



Rao IIT Academy

Symbol of Excellence and Perfection

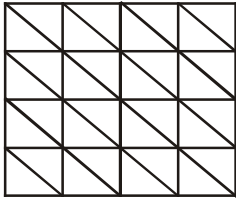
JEE | MEDICAL-UG | BOARDS | KVPY | NTSE | OLYMPIADS | MHT-CET

SOF - NSO - STAGE-1_8TH STD

ANSWER SHEET

- | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|
| 1. | (C) | 2. | (B) | 3. | (D) | 4. | (B) |
| 5. | (B) | 6. | (D) | 7. | (A) | 8. | (A) |
| 9. | (D) | 10. | (A) | 11. | (C) | 12. | (D) |
| 13. | (C) | 14. | (A) | 15. | (D) | 16. | (A) |
| 17. | (C) | 18. | (A) | 19. | (B) | 20. | (B) |
| 21. | (B) | 22. | (D) | 23. | (C) | 24. | (D) |
| 25. | (A) | 26. | (C) | 27. | (B) | 28. | (A) |
| 29. | (D) | 30. | (B) | 31. | (A) | 32. | (B) |
| 33. | (C) | 34. | (D) | 35. | (B) | 36. | (B) |
| 37. | (D) | 38. | (B) | 39. | (D) | 40. | (C) |
| 41. | (B) | 42. | (C) | 43. | (C) | 44. | (B) |
| 45. | (D) | 46. | (C) | 47. | (A) | 48. | (C) |
| 49. | (C) | 50. | (D) | | | | |

1. (C)



5 horizontal lines
 5 vertical lines
 7 diagonal lines
 Total = 17 lines

2. (B)

MATRBW

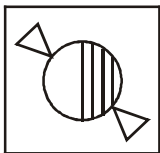
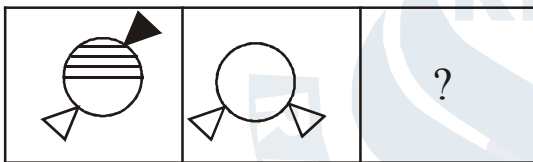
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3

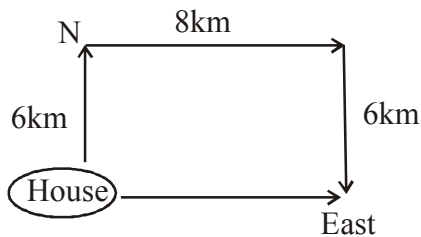
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3. (D)



One circle should be contain vertical lines and two unfilled triangles.

4. (B)



5. (B)

K P S U

K L M N O P Q R S T U

Only option (B) have different arrangement. Option (A), (C), (D) all are in same sequence.

6. (D)

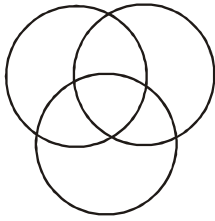
More than 4.

5, 7, 3, 5, 3, 1

Total 6 numbers.

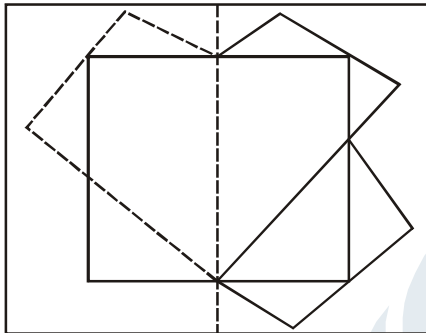
7. (A)
If two dots at the bottom, the number of dots at the top will be 3.

8. (A)



Singers can be dancers and Actors similarly A dancer can be a singer and An actor and A actor can be a singer and Dancer.

9. (D)



10. (A)

	Met.	Tele.	Hema	Mech.	Electr.	E.E	Hokey	Cricket	Swimming	Foot.	Bd.	TT
Mohit	X	X	X	X	X	✓	X	X	X	✓	⊗	⊗
Arun	X	X	X	X	✓	X	X	X	X	X	⊗	✓
Amit	✓	X	X	X	⊗	X	X	X	✓	X	X	X
Samrath	X	✓	X	X	⊗	X	X	X	X	X	✓	X
Aman	X	X	✓	X	X	X	✓	X	X	X	X	X
Siddarth	X	X	X	✓	X	X	X	✓	X	X	X	⊗

(1) Football → electrical

(2) Badminton → telecommnication

✓, ⊗ are those, which already given in out
⇒ Mohit like football.

11. (C)

Distance is area under speed-time graph

∴ At $t = 5s$ both will have covred same distance since area under speed-time graph would become same and also initial position is same so final position at $t = 5s$ will be same.

12. (D)

Stokes' law

$$F = 6 \pi \eta r v \rightarrow \text{depends speed of the object}$$

depends on nature of fluid (pointing to η)
depends on shape of object (pointing to r)

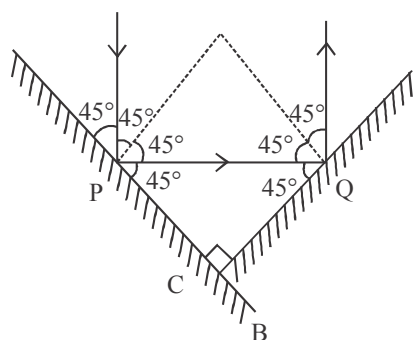
13. (C)

