PAPER CODE **C05221023**

CLASS : 5th

MATRIX OLYMPIAD

CSR Initiative of Matrix Education, Sikar to motivate and reward young talent.

Total Questions : 60 | **Maximum Marks : 240** | **Duration : 2 Hrs.**

PAPER PATTERN			
Part	(I) Maths	(II) Science	(III) Logical Reasoning & IQ
Number of Questions	30	20	10

Marking Scheme: +4 For Each Correct Answer (There is no negative for wrong answer)

Instructions :

1. This Booklet is your **Question Paper.** DO NOT **break seal** of Booklet until the invigilator instructs to do so.
2. The Answer Sheet is provided to you separately which is a machine readable Optical Response Sheet (ORS). You have to mark your answer in the ORS by darkening bubble, as per your answer choice , by using **Black** /**Blue** ball point pen only.
3. If you are found involved in **cheating** or disturbing others then your ORS will be cancelled.
4. Do not **damage** the ORS sheet in any manner. If ORS is damaged or not completed properly, your results will not be prepared.
5. If you have any **confusion** in filling-up ORS sheet, please **contact** your invigilator. Incomplete ORS will be not be evaluated.
6. You can take the question paper home once the ORS is submitted.

Answer Key and Video Solutions Kindly Scan QR Code and subscribe Matrix youtube channel

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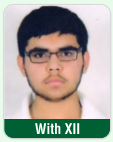
Mayank Soni — AIR 26 (Gen.)

Priyanshu Meel — AIR 154 (Gen.)

Nagendra Singh — AIR 220 (Gen.)

Mohit Modi — AIR 296 (Gen.)

Aman Nehra — AIR 356 (Gen.)



Himanshu Rewar — AIR 358 (Gen.)

Aarish — AIR 415 (Gen.)


Uttam Paharia — AIR 421 (Gen.)

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Marks-665 — Deepika Soni — AIR 3545


Marks-665 — Lokesh Goyal — AIR 3621


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Chirag Indoria — AIR 37 (Gen.) Stream- SB

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Aman Nehra — 1st State Rank

Aman Nehra — 2nd State Rank

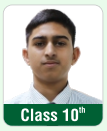
Dinesh Kumar — 2nd State Rank

Pranshu Bharia — 2nd State Rank

Shrishti — 2nd State Rank

Rohit Yadav — 2nd State Rank

Dev Kumar — 3rd State Rank



Mohd. Farhan — 3rd State Rank

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Nayan Godara — 1st State Rank

Aman Nehra — 1st State Rank

Aaditya Pratap — 2nd State Rank

Mayank Soni — 2nd State Rank

Aditya Bijarniya — 4th State Rank

Pragati — 5th State Rank

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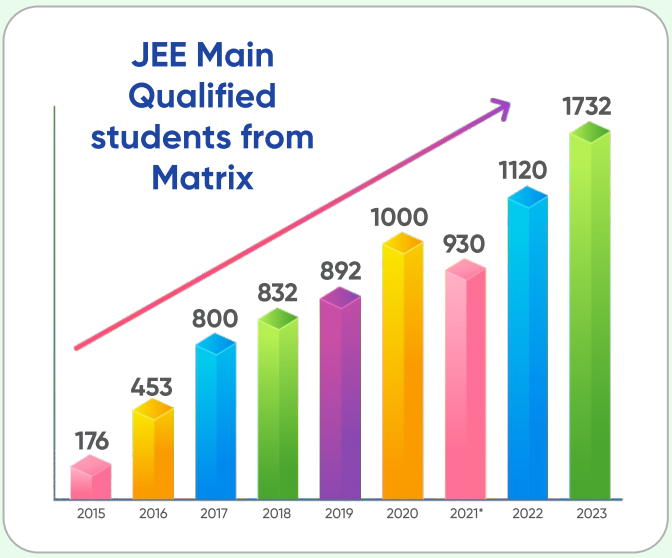

