



IIT

KALRASHUKLA

A Class Apart

CLASS – 8th

Time : 90 minutes

Maximum Marks : 180

-: Important Instructions :-

- (i) Use only Black Ball Point pen.
- (ii) This test booklet contains 3 Sections of question paper consisting of
 - SECTION - I → SCIENCE (15 Questions)
 - SECTION - II → MATHEMATICS (15 Questions)
 - SECTION - III → MENTAL ABILITY & REASONING (15 Questions)
- (iii) Each question is allotted **4 marks for correct response**.
- (iv) **1 mark will be deducted** for marking incorrect or multiple responses.
- (v) No deduction will be made from total marks for unattempted questions.
- (vi) For each question, there is **only 1 correct** response.

Name of Student (in Capital Letter) : _____

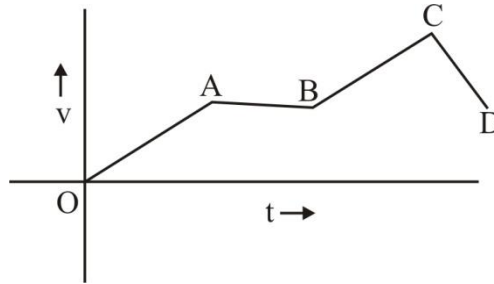
Candidate Signature: _____

Invigilator Signature: _____

SECTION - I**SCIENCE**

1. A body is first displaced by 5 m and then by 12 m in different directions. The minimum displacement it can have is _____ m.
(A) 0 (B) 17 (C) 7 (D) 13

2. The velocity-time graph of a certain body is shown in the following graph. The part of the graph which shows deceleration of the body is



- (A) OA (B) AB (C) BC (D) CD
3. Action and reaction
(A) always act on two different bodies. (B) are equal in magnitude.
(C) are opposite in direction. (D) All the above.
4. The sun is seen before the actual sun rise because of _____.
(A) reflection (B) refraction
(C) scattering of light (D) rectilinear propagation of light
5. The fuels that cannot be replenished, once they are used, are called
(A) renewable sources (B) non-renewable sources
(C) ultimate sources (D) accessible sources

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6. The fibres that are obtained from cotton, jute and silk are known as -----
(A) Man made or synthetic fibres (B) Natural fibres
(C) Artificial fibres (D) Plastics
7. The process by which artificial fibres are made from simple molecules is called?
(A) Monomer (B) Polymer (C) Polymerization (D) Thermosetting
8. The metal stored in kerosene due to its high reactivity with air and water is
(A) Magnesium (B) Zinc (C) Sodium (D) Calcium
9. Which non-metal is a good conductor of electricity?
(A) Phosphorus (B) Sulphure (C) Graphite (D) Coal
10. What is used for surfacing of roads?
(A) Paraffin wax (B) Coke (C) Lubricants (D) Bitumen.
11. Kitchen of the cell is
(A) Mitochondria (B) Endoplasmic reticulum
(C) Chloroplast (D) Golgi apparatus
12. Dengue is caused by
(A) Fungi (B) Bacteria (C) Virus (D) Protozoa
13. Which one of the following diseases is caused by a protozoan?
(A) Malaria (B) Influenza (C) AIDS (D) Cholera
14. Cell wall present in
(A) Plant Cell (B) Animal cell (C) Protozoa (D) Nucleolus
15. Longest Animal cell is :
(A) Nerve cell (B) Protozoa (C) R.B.Cs (D) Muscle cells
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SECTION - II**MATHEMATICS**

