## **Dept. of Physics**

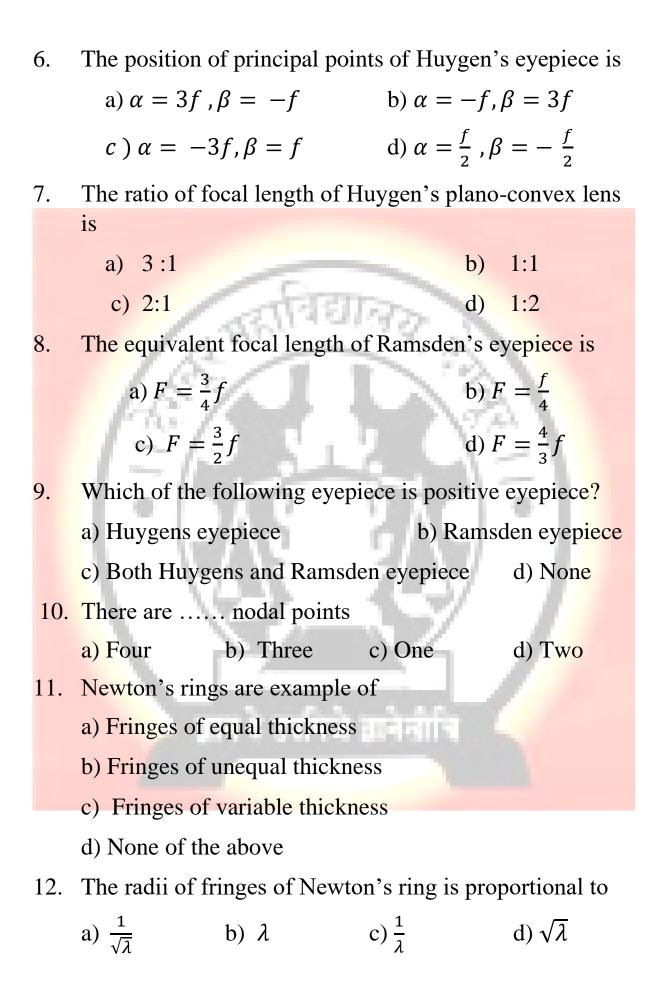
## **DEGLOOR COLLEGE, DEGLOOR**

## MCQ PRACTICE

Class: B.Sc. S.Y.

Paper: VIII

	Title of Paper: Optics and Laser		
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1.	There are cardinal points in all		
	a) Four b) Three c) Five d) Six		
2.	Complex optical system has Principal planes		
	a) Six b) Two c) One d) Three		
3.	The distance between first focal point from first principa point is	1	
	a) First focal length b) First focal plane		
	c) First focal point d) None		
4.	Which of the following eyepiece is free from spherical & chromatic aberrations?		
	a) Huygens eyepiece only b) Ramsden eyepiece only		
	c) Both Huygens and Ramsden eyepiece d) None		
5.	The equivalent focal length of Huygen's eyepiece is		
	a) $F = \frac{3}{4}f$ b) $F = \frac{3}{2}f$		
	c) $F = \frac{f}{2}$ d) $F = \frac{2}{3}f$		



13. The wavelength of sodium light using Newton's ring is

a) 
$$\lambda = \frac{D_{m+p}^2 - D_m^2}{8PR}$$
  
b) 
$$\lambda = \frac{D_{m+p}^2 - D_m^2}{2PR}$$
  
c) 
$$\lambda = \frac{D_{m+p}^2 - D_m^2}{PR}$$
  
d) 
$$\lambda = \frac{D_{m+p}^2 - D_m^2}{4PR}$$

14. The wavelength of monochromatic light using Michelson interferometer is

a) 
$$\lambda = \frac{2d}{N}$$
  
b)  $\lambda = \frac{2N}{d}$   
c)  $\lambda = \frac{N}{2d}$   
d)  $\lambda = \frac{N}{d}$ 

15. The difference in wavelength between two neighboring lines in Michelson interferometer is

a) 
$$\lambda_1 - \lambda_2 = \frac{\lambda_1 \lambda_2}{d}$$
  
b)  $\lambda_1 - \lambda_2 = \frac{\lambda_1 \lambda_2}{2d}$   
c)  $\lambda_1 - \lambda_2 = \frac{d}{\lambda_1 \lambda_2}$   
d) None

16. Bending of light around the edges is called

- a) Interference b) Diffraction
- c) Polarization d) Reflection
- 17. Thin film has thickness of the order of is..
  - a) 0.5 μm to 10 μm b) 10μm to 100μm
  - c) 5  $\mu$ m to 500 $\mu$ m d) 100  $\mu$ m 1000 $\mu$ m
- 18. To obtain Fraunhoffer's diffraction,

a) Wave front must be plane

b) Source and screen should be at infinite distance

- c) Lens is used between screen and slit
- d) All of these

19. The position of minimum intensity due to single slit is given by

a) $\sin\theta_n = \frac{na}{2\lambda}$	b) $sin\theta_n = \frac{n\lambda}{a}$
c) $sin\theta_n = \frac{na}{4\lambda}$	d) $\sin\theta_n = \frac{na}{3\lambda}$

20. Ability of optical instrument to produce distinctly separate images of closed object

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- a) Reflecting power b) Lens power
- c) Resolving power d) None