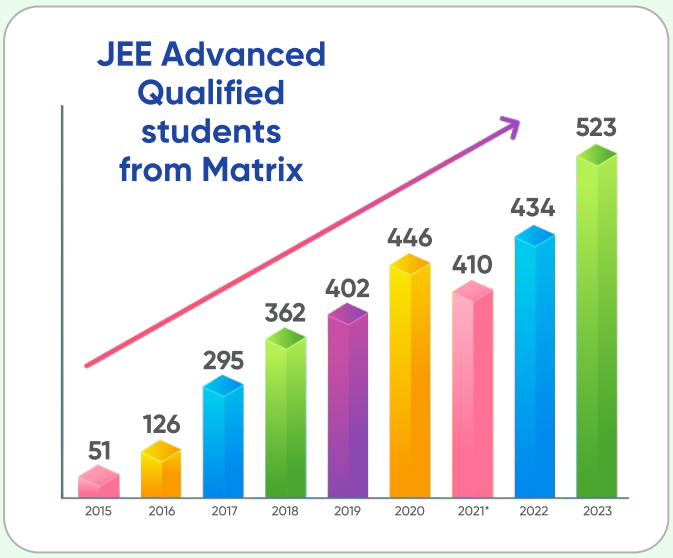

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Note : All results are from Matrix year long classroom program at Sikar only.

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Rank- **34**

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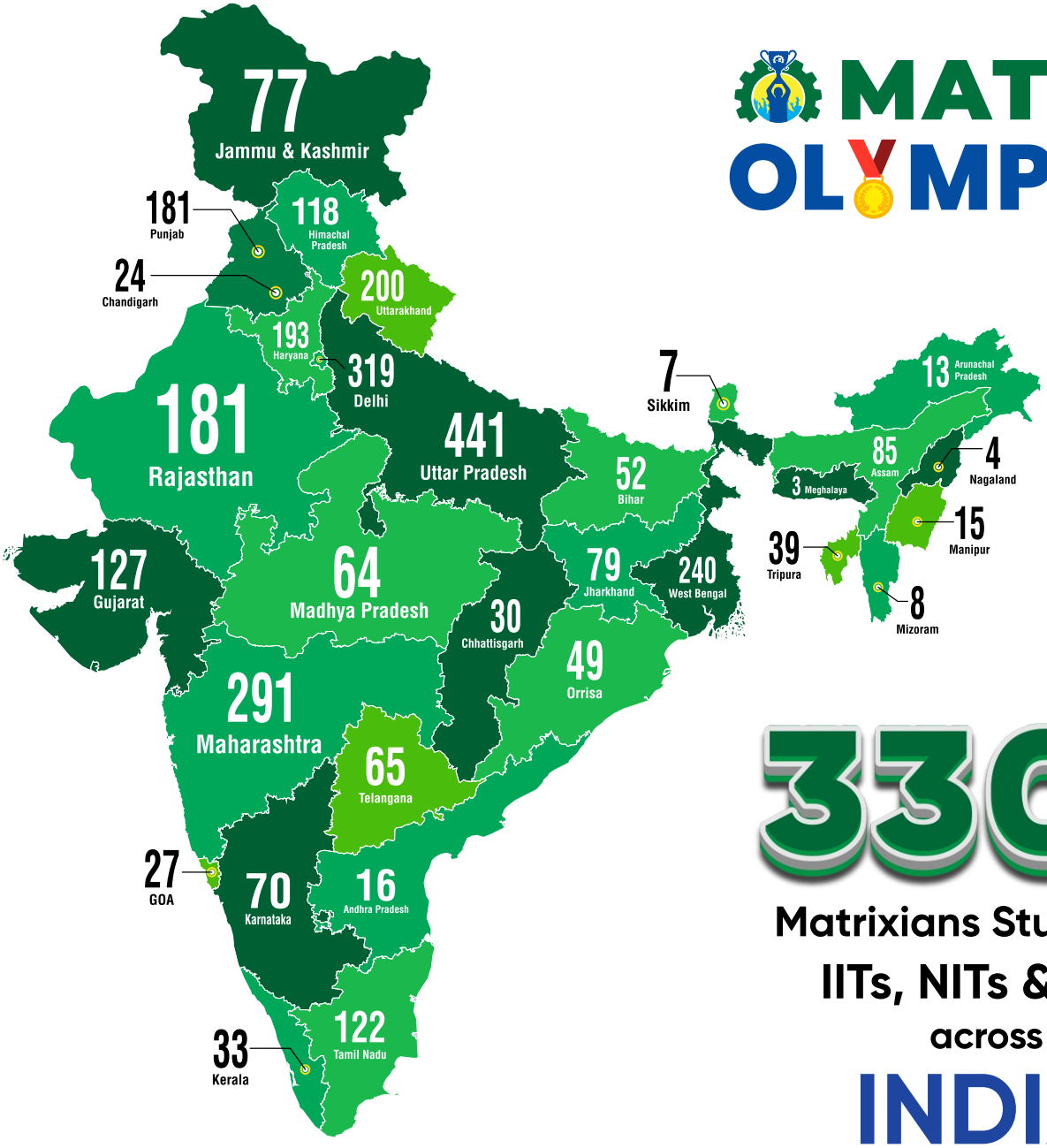

