**SARASWATI MODERN COLLEGE OF PHARMACY MOHNA**

# Lesson Plan

Program- D.Pharm Year - I

Course PHARMACEUTICS-I

Session - 2020-2021

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **S. No.** | **Day** | **Subject** | **L** | **T** | **P** | **Total** |
| **1** | D Day |  |  |  |  |  |
| **2** | D+1 | **Introduction of different dosage forms** | 1 | 0 | 0 | 1 |
| **3** | D+2 | **different dosage forms** classification with examples-their relative applications | 1 | 0 | 0 | 1 |
| **4** | D+3 | Familiarization with new drug delivery systems | 1 | 0 | 0 | 1 |
| **5** | D+4 | **Introduction to Pharmacopoeias** with special reference to the Indian Pharmacopoeia. | 1 | 0 | 0 | 1 |
| **6** | D+5 | Tutorial (Problem solving session/ class test) | 0 | 1 | 0 | 1 |
| **7** | D+6 | **Metrology–**Systems of weights and measures | 1 | 0 | 0 | 1 |
| **8** | D+7 | Calculations including conversion from one to another  system | 1 | 0 | 0 | 1 |
| **9** | D+8 | Percentage calculations and adjustments | 1 | 0 | 0 | 1 |
| **10** | D+9 | alligation method in calculations | 1 | 0 | 0 | 1 |
| **11** | D+10 | Tutorial (Problem solving session/ class test) | 0 | 1 | 0 | 1 |

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| --- | --- | --- | --- | --- | --- | --- |
|  |  | **TOTAL** | 8 | 2 | 0 | 10 |
| **12** | D+11 | isotonic solutions. | 1 | 0 | 0 | 1 |
| **13** | D+12 | **Packing of Pharmaceuticals** | 1 | 0 | 0 | 1 |
| **14** | D+13 | Desirable features of a container | 1 | 0 | 0 | 1 |
| **15** | D+14 | Study of glass and plastics as materials for containers | 1 | 0 | 0 | 1 |
| **16** | D+15 | Tutorial (Problem solving session/ class test) | 0 | 1 | 0 | 1 |
| **17** | D+16 | rubber as material for closures-their merits and demerits. Introduction to aerosol packaging | 1 | 0 | 0 | 1 |
| **18** | D+17 | **Size reduction:** Objectives, and factors affecting size reduction, methods of size reduction | 1 | 0 | 0 | 1 |
| **19** | D+18 | Study of Hammer mill, Ball mill, Fluid Energy, Mill and Disintegrator.  **Size separation–**Size separation by sifting. Official Standard for powders | 1 | 0 | 0 | 1 |
| **20** | D+19 | Sedimentation methods of size separation. Construction and working of cyclone separator. | 1 | 0 | 0 | 1 |
| **21** | D+20 | Tutorial (Problem solving session/ class test) | 0 | 1 | 0 | 1 |
|  |  | **TOTAL** | **8** | 2 | 0 | **10** |
| **22** | D+21 | **Mixing and Homogenization–**Liquid mixing and powder mixing | 1 | 0 | 0 |  |
| **23** | D+22 | Mixing of semisolids, Study of Silverson Mixer– Homogenizer | 1 | 0 | 0 | 1 |
| **24** | D+23 | Planetary Mixer; Agitated powder mixer; Triple Roller Mill | 1 | 0 | 0 | 1 |
| **25** | D+24 | Propeller Mixer, Colloid Mill and Hand Homogenizer. Double cone mixer. | 1 | 0 | 0 | 1 |
| **26** | D+25 | Tutorial (Problem solving session/ class test) | 0 | 1 | 0 | 1 |
| **27** | D+26 | **Clarification and Filtration –**Theory of filtration, Filter media; | 1 | 0 | 0 | 1 |