16. Which of the following number becomes a perfect cube when we divide the number by 5?
(A) 25 (B) 125 (C) 625 (D) 3125
17. Find the value of $\left(\frac{225}{49}\right)^{\frac{3}{2}}$.
(A) $\frac{343}{3375}$ (B) $\frac{15}{7}$ (C) $\frac{3375}{343}$ (D) $\frac{7}{15}$
18. If $a + \frac{1}{a} = 3$, then the value of $a^2 + \frac{1}{a^2}$ is
(A) 9 (B) 6 (C) 7 (D) 8
19. The product of the polynomials $(x^2 - x + 2)$ and $(x - 1)$ is
(A) $x^3 - 2x^2 + 3x - 2$ (B) $x^3 + 3x^2 - 3x + 2$
(C) $x^3 - 2x + 4x^2 - 6$ (D) $x^3 - 2x^2 + 3x + 2$
20. If $x + y + z = 5$ and $xy + yz + zx = 7$, then $x^3 + y^3 + z^3 - 3xyz =$
(A) 20 (B) 21 (C) 12 (D) 22
21. The length of a rectangle is increased by 10% while its breadth is decreased by 10%. What is the consequent percentage change in the area of the rectangle?
(A) 1% increase (B) 10% increase (C) 10% decrease (D) 1% decrease
22. Find the square root of $12\frac{4}{7}$ and correct to three places of decimal.
(A) 3.545 (B) 3.391 (C) 3.541 (D) 3.559
23. A profit of 10% can be made by selling an article for Rs 759. The cost price of the article is
(A) Rs. 840 (B) Rs. 770.50 (C) Rs. 690 (D) Rs. 675
24. In an examination, Mohit secured 60% of the maximum marks, which is more than the pass marks by 45 marks. Find the maximum marks in the examination if the pass mark is 45%.
(A) 280 (B) 300 (C) 310 (D) 340

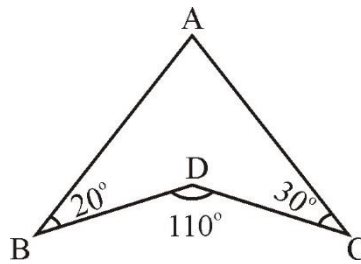
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25. If Anil's salary is 20% less than Raju's salary, then by what percent is Raju's salary more than that of Anil?
 (A) 15% (B) 20% (C) 25% (D) 35%

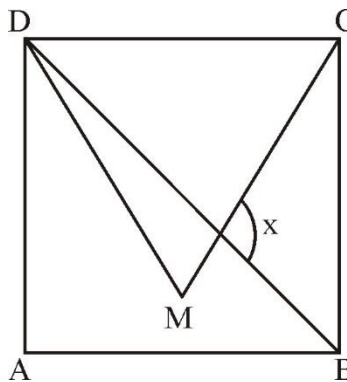
26. If we divide 180 into two parts such that second part is 12 more than the twice of the first part, then the two parts are
 (A) 56, 124 (B) 54, 126 (C) 52, 128 (D) 50, 130

27. If the mean of 2, x and y is 8, then the mean of x, y and 8 is
 (A) 8 (B) 9 (C) 12 (D) 10

28. In the figure, $\angle ABD = 20^\circ$, $\angle BDC = 110^\circ$ and $\angle DCA = 30^\circ$. What is the value of $\angle BAC$?



- (A) 30° (B) 60° (C) 90° (D) 120°
29. In the figure below, ABCD is a square, MDC is an equilateral triangle. Find the value of x.



- (A) 75° (B) 90° (C) 105° (D) 60°
30. A cone and a cylinder are having the same base. Find the ratio of their heights if their volumes are equal.
 (A) 1 : 3 (B) 3 : 1 (C) 1 : 6 (D) 6 : 1

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SECTION - III**MENTAL ABILITY & REASONING**

31. Find out to sign to be interchanged for making the question correct

$$10 + 10 \div 10 - 10 \times 10 = 10$$

(A) + and –

(B) + and \times

(C) \div and \times

(D) + and \div

Direction: (32 to 33) *The six faces of a cube are coloured black, brown, green red, white and blue, such that*

(i) Red is opposite black

(ii) Green is between red and black

(iii) Blue is adjacent to white

(iv) Brown is adjacent to blue

(v) Red is at the bottom

Answer the following questions based on this information

32. Which colour is opposite brown?

(A) White

(B) Red

(C) Green

(D) Blue

33. The three adjacent colour brown ?

(A) Black, Blue, Red

(B) Blue, Brown, White

(C) Black, Red, White

(D) All of these

Direction: (34 to 35) *Complete the series.*

34. 5, 7, 11, 13, 17, 19, 23,

(A) 26

(B) 27

(C) 29

(D) 31

35. 8, 9, 11, 14, 18, 23, ...