3302

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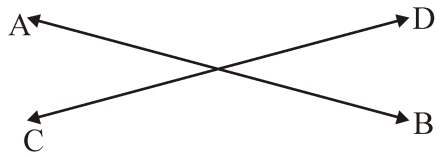
PART I : MATHEMATICS

*This section contains **30 Multiple Choice Questions (Q : 01 to Q : 30).** Each question has four choices **(A), (B), (C) and (D)** out of which **ONLY ONE** is correct.*

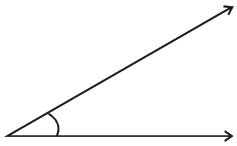
1. Identify the pair of lines and choose the correct option.

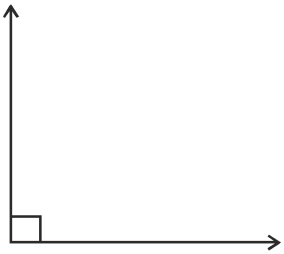


(A) Perpendicular lines
(B) Intersecting lines
(C) Parallel lines
(D) All of these

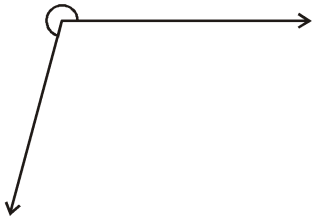
2. How many end points does a ray have ?
(A) One
(B) Two
(C) Zero
(D) Three

3. Which of the following is a reflex angle ?

(A) 

(B) 

(C) 

(D) 

4. An angle that measures more than 90° but less than 180° is called :
(A) Obtuse angle
(B) Right angle
(C) Complete angle
(D) Straight angle

5. Find the number which is 1200 more than 57683104.
(A) 57684304
(B) 56795104
(C) 57695104
(D) 57659102

6. Subtract and choose the correct option :
(A) 83542 – 42221 = 41231
(B) 74002 – 34991 = 39011
(C) 8329 – 8029 = 0200
(D) 97541 – 68321 = 28220

***** C05221023 *****

Space for rough work

7. A bottle factory produces 684 bottles in a day. How many bottles will the factory produce in 46 days ?

(A) 31646

(B) 36146

(C) 31464

(D) 34164

8. Choose the correct relation between Dividend, Divisor, Quotient and Remainder :

(A) Divisor = Dividend × Quotient + Remainder

(B) Dividend = Divisor × Quotient + Remainder

(C) Quotient = Divisor × Dividend + Remainder

(D) Remainder = Divisor × Quotient + Dividend

9. Which set of numbers clearly divides 25 ?

(A) 1, 10, 15

(B) 1, 5, 25

(C) 1, 5, 10, 25

(D) 1, 5, 15, 25

10. Which of the following is a multiple of 23 ?

(A) 438

(B) 484

(C) 454

(D) 483

11. Which of the following table shows the correct information where 'a' and 'b' are any whole number ?

(A)