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| **28** | D+27 | Filter aids and selection of filters | 1 | 0 | 0 | 1 |
| **29** | D+28 | Study of the following filtration equipment | 1 | 0 | 0 | 1 |
| **30** | D+29 | Filter Press, Sintered Filters | 0 | 1 | 0 | 1 |
| **31** | D+30 | Tutorial (Problem solving session/ class test) | 1 | 0 | 0 |  |
|  |  | **TOTAL** | **8** | **2** | **0** | **10** |
| **32** | D+31 | Filter Candles, Meta filter | 1 | 0 | 0 | 1 |
| **33** | D+32 | **Extraction and Galenicals** | 1 | 0 | 0 | 1 |
| **34** | D+33 | Study of percolation and maceration and their modification | 1 | 0 | 0 | 1 |
| **35** | D+34 | continuous hot extraction–Applications in the preparation of tinctures and extracts | 1 | 0 | 0 | 1 |
|  | D+35 | Tutorial (Problem solving session/ class test) | 0 | 1 | 0 | 1 |
| **36** | D+36 | Introduction to Ayurvedic dosage forms. | 1 | 0 | 0 | 1 |
| **37** | D+37 | **Heat processes Evaporation–**Definition Factors affecting evaporation | 1 | 0 | 0 | 1 |
| **38** | D+38 | Study of evaporating still and Evaporating Pan. | 1 | 0 | 0 | 1 |
| **39** | D+39 | **Distillation–**Simple distillation and Fractional distillation | 1 | 0 | 0 | 1 |
| **40** | D+40 | Tutorial (Problem solving session/ class test) | 0 | 1 | 0 | 1 |
|  |  | **TOTAL** | **8** | **2** | **0** | **10** |
| **41** | D+41 | Steam distillation and vacuum distillation | 1 | 0 | 0 | 1 |
| **42** | D+42 | Study of vacuum still, preparation of Purified Water I.P. . | 1 | 0 | 0 | 1 |
| **43** | D+43 | **Introduction to drying processes** | 1 | 0 | 0 | 1 |
| **44** | D+44 | Study of Tray Dryers: Fluidized Bed Dryer | 1 | 0 | 0 | 1 |
| **45** | D+45 | Tutorial (Problem solving session/ class test) | 0 | 1 | 0 | 1 |
| **46** | D+46 | Vacuum Dryer and Freeze Dryer | 1 | 0 | 0 | 1 |
| **47** | D+47 | water for injection I.P. Construction and working of the | 1 | 0 | 0 | 1 |

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|  |  | still used for the same |  |  |  |  |
| **48** | D+48 | **Sterilization–**Concept of sterilization | 1 | 0 | 0 | 1 |
| **49** | D+49 | **Sterilization** its differences from disinfection Thermal resistance of micro– organisms | 1 | 0 | 0 | 1 |
| **50** | D+50 | Tutorial (Problem solving session/ class test) | 0 | 1 | 0 | 1 |
|  |  | **TOTAL** | **8** | **2** | **0** | **10** |

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| **51** | D Day |  |  |  |  |  |
| **52** | D+51 | Detailed study of the following sterilization process, | 1 | 0 | 0 | 1 |
| **53** | D+52 | Sterilization with moist heat | 1 | 0 | 0 | 1 |
| **54** | D+53 | Sterilization by radiation | 1 | 0 | 0 | 1 |
| **55** | D+54 | Sterilization by radiation | 1 | 0 | 0 | 1 |
| **56** | D+55 | Tutorial (Problem solving session/ class test) | 0 | 1 | 0 | 1 |
| **57** | D+56 | Sterilization by filtration | 1 | 0 | 0 | 1 |
| **58** | D+57 | Gaseous sterilization. | 1 | 0 | 0 | 1 |
| **59** | D+58 | **Aseptic techniques:** Application of sterilization processes | 1 | 0 | 0 | 1 |
| **60** | D+59 | hospitals particularly with reference to surgical dressings and intravenous fluids | 1 | 0 | 0 | 1 |
| **61** | D+60 | Tutorial (Problem solving session/ class test) | 0 | 1 | 0 | 1 |
|  |  | **TOTAL** | **8** | **2** | **0** | 10 |
| **62** | D+61 | Precautions for safe and effective handling of sterilization equipment. | 1 | 0 | 0 | 1 |
| **63** | D+62 | **Processing of Tablets** | 1 | 0 | 0 | 1 |
| **64** | D+63 | **Tablets-**Definition; Different types of compressed tablets and their properties | 1 | 0 | 0 | 1 |

