|  |  |  |
| --- | --- | --- |
| Programme/Class: **Undergraduate** | Year: 2022 | Semester: |
| Subject: **Gems & Dimension Stones** |
| Course Code: | Course Title: **SEC/Minor II** |
|  |
|  | Core: **SEC** |
| Max. Marks: 25+75 | Min. Passing Marks:45 |
| TotalNo.ofLectures-Tutorials-Practical(inhoursperweek):L-T-P:3-0-0 |
| **Unit** |  | **No. of Lectures=90** |
| **I** | Gems: Physical properties, Types, Classification and Identification of Gems, List of the Gems (Navaratnas) as per Hindu Vedic Astrology; eg: Ruby for Surya (Sun),Pearl for Chandra (Moon), Red Coral for Mangala (Mars), Emerald for Budha (Mercury), Yellow sapphire for Brihaspati (Jupiter), Diamond for Shukra (Venus), Blue sapphire for Shani (Saturn), Hessonite for Rahu (the ascending lunar node) and Cat's Eye for Ketu (the descending lunar node)     | 12 |
| **II** |  Geological and Astrological nomenclature of gems, Gems and Zodiac signs and Planets and Gemstones, Religious and astrological significance of gems | 12 |
| **III** | Uses of Gems; advantages and disadvantages of gems, geological and Commercial names and occurrences and distribution of gems in India and world | 12 |
| **IV** | The varieties and colours, species, physical properties, and astrological and commercial values of the following gemstones:Ruby, Amber; Andalusite; Apatite; Axinite; Aragonite; Almandine, Beryl Emerald (Panna), Aquamarine, Morganite, Pearl, Goshenite; Calcite; Chrysobery, Cat’s eye; Coral (Munga); Corundum: Ruby, Sapphire (Neelam), Garnet, Pyrope, Moonstone, Sunstone, Fluorspar; Pearl : Rhodalite, Australian, , Black, Blue, Pyrites; Topaz (Pukharaaj)Quartz : Rock crystal, Amethyst, Smoky Quartz; Rose Quartz; Aventurine, Quartz Cat’s eye, Tiger’s eye, Chalcedony Group : Chalcedony; Carnelian, Chrysoprase, Moss Agate, Jasper, Bloodstone, Rhodonite; Sodalite; Smithsonite; Sphene;  | 12 |
| **V** | Opal, Opal; Types properties and uses: Fire Opal, White Opal, Black Opal, Water Opal; Diamond, Types, astrological values occurrences and distribution in India,  | 10 |
| **VI** | Dimension Stones: Physical properties, classification and Types of Dimension stones | 10 |
| **VII** | Production, Processing, Occurrences and distribution of Dimension stones in India and World | 10 |
| **VII** | Important Types of Dimension stones and their commercial values. Granite, Lime stones, Marble, Sandstones, etc | 12 |
|  | **Suggested Readings/Recommended books:**1. A Handbook on Gemstones by Cally Hall, Publisher: **‎**Education Books /Sahni (1 November 2003), 175 pages
2. Gems of the World Paperback – 1 January 2008by [Philips](https://www.amazon.in/s/ref%3Ddp_byline_sr_book_1?ie=UTF8&field-author=Philips&search-alias=stripbooks) (Author)

GEMS & STONES, AUTHOR: [RAKESH SHASTRI](https://www.bookchor.com/author-books.php?au=48a49a47a50a47a49a51a99)Gems and Gem Industry in India by [R.V. Karanth](https://www.goodreads.com/author/show/7904221.R_V_Karanth), Geological Society of India, 2000 - Precious stone industry - 405 pages.Dimensional Stone Technology, S.S.Rathore, G.S. Bhardwaj, S.C. Jain, [Mining](https://himanshupublications.com/product-category/reference-books/geography-reference-books/mining/), [Reference Books](https://himanshupublications.com/product-category/reference-books/)The stone industries dimension stone, crushed stone, geology, technology, distribution, utilization,[Oliver Bowles](https://www.worldcat.org/search?q=au%3ABowles%2C+Oliver%2C&qt=hot_author), New York And London, McGraw-Hill  |  |