



Shree H.N.Shukla College of Science Rajkot

B.Sc. (Sem. - II) (CBCS)

[201-PHYSICS]

UNIT TEST-2018

DATE: - / /2018

Student's Name:

Roll no.:

Total marks- 30

Q-1 (a) Give the answer of following question.

[05]

- 1) What is Transverse wave?
- 2) _____ waves carry sound in air.
- 3) Intensity of sound is directly proportional to _____.
- 4) What is Doppler Effect?
- 5) The fundamental frequency of a string is directly proportional to _____.

Q-1 (B) Give the answer of following Question. (Any One)

[02]

- 1) Calculate the velocity of sound in a gas in which two waves of length 560 cm and 50.4 cm produces 6 beats per sec.
- 2) State the law of length of the string and mass of the string.

Q-1 (C) Give the answer of following Question. (Any one)

[03]

- 1) Explain Laplace correction.
- 2) Explain the acoustics of buildings?
- 3) Derive the formula for velocity of sound in air.

Q-1 (D) Give the answer of following Question. (Any one)

[05]

- 1) Discuss transverse wave travelling on a string and derive an expression for its velocity.
- 2) Discuss Doppler Effect.

Q-2 (a) Give the answer of following question.

[05]

- 1) Write a name of type of wave front.
- 2) Give an example of the division of wave front.
- 3) Soap bubble looks coloured due to _____.
- 4) The central region in Newton's ring is _____.
- 5) Newton's ring illustrates the phenomenon of _____.

Q-2 (B) Give the answer of following Question. (Any One)

[02]

- 1) Distance between two slits is 0.1 mm and the width of the fringes formed on the screen is 0.5 nm. If the distance between the screen and the slit is 1 m, calculate the wavelength of light used.
- 2) Define types of interference.

Q-2 (C) Give the answer of following Question. (Any one)

[03]

- 1) Determination of wave length of sodium light using from the Newton's ring.
- 2) Give the condition for interference of light.

Q-2 (D) Give the answer of following Question. (Any one)

[05]

- 1) Explain interference by transmitted light.
- 2) Monochromatic light from the narrow slits falls on two parallel slits of the interference fringes are obtained on a screen (Young's expt.). Calculate the spacing between two consecutive maxima and minima what is the shape of fringes?