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| **65** | D+64 | Processes involved in the production of tablets | 1 | 0 | 0 | 1 |
| **66** | D+65 | Tutorial (Problem solving session/ class test) | 0 | 1 | 0 | 1 |
| **67** | D+66 | Tablets excipients; Defects in tablets | 1 | 0 | 0 | 1 |
| **68** | D+67 | Evaluation of Tablets; Physical Standards including Disintegration and Dissolution | 1 | 0 | 0 | 1 |
| **69** | D+68 | Tablet coating–sugar coating; film coating, | 1 | 0 | 0 | 1 |
| **70** | D+69 | enteric coating and microencapsulation | 1 | 0 | 0 | 1 |
| **71** | D+70 | Tutorial (Problem solving session/ class test) | 0 | 1 | 0 | 1 |
|  |  | **TOTAL** | **8** | **2** | **0** | **10** |
| **72** | D+71 | **Processing of Capsules–**Hard and soft gelatin capsules | 1 | 0 | 0 |  |
| **73** | D+72 | **Processing of Capsule** filling of capsules | 1 | 0 | 0 | 1 |
| **74** | D+73 | handling and storage of capsules | 1 | 0 | 0 | 1 |
| **75** | D+74 | Special applications of capsules | 1 | 0 | 0 | 1 |
| **76** | D+75 | Tutorial (Problem solving session/ class test) | 0 | 1 | 0 | 1 |
| **77** | D+76 | **Study** of immunological products | 1 | 0 | 0 | 1 |
| **78** | D+77 | **Study** of immunological products like sera vaccines, | 1 | 0 | 0 | 1 |
| **79** | D+78 | **Study** of immunological products like sera vaccines, toxoids & their preparations. | 1 | 0 | 0 | 1 |
| **80** | D+79 | reference to surgical dressings and intravenous fluids | 0 | 1 | 0 | 1 |
| **81** | D+80 | Tutorial (Problem solving session/ class test) | 1 | 0 | 0 |  |
|  |  | **TOTAL** | **8** | **2** | **0** | **10** |

**SARASWATI MODERN COLLEGE OF PHARMACY MOHNA**

# Lesoon Plan

Program- D.Pharm Semester- I

Course PHARMACEUTICS-I

Session - 2020-2021

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| --- | --- | --- | --- | --- | --- | --- |
| **S. No.** | **Day** | **Subject** | **L** | **T** | **P** | **Total** |
| **1** | D Day |  |  |  |  |  |
| **2** | D+1 | To Prepare and Submit 10 ml of Chloroform Water IP. | 0 | 0 | 4 | 4 |
| **3** | D+2 | To Prepare and Submit 20 ml of Rose Water NF. | 0 | 0 | 4 | 4 |
| **4** | D+3 | To Prepare and Submit 20 ml of Aq. Iodine Solution IP. | 0 | 0 | 4 | 4 |
| **5** | D+4 | To Prepare and Submit 10 ml of Camphor Water IP. | 0 | 0 | 4 |  |
| **6** | D+5 | To Prepare and Submit 20 ml of Strong Ammonium  Acetate Solution BP | 0 | 0 | 4 | 4 |
| **7** | D+6 | To Prepare and Submit 20 ml of Alcoholic Iodine  Solution BP. | 0 | 0 | 4 | 4 |
| **8** | D+7 | To Prepare and Submit 20 ml of Aromatic Ammonia  Spirit USP. | 0 | 0 | 4 | 4 |
| **9** | D+8 | To Prepare and Submit 20 ml of Camphor Spirit USP. | 0 | 0 | 4 | 4 |
| **10** | D+9 | To Prepare and Submit 10 gm of Salicylic acid Cream. | 0 | 0 | 4 | 4 |
| **11** | D+10 | To Prepare and Submit 20 gm of Cold Cream. | 0 | 0 | 4 | 4 |
|  |  |  | 0 | 0 | 4 | 4 |
| **12** | D+11 | To Prepare and Submit 20 gm of Shampoo. | 0 | 0 | 4 | 4 |

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| --- | --- | --- | --- | --- | --- | --- |
| **13** | D+12 | To Prepare and Submit 10 ml of compound NaCl Mouth  wash. | 0 | 0 | 4 | 4 |
| **14** | D+13 | Formulation and Evaluation of PCM/ Aspirin Tablets by  Granulation techniques. | 0 | 0 | 4 | 4 |
| **15** | D+14 | To Prepare, submit and Evaluate 5 capsules of PCM. | 0 | 0 | 4 | 4 |
| **16** | D+15 | To Prepare and Submit 10 ml of Zinc Sulphate Eye drops  BP. | 0 | 0 | 4 | 4 |
| **17** | D+16 | To Prepare and Submit 10 ml of Sodium Chloride Eye  drops BP. | 0 | 0 | 4 | 4 |
| **18** | D+17 | Sterilization of Prepared Eye drop of Zinc Sulphate Eye drops BP and Sodium Chloride Eye drops BP by  Autoclaving Method. | 0 | 0 | 4 | 4 |
| **19** | D+18 | To Prepare and Submit 20 ml of Liquorice Liquid Extract  BP. | 0 | 0 | 4 | 4 |
| **20** | D+19 | To Prepare and Submit 20 ml of Strong Ginger Tincture  BP. | 0 | 0 | 4 | 4 |
| **21** | D+20 | To Prepare and Submit 20 ml of Iodine Tincture USP. | 0 | 0 | 4 | 4 |
| **22** | D+21 | Preparation and Sterilization of Nutrient Broth. | 0 | 0 | 4 | 4 |
| **23** | D+22 | Preparation of Glassware and sterilization equipment for  microbiological work by Autoclaving. | 0 | 0 | 4 | 4 |
| **24** | D+23 | To cultivate the Micro-organism in Nutrient broth  medium. | 0 | 0 | 4 | 4 |
| **25** | D+24 | To Prepare and Submit 10 ml of Sodium Chloride Eye  drops BP. | 0 | 0 | 4 | 4 |
| **26** | D+25 | Sterilization of Prepared Eye drop of Zinc Sulphate Eye drops BP and Sodium Chloride Eye drops BP by  Autoclaving Method. | 0 | 0 | 4 | 4 |