a	×	b	=	Product
4	×	3	=	16
7	×	7	=	42
5	×	11	=	55
8	×	3	=	63

(B)

a	×	b	=	Product
4	×	3	=	12
7	×	5	=	35
2	×	11	=	22
8	×	10	=	80

(C)

a	×	b	=	Product
4	×	3	=	12
7	×	5	=	45
2	×	11	=	22
6	×	6	=	30

(D)

a	×	b	=	Product
3	×	3	=	9
8	×	5	=	50
3	×	11	=	33
6	×	7	=	42

12. Which of the following is a pair of co-primes ?

(A) (16, 12)

(B) (18, 25)

(C) (21, 35)

(D) (23, 92)

Space for rough work

13. What is the length of the side of a square park whose area is 64 m^2 ?

(A) 16 m

(B) 8 m

(C) 4 m

(D) 12 m

14. Find the perimeter of the triangle whose sides are 3cm, 4cm and 5cm.

(A) 32 cm

(B) 42 cm

(C) 12 cm

(D) 22 cm

15. What will be the labour charge for tiling a hall 22 m long and 17 m wide at the rate of Rs. 8 per sq. m ?

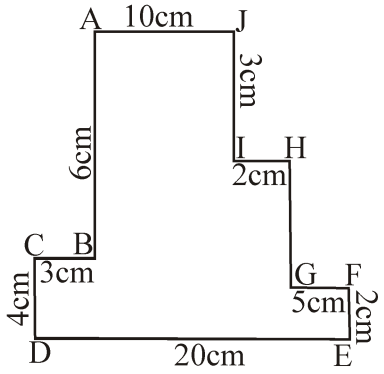
(A) Rs. 2982

(B) Rs. 2882

(C) Rs. 2873

(D) Rs. 2992

16. The perimeter of the figure ABCDEFGHIJ is :



(A) 60 cm

(B) 30 cm

(C) 40 cm

(D) 50 cm

17. Find the volume of a cuboid whose length, breadth and height are 6.5 cm, 4.5 cm and 2 cm respectively.

(A) 58 cm^2

(B) 58.5 cm^3

(C) 58.5 cm^2

(D) 58 cm^3

18. Find the volume of a cube whose side is 7 cm.

(A) 343 cm^3

(B) 434 cm^3

(C) 432 cm^3

(D) 234 cm^3

19. How many vertices does a cube has ?

(A) 18 vertices

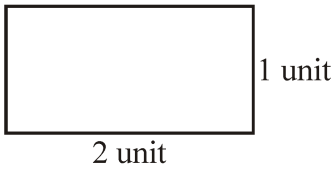
(B) 12 vertices

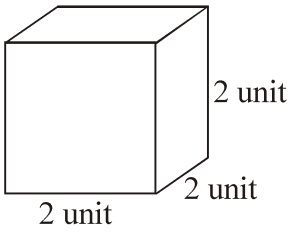
(C) 10 vertices

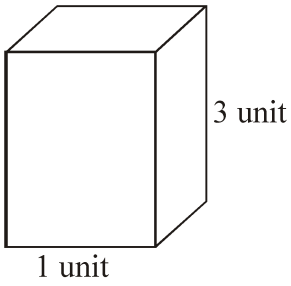
(D) 8 vertices

Space for rough work

20. Which figure is most likely to have a volume of 8 cubic unit ?

(A) 

(B) 

(C) 

(D) None of these

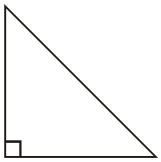
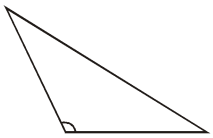
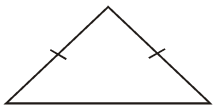
21. Match **Column – I** with **Column – II** and select the correct answer using the codes given below.

