Class - 12

पी. एम. श्री केंद्रीय विद्यालय पानीसागर

शीतावकाश हेतु गृह-कार्य 2023 -2024

दिनांक - 21/12/2023

कक्षा – बारहवीं

- 1. उषा कविता के आधार पर कवि ने प्रातः काल का वर्णन किस प्रकार से किया है ?
- 2. फ़ीचर क्या है ? "शहर की ओर पलायन करते युवा वर्ग"–विषय पर एक फ़ीचर लिखिए
- ग्रूप में दिए गए किन्हीं 2 नमूना प्रश्न–पत्र को हल कीजिये ।
- परियोजना कार्य विषय प्राकृतिक आपदाएँ और सुरक्षा का उपाय

(कला एकीकृत परियोजना–कार्य निम्न आधार पर होना आवश्यक है :– प्रमाण–पत्र, आभार ज्ञापन ,विषय– सूची , उद्देश्य , समस्या का बयान ,परिकल्पना , स्रोत, अध्यापक टिपण्णी)

PM SHRI K.V. PANISAGAR.

WINTER VACATION HOLIDAY.

CLASS-12th

SUBJECT-BIOLOGY

- A. Learn all lessons for final examination. Practice the diagrams well with labelling.
- B. Read the text book thoroughly for MCQ type of questions.
- C. Solve all previous year questions answers and prepare a separate notebook.
- D. Solve ncert excercise of each chapter.



Wave-Optics-

- 1. Define wave front. State Huygens principle and verify Snell's law.
- 2. State Huygens principle and prove the laws of reflection on the basis of wave theory.
- 3. What do you mean by interference of light? Explain in brief the Young's double slit experiment.
- 4. What are the coherent sources? Write the conditions for the sustained interference pattern. Also draw the intensity v/s path difference curve.
- 5. Find the conditions for constructive and destructive interference. How does the intensity depend on the width of slit?
- 6. Find the expression for the fringe width. What is the effect on the fringe width if the whole apparatus (YDSE) is completely immersed in a liquid of refractive index μ ?
- 7. What do you mean by diffraction of light and state the condition for the diffraction? Obtain the conditions for secondary maxima and minima. Also draw the intensity distribution curve.
- 8. Prove that the width of central maxima is twice the width of the secondary maxima. How does the width of central maxima depend on the width of the slit?

Chapter wise Theoretical Important Questions in Physics for Class-XII

Dual Nature of Radiation

- 1. Describe the experiment to study photoelectric effect and explain the laws of photoelectric effect and the significance of each.
- 2. Describe Hertz and Lenard's experiment to demonstrate photoelectric effect.
- 3. Explain Einstein's photoelectric equation and explain the laws of photoelectric effect using it.
- 4. State and explain de Broglie relation for matter waves.
- 5. Draw various graphs of photoelectric effect.

Semiconductor Devices

- 1. Distinguish between conductors, insulators and semiconductors on the basis of energy bands.
- 2. What are extrinsic semiconductors? Mention its types and explain the mechanism of conduction in each.
- 3. Explain the formation of depletion layer and potential barrier in a PN junction diode.
- 4. Draw the circuit diagram used to determine the VI characteristics of a diode and draw the forward and reverse bias characteristics of a diode. Explain the conclusions drawn from the graph.
- 5. With the help of a labeled circuit diagram explain the working of half wave rectifier & full wave rectifier and draw the input and output waveforms.
- 6. Write notes on LED, photodiode and solar cell.