0 0 100 100

**SARASWATI MODERN COLLEGE OF PHARMACY MOHNA**

Program- D.Pharm year- 1st year

Course PHARMACEUTICAL CHEMISTRY-I

Session - 2020-21

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| --- | --- | --- | --- | --- | --- | --- |
| **S. No.** | **Day** | **Subject** | **L** | **T** | **P** | **Total** |
| **1** | D Day | **General discussion** on the following inorganic compounds including important physical and chemical  properties | 1 | 0 | 0 | 1 |
| **2** | D+1 | medicinal and Pharmaceutical uses, storage conditions  and chemical incompatibility | 1 | 0 | 0 | 1 |
| **3** | D+2 | **(A) Acids, bases and buffers** Boric acid\*, Hydrochloric  acid, | 1 | 0 | 0 | 1 |
| **4** | D+3 | strong ammonium hydroxide | 1 | 0 | 0 | 1 |
| **5** | D+4 | **Tutorial** | 0 | 1 | 0 | 1 |
| **6** | D+5 | Calcium hydroxide | 1 | 0 | 0 | 1 |
| **7** | D+6 | Sodium hydroxide and official buffers | 1 | 0 | 0 | 1 |
| **8** | D+7 | **(B) Antioxidants–**Hypo phosphorous acid, Sulphur dioxide | 1 | 0 | 0 | 1 |
| **9** | D+8 | Sodium bisulphite, Sodium Meta bisulphite, | 1 | 0 | 0 | 1 |
| **10** | D+9 | Sodium thiosulphate, Nitrogen and Sodium Nitrite | 1 | 0 | 0 | 1 |
| **11** | D+10 | **Tutorial** | 0 | 1 | 0 | 1 |
| **12** | D+11 | **(C) Gastrointestinal agents—** | 1 | 0 | 0 | 1 |

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|  |  | (i) Acidifying agents Dilute hydrochloric acid |  |  |  |  |
| **13** | D+12 | (ii)Antacids-Sodium bicarbonate, Aluminium hydroxide  gel | 1 | 0 | 0 | 1 |
| **14** | D+13 | Aluminium Phosphate | 1 | 0 | 0 | 1 |
| **15** | D+14 | Calcium carbonate Magnesium carbonate | 1 | 0 | 0 | 1 |
| **16** | D+15 | Tutorial | 0 | 1 | 0 | 1 |
| **17** | D+16 | Magnesium trisilicate, Magnesium oxide | 1 | 0 | 0 | 1 |
| **18** | D+17 | Combinations of antacid preparations | 2 | 0 | 0 | 1 |
| **19** | D+18 | Protectives and Adsorbents –Bismuth subcarbonate and  Kaolin. | 1 | 0 | 0 | 1 |
| **20** | D+19 | Saline Cathartics –Sodium potassium tartrate | 2 | 0 | 0 | 1 |
| **21** | D+20 | Protectives and Adsorbents Magnesium sulphate. | 1 | 0 | 0 | 1 |
| **22** | D+21 | **Tutorial** | 0 | 1 | 0 | 1 |
|  |  | **Total** | 19 | 4 | 0 | 23 |
| **23** | D+22 | **General discussion** on the following inorganic compounds including important physical and chemical properties, medicinal and Pharmaceutical uses, storage  conditions and chemical incompatibility | 1 | 0 | 0 | 1 |
| **24** | D+23 | **Topical Agents-**  i. Protectives-Talc, Zinc Oxide, Calamine, | 1 | 0 | 0 | 1 |
| **25** | D+24 | i. Zinc stearate, Titanium dioxide, Silicone polymers | 1 | 0 | 0 | 1 |
| **26** | D+25 | **Tutorial** | 0 | 1 | 0 | 1 |
| **27** | D+26 | (ii) Antimicrobials and Astringents–Hydrogen peroxide\*,  Potassium permanganate, | 1 | 0 | 0 | 1 |
| **28** | D+27 | Chlorinated lime | 1 | 0 | 0 | 1 |
| **29** | D+28 | Iodine, Solutions of Iodine, Povidone-iodine | 1 | 0 | 0 | 1 |
| **30** | D+29 | Boric acid, Borax. Silver nitrate, Mild silver protein, | 1 | 0 | 0 | 1 |

