Q.1 Choose the incorrect statement-

(A) According to the corpuscular theory, a light source emits tiny corpuscles of light.

(B) According to the corpuscular theory, corpuscles travel in a straight line.

(C) Newton could explain the laws of reflection of light on the basis of elastic collisions of the particles of light with the surface.

(D) According to corpuscular theory, light is assumed to behave as a wave.

Q.2 Newton's corpuscular theory failed to explain

(A) Rectilinear propagation of light **(B)**Rectilinear propagation of light

(C) Refraction of light **(D)**Diffraction of light

Q.3 The energy of the wave travels in a direction_____ to the wavefront.

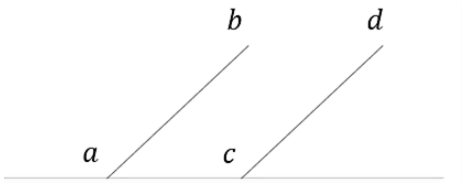
(A) Tendential **(B)**lateral **(C)**perpendicular **(D)**parallel

Q.4 According to Huygens, the ether medium pervading entire universe is

(A)less elastic and more dense. **(B)**highly elastic and less dense.

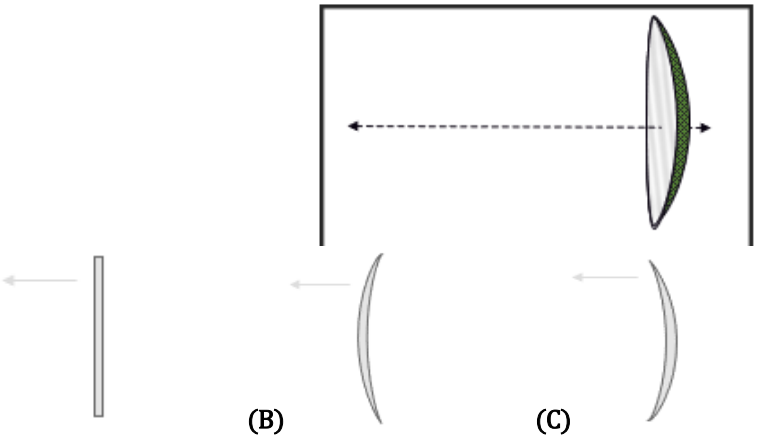
(C)not elastic. **(D)**much heavier.

Q.5 If ab is the wavefront at time $t = 0$ and cd is the wavefront at time $t = t_1$. Find the direction of propagation of light.



(A)↖ **(B)**↘ **(C)**↙ **(D)**↗

Q.6 A plane wavefront AB incident on a concave mirror as shown. Then, the wavefront just after reflection is



(A) **(B)** **(C)** **(D)**None of the above

Q.7 The phase change in reflected wave, when light wave suffers reflection at the interface from air to glass is

(A)0 **(B)**$\pi/2$ **(C)**π **(D)**2π

Q.8 The wavefronts of light coming from a distant source of unknown shape are nearly

(A) Plane **(B)**Elliptical **(C)**Cylindrical **(D)**Spherical

Q.9 Light wave travel in vacuum along the x −axis, which of the following may represent the wave front?

(A) $x = a$ **(B)** $y = a$ **(C)** $z = a$ **(D)** $x + y + z = a$

Q.10 If ab is the wavefront in medium 1 and cd is the wavefront in medium 2 as light travels from medium 1 to medium 2. Let μ_1 and μ_2 be the refractive indexes in medium 1 and 2 respectively. Choose the correct option.

(A) $\mu_1 = \mu_2$ **(B)** $\mu_1 < \mu_2$ **(C)** $\mu_1 > \mu_2$ **(D)** Cannot predict

ANSWER KEY

Q.	1	2	3	4	5	6	7	8	9	10
Sol.	(D)	(D)	(C)	(B)	(B)	(C)	(C)	(A)	(A)	(B)