$$P = \frac{F}{A}$$

$$F = \text{weight} = P \times A$$

$$= 340 \times (17 \times 10^{-4} \times 2)$$

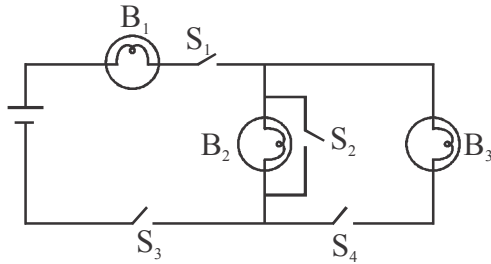
$$= 1.156 \text{ N}$$
14. (A)
 Because distilled, deionised water not conduct electricity. As a result, person using distilled water an anoid electronation.
15. (D)
 Last option is incorrect.
 All stars in a convection are not at the same distance from us.
16. (A)
 Conduction can happen along with connection. For example in water in ocean.
17. (C)
 For 35°C water the reading would be 34°C (lower).
 For 70°C water the reading will be 69°C (lower).
 Actual temperature difference recordes remain same (1° C)
18. (A)
 It is difficult to control the vehicle at high speed due to reduced friction.
19. (B)
 Convex lens – Magnifying glass
 (large image formed)
20. (B)
 1 torn per year
 $\therefore 2016 - 1977 = 39$
21. (B)
 Concave lens - Peep hole in the door
 Convex mirror - Slope security mirror (wide angle viewing)
 Concave mirror - Reflects of torch (diverges the beam of light)
 Convex lens - Magnifying glass (large image formed)
22. (D)
 Rearranging charges in uncharged metal object without contact with charged object is called induction.
23. (C)



$\angle PQC = 45^\circ$ since PQ incident at 45° to mirror C.

24. (D)

S_1	S_2	S_3	S_4
Closed	Open	Closed	Closed



S_2 should be open rest closed.

25. (A)

90 dB – 8 hrs, 95 dB – 4 hrs, 100 dB – 2 hrs, 105 dB – 1 hr

26. (C)

Ist solution is acid as it istoming red litmus into blue.

IInd issolation. IInd is base.

so, I → viregar, II → sugar solution, III → baking soda solution.

27. (B)

Unburnt carbon particles produce smoke which gets deposited on spoon.

28. (A)

Iron is conductor is coal piece is not malleable.

29. (D)

Fact.

30. (B)

31. (A)

Fact.

32. (B)

Sour in taste Acidic in nature base neutralises the effect of wasp sting.

33. (C)

Used for cooling.

34. (D)

X is seed of drumstick

Y is seed of candy tafl

35. (B)

It process depicted is exhalation, inter costal muscle relax, pressure in thoraxic cage and lungs increase, theraci cavity decrease, lungs cantract and air goes has out.

36. (B)

P = Bryophylum vegtative propogation by leaves

Q = Ginger vegetative propogation by rhizomes

R = Onion who is bulb

S = Amoeba carry out binary fissions

T = Hydra

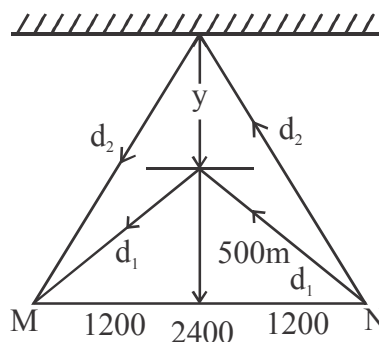
37. (D)

All statements are true for the concept as mercury can cause bioaccumulation. It appears and may cause minamata disease.

38. (B)
In stems rascular bundles are colateral. Xylem inside and phloem outside it can be open or closed, hence blue colour will appear only is xylem area as we can induce colouration using coloured water which is translocated through xylem.
39. (D)
X = camel living in desert where we get xerophylic plant
Y = is polar animals inhabiting polar area they have subcutaneous fats which they use during liberation.
Z = is chamelear
40. (C)
P = chloroplast
Q = RER
Hence, P takes part in photosynthesis and Q in protein synthesis.
41. (B)
P = Metamorphoses R = viviparaous
Q = oviparous S = primary sex organ
T = scrotum U = Dolly
V = finn Dorset
42. (C)
R- can be unicelluar biflagellate probabally chlancydomonas which is phytoplantons.
43. (C)
X is national park or sanchines where conservation take place.
44. (B)
Both statement are correct but statement 2 is not the reason for 1.
45. (D)
Both statement B and C are correct, as process I is explain accumulation of nutrient is soil if it is not taking place the recycling of nutrient is not possible and process III is nitrogen fixation which can biological, physical or indusmal process.

46. (C)

$$\begin{aligned}
 d_1 &= \sqrt{(500)^2 + (1200)^2} \\
 &= \sqrt{250000 + 1440000} \\
 &= \sqrt{1690000} \\
 &= 1300 \\
 \therefore t_1 &= \frac{2d_1}{v} \\
 &= \frac{2 \times 1300}{325} \\
 &= 8s
 \end{aligned}$$



47. (A)

$$t_2 = t_1 + 1.23$$

$$= 9.23 \text{ s}$$

$$t_2 = \frac{2d_2}{v}$$

$$d_2 = \frac{t_2 v}{2}$$

$$= \frac{9.23 \times 325}{2} = 1500$$

$$d_2 = 1500$$

$$d_2 = \sqrt{(y+500)^2 + (1200)^2}$$

$$(1500)^2 = (y+500)^2 + (1200)^2$$

$$(y+500)^2 = 2250000 - 1440000$$

$$= 810000$$

$$y+500 = 900$$

$$y = 400 \text{ m}$$

48. (C)

Cu is less active than Fe and Zn. So, it will be displaced in solution (I) and (IV).

49. (C)

In crop rotation two crops are alternately grown in same field, hence we will replace simultaneously with alternative as sumultaneously term we can use only for inter cropping method or mixed cropping.

50. (D)

Condition X is diabetes mellihes where sugar level is higher than normal hence person require to take insulin prior to food intake to cope up with increased sugar level after food. This is due to malfunctioning of p cells of islet of longer have in pancrease.