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| --- | --- | --- | --- | --- | --- | --- |
| **31** | D+30 | Mercury, Yellow mercuric oxide, Ammoniated mercury | 1 | 0 | 0 | 1 |
| **32** | D+31 | Tutorial | 0 | 1 | 0 | 1 |
| **33** | D+32 | Sulphur and its compounds–Sublimed  sulphurprecipitated sulphur, selenium sulphide | 1 | 0 | 0 | 1 |
| **34** | D+33 | selenium sulphide | 1 | 0 | 0 | 1 |
| **35** | D+34 | Astringents:-Alum | 1 | 0 | 0 | 1 |
| **36** | D+35 | Zinc Sulphate | 1 | 0 | 0 | 1 |
| **37** | D+36 | Tutorial | 0 | 1 | 0 | 1 |
| **38** | D+37 | **Dental Products–Sodium** Fluride, Stannous Flouride,  Calcium carbonate | 1 | 0 | 0 | 1 |
| **39** | D+38 | Sodium metaphosphate, Dicalcium phosphate, | 1 | 0 | 0 | 1 |
| **40** | D+39 | Strontium chloride, Zinc chloride | 1 | 0 | 0 | 1 |
| **41** | D+40 | **(F) Inhalants–**Oxygen, Carbon dioxide, Nitrous oxide | 1 | 0 | 0 | 1 |
| **42** | D+41 | **(G) Respiratory stimulants–**Ammonium Carbonate | 1 | 0 | 0 | 1 |
| **43** | D+42 | **Tutorial** | 0 | 1 | 0 | 1 |
| **44** | D+43 | **(H) Expectorants and Emetics–**Ammonium chloride,  \*Potassium iodide, Antimony potassium tartrate. | 2 | 0 | 0 | 1 |
| **45** | D+44 | **(I) Antidotes-**Sodium nitrate | 1  20 | 0 | 0 | 1 |
|  |  | **Total** | 4 |  | 24 |
| **46** | D+45 | **Major Intra and Extracellular electrolytes-**  **(**A) Electrolytes used for replacement therapy –Sodium chloride and its preparations | 1 | 0 | 0 | 1 |
| **47** | D+46 | Potassium chloride and its preparations | 1 | 0 | 0 | 1 |
| **48** | D+47 | Revision | 1 | 0 | 0 | 1 |
| **49** | D+48 | **Tutorial** | 0 | 1 | 0 | 1 |
| **50** | D+49 | (B) Physiological acid-base balance and electrolytes used-  Sodium acetate, | 1 | 0 | 0 | 1 |
| **51** | D+50 | Potassium acetate, Sodium bicarbonate injection, | 1 | 0 | 0 | 1 |

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| **52** | D+51 | Tutorial | 0 | 1 | 0 | 1 |
| **53** | D+52 | Sodium citrate | 1 | 0 | 0 | 1 |
| **54** | D+53 | Potassium citrate, Sodium lactate injection | 1 | 0 | 0 | 1 |
| **55** | D+54 | Ammonium chloride and its injection. | 1 | 0 | 0 | 1 |
| **56** | D+55 | (C) Combination of oral electrolyte powders and  solutions cont…. | 1 | 0 | 0 | 1 |
| **57** | D+56 | (C) Combination of oral electrolyte powders and  solutions. | 1 | 0 | 0 | 1 |
| **58** | D+57 | Tutorial | 0 | 1 | 0 | 1 |
| **59** | D+58 | Class test | 1 | 0 | 0 | 1 |
| **60** | D+59 | **Inorganic Official** compounds of Iron | 1 | 0 | 0 | 1 |
| **61** | D+60 | **Inorganic Official** compounds of Calcium Ferrous Sulfate | 1 | 0 | 0 | 1 |
| **62** | D+61 | **Inorganic Official** compounds of Calcium gluconate | 1 | 0 | 0 | 1 |
| **63** | D+62 | Revision | 2 | 0 | 0 | 1 |
| **64** | D+63 | Class test | 1 | 0 | 0 | 1 |
| **65** | D+64 | Tutorial | 0 | 1 | 0 | 1 |
|  |  | Total | 18 | 4 |  | 22 |
| **66** | D+65 | **Radio pharmaceuticals and Contrast media-**Radio  activity-Alpha, | 1 | 0 | 0 | 1 |
| **67** | D+66 | **Radio pharmaceuticals and Contrast media-** Beta and  Gamma Radiations, | 1 | 0 | 0 | 1 |
| **68** | D+67 | Biological effects of radiations | 1 | 0 | 0 | 1 |
| **69** | D+68 | Measurement of radio activity, G. M. Counter Radio  isotopes their uses, storage and precautions with special reference to the official preparations cont…. | 1 | 0 | 0 | 1 |
| **70** | D+69 | Tutorial | 0 | 1 | 0 | 1 |