(A) 28

(B) 30

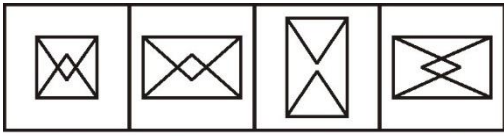
(C) 32

(D) 29

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36. Sunita’s school bus is facing North when it reaches her school. After starting from Sunita’s house, it turns right twice and then left before reaching the school. What direction was the bus facing when it left the bus stop in front of Sunita’s house?
 (A) North (B) South (C) East (D) West

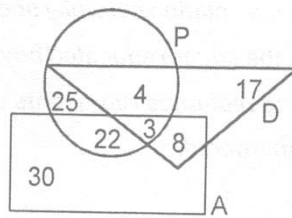
Direction: Out of the four figures (a), (b), (c) and (d) given in each problem, three are similar in a certain way. However, one figure is not like the other three.

37. 
 (A) (B) (C) (D)

38. Aaskah said to Mohit, “That boy in blue shirt is younger of the two brothers of the daughter of my father’s wife”. How is the boy in blue shirt related to Aakash?
 (A) Father (B) Uncle (C) Brother (D) Nephew

Directions : (39 to 42) Study the following figure carefully and answer the questions :

The triangle represents doctors. The circle represents players and the rectangle represents artists.



39. How many doctors are both players and artists ?
 (A) 6 (B) 8 (C) 4 (D) 3
40. How many artists are players ?
 (A) 30 (B) 29 (C) 25 (D) 17

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41. How many artists are neither players nor doctors ?
(A) 29 (B) 30 (C) 22 (D) 8
42. How many doctors are neither players nor artists ?
(A) 17 (B) 30 (C) 8 (D) 19
43. Which name will come in the last of the Telephone Dictionary?
(A) Mahender (B) Mahendra (C) Mahinder (D) Mahindre
44. Arrange the following words according to dictionary arrangement:
1. Epitaxy 2. Episode 3. Epigene 4. Epilogue
(A) 1, 2, 3, 4 (B) 3, 2, 4, 1 (C) 3, 4, 2, 1 (D) 4, 2, 1, 3
45. One morning after sunrise Vikram and Shailesh were standing in a lawn with their back towards each other. Vikram's shadow fell exactly towards left-hand side. Which direction Shailesh was facing?
(A) East (B) West (C) North (D) South
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8TH CLASS (SET) TEST I.D.: 88017

ANSWERS

| | | | | |
|---------|---------|---------|---------|---------|
| 1. (C) | 2. (D) | 3. (D) | 4. (B) | 5. (B) |
| 6. (B) | 7. (C) | 8. (C) | 9. (C) | 10. (D) |
| 11. (C) | 12. (C) | 13. (A) | 14. (A) | 15. (A) |
| 16. (C) | 17. (C) | 18. (C) | 19. (A) | 20. (A) |
| 21. (D) | 22. (A) | 23. (C) | 24. (B) | 25. (C) |
| 26. (A) | 27. (D) | 28. (B) | 29. (C) | 30. (B) |
| 31. (B) | 32. (A) | 33. (A) | 34. (C) | 35. (D) |
| 36. (D) | 37. (C) | 38. (C) | 39. (D) | 40. (C) |
| 41. (B) | 42. (A) | 43. (D) | 44. (C) | 45. (D) |