Column – I	Column – II
P. 1243 × 5	**1.** 172778
Q. 78392 – 42148	**2.** 6215
R. 83294 + 89484	**3.** 36244

Code :

	P	*Q*	*R*
(A)	2	3	1
(B)	3	1	2
(C)	3	2	1
(D)	2	1	3

22. Match **Column – I** with **Column – II** and select the correct answer using the codes given below.

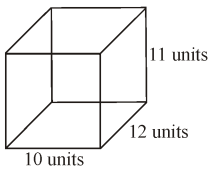
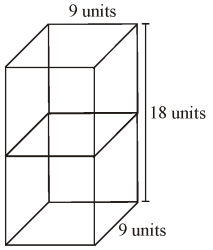
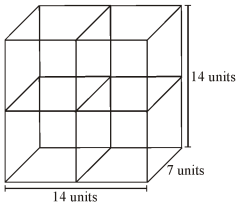
Column – I	Column – II
P. 	**1.** Obtuse angle
Q. 	**2.** Isosceles triangle
R. 	**3.** Right angle triangle

Code :

	P	*Q*	*R*
(A)	2	3	1
(B)	3	1	2
(C)	3	2	1
(D)	2	1	3

Space for rough work

23. Match **Column – I** (Solid figure) with **Column – II** (Volume in cubic units) and select the correct answer using the codes given below.

Column – I	Column – II
P. 	**1.** 1372
Q. 	**2.** 1320
R. 	**3.** 1458

Code :

	P	*Q*	*R*
(A)	2	3	1
(B)	3	1	2
(C)	3	2	1
(D)	2	1	3

24. Which of the following statement/s is/are **True(T)** or **False(F)** ?

(i) 12 is a factor of 30.

(ii) 6 and 14 are factors of 84.

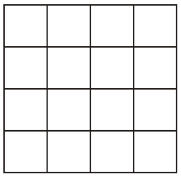
(iii) 100 is a multiple of 10.

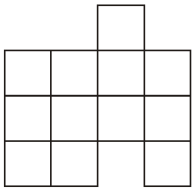
Code :

	(i)	*(ii)*	*(iii)*
(A)	T	F	F
(B)	T	T	T
(C)	F	T	T
(D)	F	T	F

25. Which of the following statement/s is/are **True(T)** or **False(F)** ?

If the area of each small square is 1 cm^2.

(1) 

(2) 

(i) Area of figure (1) is the same as the area of figure (2).

(ii) Perimeter of figure (1) is the same as figure (2).

(iii) Perimeter of figure (2) is 18 cm.

Code :

Space for rough work

	(i)	*(ii)*	*(iii)*
(A)	T	F	F
(B)	T	T	T
(C)	F	F	T
(D)	F	T	F

26. Which of the following statement/s is/are **True(T)** or **False(F)** ?

(i) An angle is made up of two rays starting from a common end point.

(ii) A line cannot be extended in two directions.

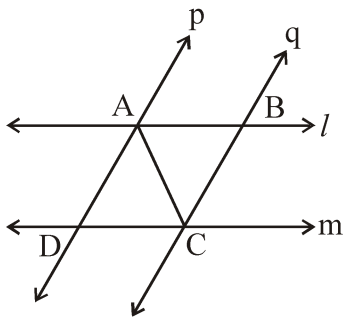
(iii) A ray have fixed length.

Code :

	(i)	*(ii)*	*(iii)*
(A)	T	F	F
(B)	T	T	T
(C)	F	F	T
(D)	F	T	F

Paragraph for Questions 27 & 28

A farmer has a field ABCD formed by two pairs of parallel roads as shown below in which $l \,||\, m$ and $p \,||\, q$. His four cows suffering from BSE (Bovine spongiform encephalopathy). Thus, he tied them at four corners of the field ABCD.