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| --- | --- | --- | --- | --- | --- | --- |
| **71** | D+70 | Measurement of radio activity, G. M. Counter Radio isotopes their uses, storage and precautions with special  reference to the official preparations | 1 | 0 | 0 | 1 |
| **72** | D+71 | Radio opaque Contrast media–Barium sulfate. | 1 | 0 | 0 | 1 |
| **73** | D+72 | Revision | 1 | 0 | 0 | 1 |
| **74** | D+73 | Quality control of Drugs and Pharmaceuticals-Importance  of quality control, significant errors | 1 | 0 | 0 | 1 |
| **75** | D+74 | Tutorial |  | 1 |  | 1 |
| **76** | D+75 | methods used for quality control, sources of impurities in  Pharmaceuticals | 1 | 0 | 0 | 1 |
| **77** | D+76 | Limit tests for Arsenic, chloride | 1 | 0 | 0 | 1 |
| **78** | D+77 | sulphate, Iron and Heavy metals. | 1 | 0 | 0 | 1 |
| **79** | D+78 | Class test | 1 | 0 | 0 | 1 |
| **80** | D+79 | Tutorial | 0 | 1 | 0 | 1 |
| **81** | D+80 | Limit tests for mercury. | 1 | 0 | 0 | 1 |
| **82** | D+81 | significant errors in quality control of drugs | 1 | 0 | 0 | 1 |
| **83** | D+82 | Revision | 2 | 0 | 0 | 1 |
| **84** | D+83 | Identification tests for cations as per Indian  Pharmacopoeia | 1 | 0 | 0 | 1 |
| **85** | D+84 | Identification tests for anions as per Indian  Pharmacopoeia | 1 | 0 | 0 | 1 |
| **86** | D+85 | Tutorial |  | 1 |  | 1 |
|  |  | Total | 18 | 4 |  | 22 |

**SARASWATI MODERN COLLEGE OF PHARMACY MOHNA**

Program- D.Pharm year- 1st year

Course PHARMACEUTICAL CHEMISTRY-I

Session - 2020-21

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **S. No.** | **Day** | **Subject** | **L** | **T** | **P** | **Total** |
| **1** | D Day |  |  |  |  |  |
| **2** | D+1 | General Introduction of Glassware. | 0 | 0 | 4 | 4 |
| **3** | D+2 | To perform the assay of Boric acid. | 0 | 0 | 4 | 4 |
| **4** | D+3 | To perform assay of Hydrogen peroxide. | 0 | 0 | 4 | 4 |
| **5** | D+4 | To perform assay of potassium iodide. | 0 | 0 | 4 | 4 |
| **6** | D+5 | To perform the standardization of 0.1 N Sulphuric Acid. | 0 | 0 | 4 | 4 |
| **7** | D+6 | To perform the standardization of 0.1 N Sodium Hydroxide. | 0 | 0 | 4 | 4 |
| **8** | D+7 | To perform assay of sodium bicarbonate. | 0 | 0 | 4 | 4 |
| **9** | D+8 | To perform assay of calcium gluconate. | 0 | 0 | 4 | 4 |
| **10** | D+9 | To perform assay of Magnesium sulphate. | 0 | 0 | 4 | 4 |
| **11** | D+10 | To perform assay of NaCl. | 0 | 0 | 4 | 4 |
|  |  | **TOTAL** |  |  |  | 40 |
| **12** | D+11 | To perform assay of potassium chloride. | 0 | 0 | 4 | 4 |
| **13** | D+12 | To perform assay of ferrous sulphate. | 0 | 0 | 4 | 4 |
| **14** | D+13 | To perform the limit test of Chloride. | 0 | 0 | 4 | 4 |
| **15** | D+14 | To perform the limit test of Sulphate. | 0 | 0 | 4 | 4 |
| **16** | D+15 | To perform the limit test of Iron. | 0 | 0 | 4 | 4 |

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| --- | --- | --- | --- | --- | --- | --- |
| **17** | D+16 | To perform the limit test of Heavy Metals. | 0 | 0 | 4 | 4 |
| **18** | D+17 | To perform the limit test of Arsenic. | 0 | 0 | 4 | 4 |
| **19** | D+18 | To perform the Salt analysis of Unknown sample. | 0 | 0 | 4 | 4 |
| **20** | D+19 | To perform the Salt analysis of Unknown sample. | **0** | **0** | 4 | 4 |
| **21** | D+20 | To perform the Salt analysis of Unknown sample | **0** | **0** | 4 | 4 |
| **22** | D+21 | To perform the Salt analysis of Unknown sample | **0** | **0** | 4 | 4 |
|  |  | **Total** |  |  |  | **44** |

