

SAMPLE PAPER 3

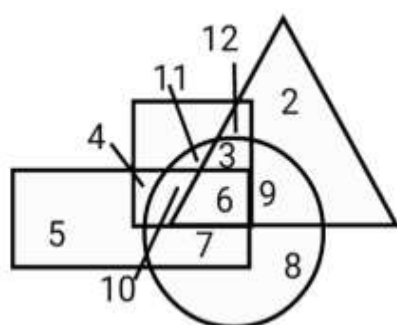
Verbal & Non Verbal Reasoning

Q1. In a certain code language
 "sen je" means "go there";
 "je ko zhe" means "there and here";
 "zhe fa ko" means "you and here" .

What does "zhe" means in that code language? :

- (a) here (b) and
 (c) you (d) me

Q2. Study the Venn diagram properly and answer the following questions :



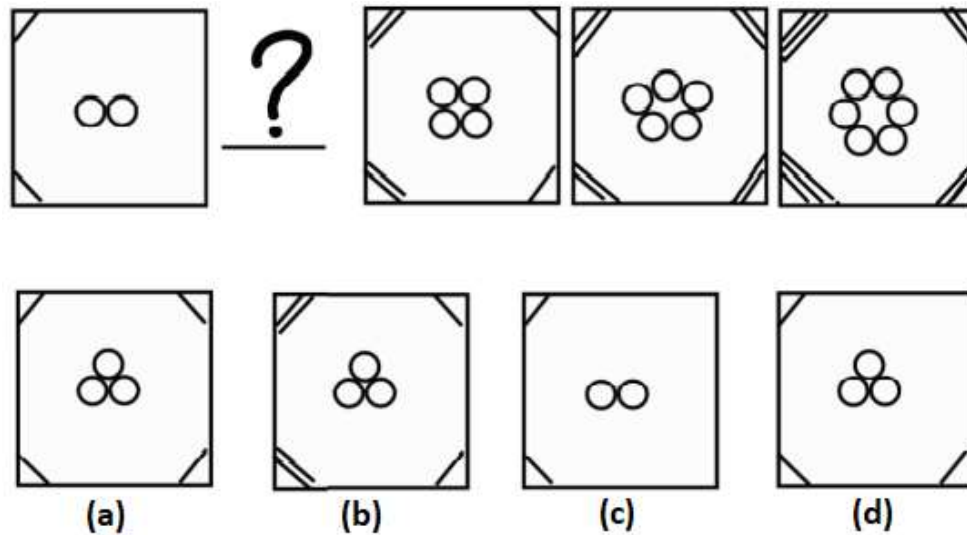
- → Summer
 □ → Winter
 ▭ → Autumn
 △ → Monsoon

Which of the following numbers represents the people who like Monsoon, Winter and Summer ?

- (a) 12 (b) 3 (c) 6 (d) 7

Q3. Study the given figure and choose the correct option which will continue the series :





Q4. If "A

B" means "A is the sister of B";

"A 2 B" means "A is the daughter of B" ;

"A 9 B" means "A is the father of B";

"A 5 B" means "A is the son of B" .,

then how is D related to N in S7D9H2N?

(a) Husband

(b) Uncle

(c) Father

(d) Sister

Q5. In a code language ,

"RAPID" is written as "\$#@!-" ;

"ROUND" is written as "\$*%!~" ;

"GRIM" is written as "=}\$)+" and

"STRONG" is written as "^?\$*!=" .

How would be "ARMSTRONG" be written in that code language?

(a) \$+^-^%\$#@!

(b) # \$"? \$*!=

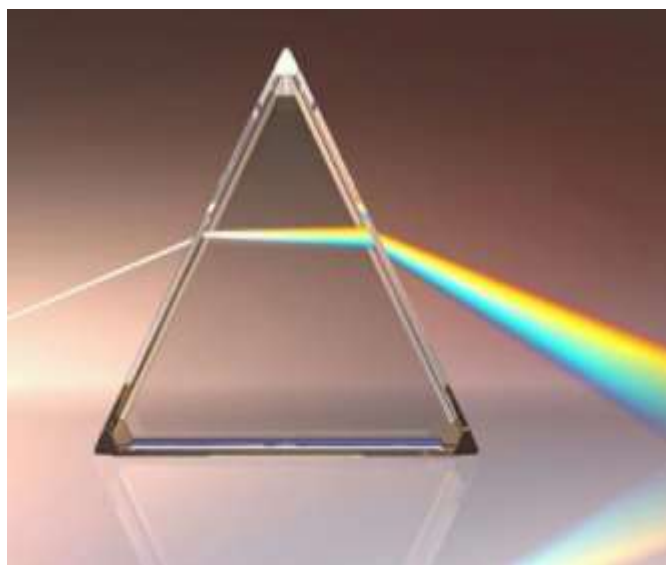
(c) # +=*\$^&*=

(d) %&*!=+*"%



Case Based Study

Direction : Read the given passage and answer Q6 to Q7



PASSAGE-I :

Prism is a transparent refracting surface medium(glass) bounded by three rectangular plane surface and two triangular surface.