27. Pair of parallel lines are :

(A) (AD || DC, AB || AD)

(B) (l || m, p || q)

(C) (BC || DC, AC || BC)

(D) None of these

28. Pair of line segment are :

(A) $\left(\overline{BC}, \overline{AD}\right)$

(B) $\left(\overline{AC}, \overrightarrow{BC}\right)$

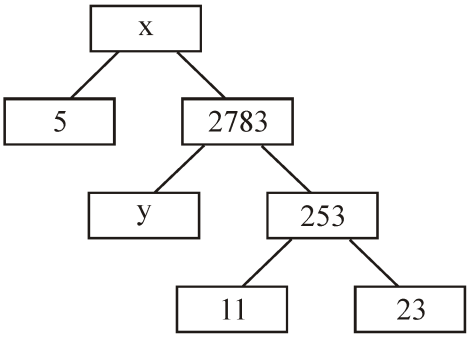
(C) $\left(\overrightarrow{AB}, \overrightarrow{DC}\right)$

(D) None of these

Paragraph for Questions 29 & 30

A mathematical exhibition is being conducted in your school and one of your friend is making a model of a factor of tree. He has some difficulty and ask for your help in completing a quiz for the audience. Observe the following factor tree and answer the followings :

Space for rough work



29. What will be the value of 'x' ?

(A) 15005

(B) 13915

(C) 17429

(D) 56920

30. What will be the value of 'y' ?

(A) 23

(B) 22

(C) 11

(D) 19

Space for rough work

PART II : SCIENCE

*This section contains **20 Multiple Choice Questions (Q : 31 to Q : 50)**. Each question has four choices **(A), (B), (C) and (D)** out of which **ONLY ONE** is correct.*

31. Which of the following animals are diurnal animals ?
(A) Birds
(B) Owls
(C) Bats
(D) Tigers

32. The category of animals that generally live an trees and have a very light skeletal system that is highly adapted for flight.
(A) Reptiles
(B) Birds
(C) Amphibians
(D) Mammals

33. Which insects spread diseases like cholera, as they carry germs on their hair ?
They feed on the food of humans and other animals and waste materials.
(A) Honeybees
(B) Mosquitoes
(C) House flies
(D) Ants

34. What is the purpose of migration ?
(A) To find better weather
(B) To find better food
(C) For breeding (Some birds and animals)
(D) All of these

35. The process of growth of a seed into a new plant is known as :
(A) Pollination
(B) Germination
(C) Reproduction
(D) Fertilization

36. Example of flowers that have both male and female reproductive organs is/are:
(A) Hibiscus
(B) Mustard
(C) Both (A) and (B)
(D) Papaya

37. After fertilisation, which part of flower enlarges and become a fruit ?
(A) Ovule
(B) Ovary
(C) Stamen
(D) Petal

Space for rough work

38. In bryophyllum which part is used for vegetative reproduction ?

(A) By leaves
(B) By roots
(C) By stem
(D) All of these

39. The time period in which the fertilised egg develops into a baby ending at birth is called the _____ period.

(A) Gestation
(B) Fragmentation
(C) Regeneration
(D) Fertilisation

40. The device used for artificial incubation is a/an -

(A) Incubator
(B) Desiccator
(C) Oven
(D) Microwave

41. Example of egg laying animals is/are :

(A) Fish
(B) Amphibians
(C) Reptiles
(D) All of these

42. A new offspring develops from an outgrowth or a bud on the body of the parent. This type of reproduction is called as_____.

(A) Fragmentation
(B) Regeneration
(C) Budding
(D) Fission

43. The process in which solids change into gases by increase in temperature or decrease in pressure is called:-

(A) Evaporation
(B) Sublimation
(C) Condensation
(D) Freezing

44. Which solvent is known as the universal solvent ?

(A) Water
(B) Oil
(C) Honey
(D) Milk

45. The deposition which changes gaseous state of matter into solid state is :

(A) Evaporation
(B) Sedimentation
(C) Deposition
(D) Fusion

Space for rough work

46. Select the ways to make water germfree and drinkable ?

(A) Boiling

(B) Chlorination

(C) Both (A) and (B)