**SARASWATI MODERN COLLEGE OF PHARMACY MOHNA**

# Lesson Plan

Program- D.Pharm year- 1st year

**Course PHARMACOGNOSY**

Session - 2020-21

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **S. No.** | **Day** | **Subject** | **L** | **T** | **P** | **Total** |
| **1** | D Day |  |  |  |  |  |
| **2** | D+1 | Introduction ofPharmacognosy, scope of Pharmacognosy. | 1 | 0 | 0 | 1 |
| **3** | D+2 | indigenous system of medicine. | 1 | 0 | 0 | 1 |
| **4** | D+3 | Various systems of classification of drugs of natural  origin. | 1 | 0 | 0 | 1 |
| **5** | D+4 | Adulteration and drug evaluation. | 1 | 0 | 0 | 1 |
| **6** | D+5 | significance of Pharmacopoeial standards | 1 | 0 | 0 | 1 |
| **7** | D+6 | Tutorial | 0 | 1 | 0 | 1 |
| **8** | D+7 | Brief outline of occurrence | 1 | 0 |  | 1 |
| **9** | D+8 | distribution, and outline of isolation | 1 | 0 | 0 | 1 |
| **10** | D+9 | identification tests, therapeutic effects and pharmaceutical applications of alkaloids, | 1 | 0 | 0 | 1 |
| **11** | D+10 | Tutorial | 0 | 1 | 0 | 1 |
| **12** | D+11 | terpenoids, glycosides, volatile oils, tannins and resins. | 1 | 0 | 0 | 1 |
| **13** | D+12 | **Occurrence, distribution, organoleptic evaluation,**  **chemical constituents including tests wherever applicable and therapeutic efficacy of following** | 1 | 0 | 0 | 1 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  |  | **categories of drugs.**  (a) Laxatives: Aloes, Rhuburb, Castor oil, Ispaghula, Senna. |  |  |  |  |
| **14** | D+13 | Tutorial | 0 | 1 | 0 | 1 |
| **15** | D+14 | (b) Cardiotonics-Digitalis, Arjuna. | 1 | 0 | 0 | 1 |
| **16** | D+15 | (c) Carminatives & G.I. regulators –Umbelliferous  fruits, | 1 | 0 | 0 | 1 |
| **17** | D+16 | Coriander, Fennel, Ajowan, Cardamom Ginger | 1 | 0 | 0 | 1 |
| **18** | D+17 | Black pepper, Asafoetida, Nutmeg, Cinnamon, Clove. | 1 | 0 | 0 | 1 |
| **19** | D+18 | (d) Astringents–Catechu. | 1 | 0 | 0 | 1 |
| **20** | D+19 | Tutorial | 0 | 1 | 0 | 1 |
| **21** | D+20 | (e) Drugs acting on nervous system- Hyoscyamus, Belladonna, . | 1 | 0 | 0 | 1 |
| **22** | D+21 | Aconite, Ashwagandha | 1 | 0 | 0 | 1 |
| **23** | D+22 | Ephedra, Opium | 1 | 0 | 0 | 0 |
| **24** | D+23 | Cannabis, Nux vomica | 1 | 0 | 0 | 0 |
|  |  | **TOTAL** | **19** | **4** |  | 23 |
| **25** | D+24 | (f) Antihypertensives-Rauwolfia. | 1 | 0 | 0 | 0 |
| **26** | D+25 | (g) Antitussives-Vasaka, Tolu balsam, Tulsi. | 1 | 0 | 0 | 1 |
| **27** | D+26 | (h) Antirheumatics-Guggul, Colchicum. | 1 | 0 | 0 | 1 |
| **28** | D+27 | (i) Antitumour-Vinca. | 1 | 0 | 0 | 1 |
| **29** | D+28 | **Tutorial** | 0 | 1 | 0 | 1 |
| **30** | D+29 | (j) Antileprotics-Chaulmoogra Oil. | 1 | 0 | 0 | 1 |
| **31** | D+30 | **Occurrence, distribution, organoleptic evaluation,** | 1 | 0 | 0 | 1 |

