Q.1	The resolving power of h (A) $\approx 1'$	resolving power of human eye is $\approx 1'$ (B) $\approx 1^{\circ}$		(D) ≈ 10′				
Q.2	Resolving power of a telescope increases with(B)Increase in focal length of objective(A)Increase in focal length of eye piece(B)Increase in focal length of objective(C)Increase in aperture of eye piece(D)Increase in aperture of objective							
Q.3	If the lenses of a telescop (A)image size will increa (C)image size will remai	be are interchanged, then use. n same.	(B)image size will decrease. (D)resolving power will increase.					
Q.4	 To increase both the resolving power and magnifying power of a telescope (A)both the focal length and aperture of the objective have to be increased. (B)the focal length of the objective has to be increased. (C)the aperture of the objective has to be increased. (D)the wavelength of light has to be decreased. 							
Q.5	The image of a star is formed by a convergent lens of focal length 1 m and diameter 5 cm. If the lens is ideal and the effective wavelength in image formation is taken as 5×10^{-5} cm, the diameter of the image formed will be nearest to (A)Zero (B) 2.5×10^{-6} cm (C) 2.5×10^{-5} cm (D) 2.5×10^{-3} cm							
Q.6	Calculate the resolving power of a microscope with cone angle of light falling on the objective equal to 60°. Take $\lambda = 600$ nm and the refractive index of transparent medium between the object and the objective lens of the microscope, $\mu = 4/3$. (A) 1.82×10^6 m ⁻¹ (B) 2×10^6 m ⁻¹ (C) 3.22×10^6 m ⁻¹ (D) 1.22×10^6 m ⁻¹							
Q.7	The angular resolution of a radio telescope is to be 0.1° , when the incident waves have a wavelength of 3.00 mm. The minimum diameter (<i>in</i> m) required for the telescope's receiving disc (<i>in</i> m) is 1.05 <i>n</i> . The value of <i>n</i> is - (A)1 (B)2 (C)3 (D)4							
Q.8	The magnifying power of a telescope is 9. When it is adjusted for parallel rays, the distance betweenthe objective and the eye-piece is found to be 20 cm. The focal lengths of the lenses are(A)18 cm, 2 cm(B)11 cm, 9 cm(C)10 cm, 10 cm(D)15 cm, 5 cm							
Q.9	A Galilean telescope has an objective lens of focal length 50 cm and eyepiece of focal length 5 cm. If the telescope is used to focus an object 2 m away from the objective lens, what should be the tube length? (Final image is forming at infinity.)(A)66.67cm(B)45cm(C)61.67cm(D)71.67cm							
Q.10	Calculate the separation distance of moon from 10^{-5} cm. (A) 4180 cm	of two points on moon to earth, $= 3.8 \times 10^{10}$ cm. (B)4200 cm	that can be resolved usin The wavelength most (C) 4280 cm	g 600 cm telescope. Given sensitive to eye is $5.5 \times$ (D)4100 cm				

ANSWER KEY

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