Sir Issac newton was the first who used a glass prism to obtain spectrum of light.

Q6. How many times Refraction occurs in a prism :

- (a) one (b) Two
(c) Not fixed number (d) no refraction occurred

Q7. Violet deviates more than Red because :

- (a) Wave length is lesser in Red
(b) Frequency is more in Red
(c) Wave length is lesser in Violet
(d) frequency is lesser in Violet

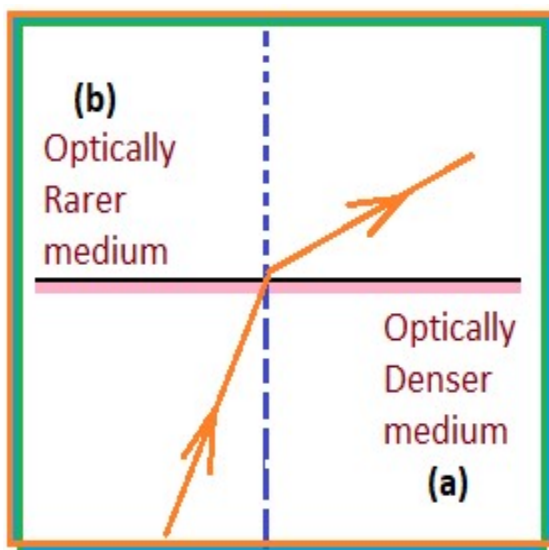
Multiple Choice Question [MCQ]



Q8. Choose the correct statement regarding the propagation of light in air:

- (a) All colors in white light moves in equal speed.
- (b) Violet color moves with fastest speed.
- (c) Yellow color has the more speed than indigo
- (d) Red color has the more speed , so scatter first.

Direction : Read the given passage and answer Q9 to Q11



PASSAGE-II :

Light Ray is passing from optically denser(a) to rarer(b) medium.

Consider the conventional sign for the light ray ,i.e. ,

i = Angle of incidence

r = Angle of refraction

μ = Refractive index

Q9. Which is the correct form of Snell's Law (or Laws of refraction) according to the above diagram :

(a) $a\mu_b = \frac{\sin r}{\sin i}$

(b) $a\mu_b = \frac{\sin i}{\sin r}$

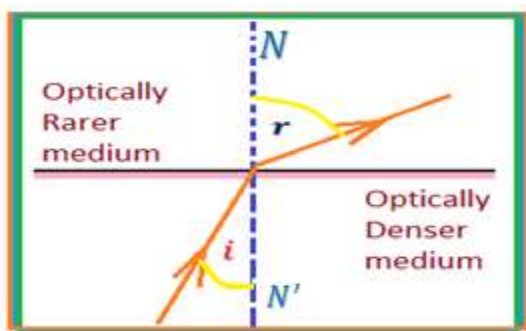
(c) $b\mu_a = \frac{\sin r}{\sin i}$

(d) $b\mu_a = \frac{\sin i}{\sin r}$

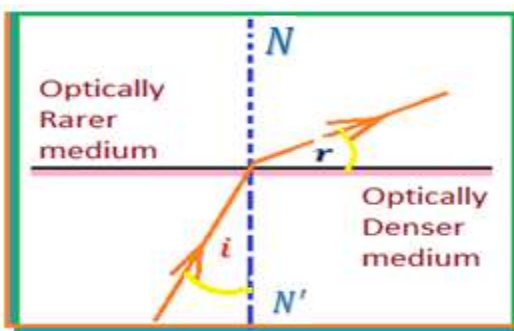
Q10. Select the correct Ray diagram for Refraction of light



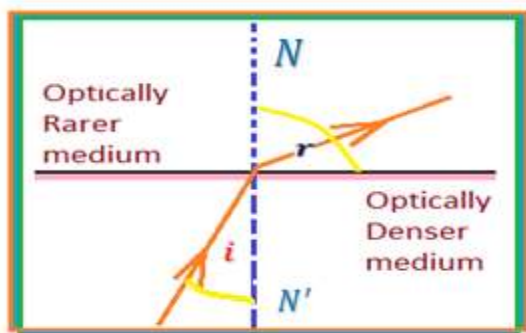
where , $\angle i$ = angle of incidence ; $\angle r$ = angle of reflection
 NN' = normal



