ii)	In simple harmonic motion, during the motion
	a) kinetic energy is conserved

- potential energy is conserved b)
- c) total energy is conserved
- the amplitude is conserved. d)

i)

[Turn over

The figures in the margin indicate full marks. Candidates are required to give their answers in their own words as

GROUP – A

(Multiple Choice Type Questions)

1. Choose the correct alternatives from the following :

 $10 \times 1 = 10$

The central fringe in case of Lloyd's mirror is

- a) dark bright b)
- dark & bright none of these. c) d)

- far as practicable.

PHYSICAL OPTICS – II

2012

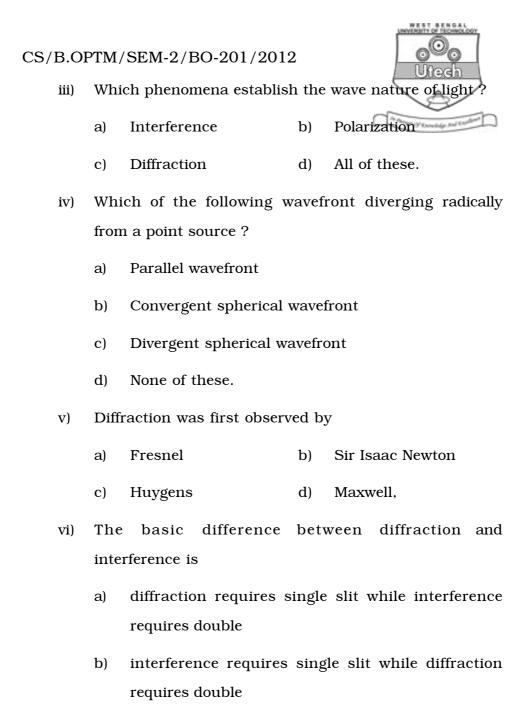
CS/B.OPTM/SEM-2/BO-201/2012

Time Allotted : 3 Hours

Full Marks: 70



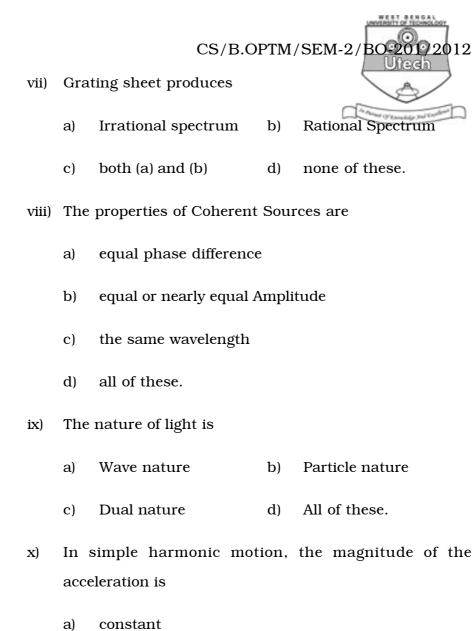
http://www.makaut.com/



- c) both of them requires single slit
- d) both of them requires double slit.

2

2006



- .
- b) proportional to the displacement
- c) inversely proportional to the displacement
- d) greatest when the velocity is greatest.

3

2006

[Turn over

(Short Answer Type Questions) Answer any three of the following. 3 5 =15 x

2. Distinguish between Fresnel and Fraunhofer diffraction's.

GROUP – B

- 3. Write short note on Lloyd's mirror.
- Define diffraction of light and compare with interference of 4. light.
- Define resolving power and dispersive power of a grating. 5.

GROUP – C

(Long Answer Type Questions)

Answer any *three* of the following. $3 \times 15 = 45$

- 6. State and explain Huygen's principle. With proper diagram obtain the spherical surface equation by wave theory.
- 7. Define retardation plate. Explain half-wave and quarter-wave retardation plate. State the application area of retardation plates. Compare between positive and negative crystal.
- 8. Deduce analytical treatment of interference of light. Prove that interference obeys the law of conservation of energy.
- 9. Explain the working principle of LASER. State different types of LASER and its application area.

2006