



	(B)	Explain “ The 7 Crystal Systems & 14 Bravais Lattices” with figure diagram.	07
	(C)	What are the Bravais lattice and Non-Bravais lattices? Give figures.	03
<b>Q-4</b>		<b>Attempt all questions</b>	<b>(14)</b>
	(A)	Discuss: Properties, characteristics and applications of X-rays.	07
	(B)	Discuss: Applications of X-rays.	07
<b>Q-5</b>		<b>Attempt all questions</b>	<b>(14)</b>
	(A)	With a neat diagram, narrate the production of X-rays using Coolidge Tube.	07
	(B)	What is a P-N junction diode? Discuss Forward and Reverse biasing of a diode with circuit diagram and explain the characteristics.	07
<b>Q-6</b>		<b>Attempt all questions</b>	<b>(14)</b>
	(A)	What is a rectifier? Explain a full wave rectifier in detail giving circuit diagram, construction, working and mathematical analysis.	07
	(B)	Name different types of transistor configurations. Discuss in detail any one of them.	07
<b>Q-7</b>		<b>Attempt all questions</b>	<b>(14)</b>
	(A)	Compare the properties of $\alpha$ , $\beta$ and $\gamma$ radiations.	07
	(B)	What are Miller Indices? Illustrate the steps to find out Miller indices of a Crystal plane with necessary diagram.	07
<b>Q-8</b>		<b>Attempt all questions</b>	<b>(14)</b>
	(A)	Explain the working of a transistor.	07
	(B)	Write a short note on Principle and working of Zener Diode as a voltage regulator.	07