(D) Loading

47. Fossil fuels such as wood, charcoal coal, petrol, diesel, CNG, LPG, etc also store_____ energy.

(A) Electrical

(B) Chemical

(C) Mechanical

(D) Solar

48. The energy which is generally associated with the position or height of the object is_____ energy.

(A) Kinetic

(B) Mechanical

(C) Potential

(D) Heat

49. Petrol and coal are examples of_____.

(A) Renewal sources of energy

(B) Sound energy

(C) Non-renewable sources of energy

(D) Mechanical energy

50. Food is turned into energy by the process of -

(A) Ingestion

(B) Digestion

(C) Respiration

(D) Circulation

***** C05221023 *****

Space for rough work

PART III : LOGICAL REASONING & IQ

*This section contains **10 Multiple Choice Questions (Q : 51 to Q : 60)**. Each question has four choices **(A), (B), (C) and (D)** out of which **ONLY ONE** is correct.*

Direction (51 – 53) : Choose the correct alternative that will continue the same pattern and replace the question mark in the given series.

51. 34, 30, 26, 22, 18, 14, 10, ?, ?

(A) 8, 6
(B) 6, 1
(C) 14, 18
(D) 6, 2

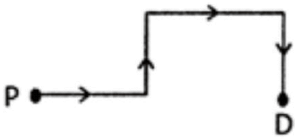
52. 4, 12, 36, 108, ?

(A) 144
(B) 216
(C) 304
(D) 324

53. AZ, GT, MN, ?, YB

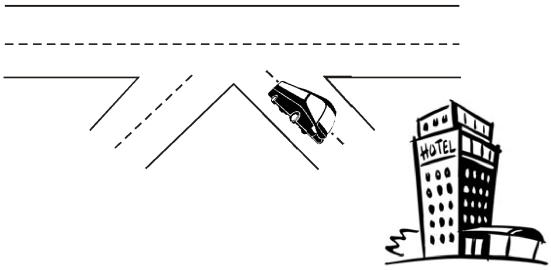
(A) JH
(B) SH
(C) SK
(D) TS

54. What is the directions sequence of the route given below ?



(A) East, West, North, South
(B) South, North, West, East
(C) East, North, East, South
(D) East, South, East, North

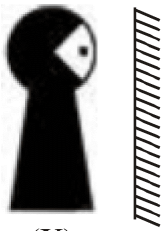
55. The bus is moving towards the hotel. In which direction is the bus moving ?



Hotel

(A) South
(B) South-East
(C) South-West
(D) East

56. Find the mirror image of the figure(X).


(X)

Space for rough work

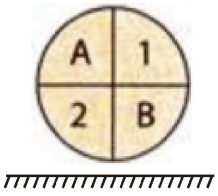
(A) 

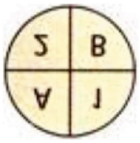
(B) 

(C) 

(D) 

57. Find the water-image of the given figure :



(A) 

(B) 

(C) 

(D) 

58. Asha ranks 6th place from the top and 14th place from the bottom in class. How many students are there in the class ?

(A) 20

(B) 18

(C) 19

(D) 25

59. Using BODMAS what is the value of given expression ?

$10 \div (5 - 3) + 2 \times 3 = ?$

(A) 5

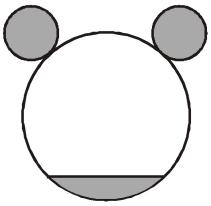
(B) 6

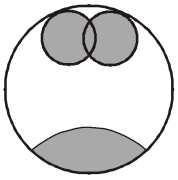
(C) 7

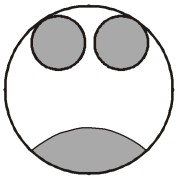
(D) 11

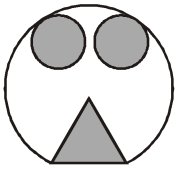
Space for rough work

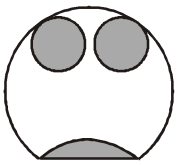
60. Identify the figure obtained by folding the shaded part of the given figure.



(A) 

(B) 

(C) 

(D) 

Space for rough work