| b. | Frog | Grasshopper | Fish | Amoeba |
| c. | Crab | Spider | Frog | Paramecium |
| d. | Penguin | Mynah | Snake | Leech |

35. Observe given figure as below:

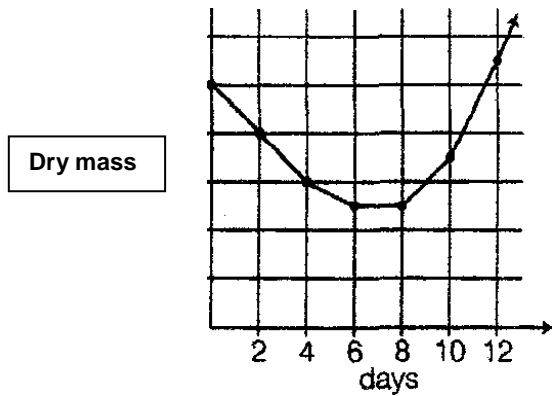


The time period of a simple pendulum is the time taken by it to travel from

- a. A to B and back to A
- b. O to A, A to B and B to A
- c. B to A, A to B and O
- d. A to B

36. The graph alongside shows the dry mass content of a seed during germination, During germination, the seeds increase in size due to A of water but its dry mass decreases because of B. After the 8th day of germination, the increase in dry mass can be related to manufacture of food in the

leaves by a process called C. Find A, B and C in the above passage by analyzing the graph.



	A	B	C
a	absorption	respiration	photosynthesis
b	respiration	absorption	photosynthesis
c	ovule formation	water retention	biomass formation
	ovule	respiration	photosynthesis

39. State T for True and F for False:
- Feathers and furs keep birds and animals warm.
 - No medium is required for the transfer of heat using radiation.
 - The SI unit of temperature is degree Celsius.
 - Sea breeze blows from sea to land.
 - Heat of a body can be felt from a distance due to convection.

Codes					
	I	II	III	IV	V
a	T	T	F	T	F
b	F	F	T	F	T
c	F	T	F	F	T
d	T	T	F	F	T

37. Match the column: with cchmm II.

Column 1	Column II
A. Perennation	1. Arrangement of flowers in a definite pattern
B. Gametes	2. Process of sending seeds away from mother plant
C. Inflorescence	3. Sex cells
D. Dispersal	4. Survival of plant from one germ -afing season to

	ABCD
a	2 3 1 4
b	4 3 2 1
c	4 1 3 2
d	2 4 3 1

38. Which of the following is a correct match of xylem and phloem with the letters?

Xylem	Phloem
a P	R
b R	S
c S	R
d Q	R