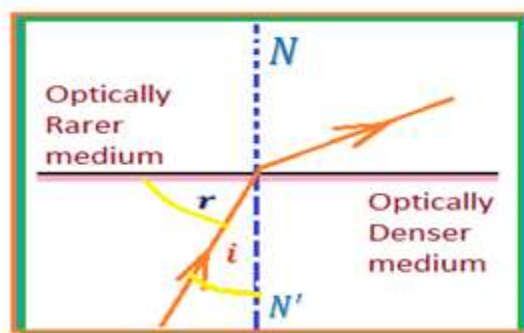
(a)



(b)



(c)



(d)

Q11. Choose the condition when Total internal reflection (light ray reflects back from the interface of two medium) occurs :

- (a) $\angle r > 90^\circ$ (b) $\angle r < 90^\circ$
 (c) $\angle r = 90^\circ$ (d) $\angle r \leq 90^\circ$

Q12. Choose the correct statement :

- (a) Reflection occurs when light passes through different medium.
 (b) Total internal reflection occurs when light travels from rarer to denser medium.
 (c) in reflection the light ray divides in two direction.
 (d) Cold mirage occurs due to refraction of light .

Q13. Magnification (m) produced by concave lens is always:



(a) $m = 1$

(b) $m > 1$

(c) $m < 1$

(d) $m \neq 1$

Assertion & Reason

The given below Statement in Assertion(A) is followed by a statement of Reason(R) .

Make the correct choice of that :

- (a) Assertion(A) and Reason(R) are both True and Reason is the Correct Explanation
- (b) Assertion(A) and Reason(R) are both True but the Reason(R) is not the correct explanation.
- (c) Assertion(A) is Correct but Reason(R) is not Correct.
- (d) Assertion(A) is not Correct but Reason(R) is Correct.

Q14.



Assertion : Oceans are blue

Reason : Red spectrum of light is absorbed in salty water and reflects back the Blue spectrum.

Q15. Assertion: focal length is unchanged even if a converging mirror placed under ocean .

Reason: The focal length of converging mirror is independent of medium in which it is placed.

Achiever's Section

Direction : Read the given passage and answer Q16 to Q17





PASSAGE-III :

Student of a class did an experiment with magnifying glass and a piece of paper.

They kept the Glass lens over the paper at a short distance [X] Sunrays are allowed to pass through the glass. After a couple of

seconds paper catches fire at 'Y'

Q16. Name the lens used in magnifying glass:

- | | |
|-------------|-------------------|
| (a) Concave | (b) Plano-concave |
| (c) Convex | (d) Plano-convex |

Q17. Name of the distance 'XY' :

- | | |
|-----------------|--------------------------|
| (a) Axis | (b) Line of illumination |
| (c) Object size | (d) Focal Length |

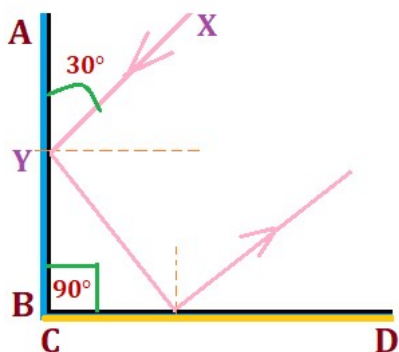
Q18. Ray diagram in the picture shows rays are converging at a point- Y .Name Y ?

- | | |
|---------------------|-----------|
| (a) Eccentric point | (b) Focus |
| (c) Pole | (d) Axis |



Direction : Read the given passage and answer the Q19

PASSAGE-II :



Two plane mirrors AB and CD are kept perpendicular to each other.

Diagram shown that a ray of light $\overrightarrow{XY}$ falls on the mirror AB at 'Y' making an angle 30°

what would be the angle when ray reflects from mirror CD .

Q19. At what angle the ray will reflect from mirror CD ?

- | | |
|----------------|-----------------|
| (a) 30° | (b) 60° |
| (c) 90° | (d) 120° |

Q20. What are the Primary colours in Rainbow :

- | | |
|--------------------------|--------------------------|
| (a) Red – Yellow - Blue | (b) Red – Green - Indigo |
| (c) Red – Green - Violet | (d) Red – Green - Blue |



Answer Key

1.(b)	2.(b)	3.(b)	4.(a)	5.(c)	6.(b)	7.(c)	8.(a)	9.(b)	10.(a)	11.(a)	12.(d)	13.(c)	14.(a)	15.(a)
16.(c)	17.(d)	18.(b)	19.(b)	20.(d)										

LEARN  TEST