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| --- | --- | --- | --- | --- | --- | --- |
|  |  | **chemical constituents including tests wherever applicable and therapeutic efficacy of following categories of drugs.**  (k) Antidiabetics -Pterocarpus, Gymnema, Sylvestro. |  |  |  |  |
| **32** | D+31 | (l) Diuretics–Gokhru, Punarrnava. | 1 | 0 | 0 | 1 |
| **33** | D+32 | (m) Antidysentrics-Ipecacuanha. | 1 | 0 | 0 | 1 |
| **34** | D+33 | Tutorial | 0 | 1 | 0 | 1 |
| **35** | D+34 | (n) Antiseptics and disinfectants Benzoin, Myrrh. Nim,  curcuma. | 1 | 0 | 0 | 1 |
| **36** | D+35 | (o) Antimalarials–Cinchona. | 1 | 0 | 0 | 1 |
| **37** | D+36 | (p) Oxytocics-Ergot. | 1 | 0 | 0 | 1 |
| **38** | D+37 | (q) Vitamines-Shark liver Oil and Amla. | 1 | 0 | 0 | 1 |
| **39** | D+38 | Tutorial | 0 | 1 | 0 | 1 |
| **40** | D+39 | (r) Enzymes-Papaya, Diastase, Yeast. | 1 | 0 | 0 | 1 |
| **41** | D+40 | (s) Perfumes and flavouring agents –Peppermint Oil,  Lemon Oil, Orange Oil | 1 | 0 | 0 | 1 |
| **42** | D+41 | Lemon grass Oil, Sandalwood. | 1 | 0 | 0 | 1 |
| **43** | D+42 | (t) Pharmaceutical aids-Honey, Arachis Oil, | 1 | 0 | 0 | 1 |
| **44** | D+43 | Starch, Kaolin, Pectin, Olive oil, | 1 | 0 | 0 | 1 |
| **45** | D+44 | Lanolin, Beeswax, Acacia, | 1 | 0 | 0 | 1 |
| **46** | D+45 | Tutorial | 0 | 1 | 0 | 1 |
|  |  | **TOTAL** | **18** | **4** |  | **22** |
| **47** | D+46 | Tragacanth, Sodium alginate | 1 | 0 | 0 | 1 |
| **48** | D+47 | Agar, Guar gum, Gelatin. | 1 | 0 | 0 | 1 |

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| --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |
| **49** | D+48 | (u) Miscellaneous–Liquorice, Garlic, | 1 | 0 | 0 | 1 |
| **50** | D+49 | Picrorhiza, Dioscorea, | 1 | 0 | 0 | 1 |
| **51** | D+50 | Linseed, Shatavari, | 1 | 0 | 0 | 1 |
| **52** | D+50 | Shankhapusphi, Pyrethrum, Tobacco. | 1 | 0 | 0 | 1 |
| **53** | D+51 | **Tutorial** | 0 | 1 | 0 | 1 |
| **54** | D+52 | Collection and preparation of crude drug for the market as exemplified by Ergot, opium, Rauwolfia, Digitalis, Senna. | 1 | 0 | 0 | 1 |
| **55** | D+53 | Study of source, preparation and identification of  fibres…….. | 1 | 0 | 0 | 1 |
| **56** | D+53 | used in sutures and surgical dressings—cotton, silk, | 1 | 0 | 0 | 1 |
| **57** | D+54 | wool and regenerated fibre. | 1 | 0 | 0 | 1 |
| **58** | D+55 | **Tutorial** | 0 | 1 | 0 | 1 |
| **59** | D+56 | Gross anatomical studies of Senna, Datura, | 1 | 0 | 0 | 1 |
| **60** | D+57 | Cinnamon, Cinchona, | 1 | 0 | 0 | 1 |

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| --- | --- | --- | --- | --- | --- | --- | --- |
| **61** | D+58 | Fennel, Clove, Ginger, Nux vomica | 1 | 0 | 0 | 1 |  |
| **62** | D+59 | Ipecacuanha. | 1 | 0 | 0 |  | 1 |

Signature of faculty

**SARASWATI MODERN COLLEGE OF PHARMACY MOHNA**

# Lesson Plan

Program- D.Pharm year- 1st year

**Course PHARMACOGNOSY**

Session - 2020-21

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **S. No.** | **Day** | **Subject** | **L** | **T** | **P** | **Total** |
| **1** | D Day | To study the parts of compound microscope. | 0 | 0 | 0 | 0 |
| **2** | D+1 | To study the morphology of Rauwolfia and Vinca. | 0 | 0 | 4 | 4 |
| **3** | D+2 | To study the morphology of Coriander and Fennel. | 0 | 0 | 4 | 4 |
| **4** | D+3 | To study the morphorlogy of Rhubarb and Isphagula. | 0 | 0 | 4 | 4 |
| **5** | D+4 | To study the morphology of Ashwagandha and Nux- vomica. | 0 | 0 | 4 | 4 |
| **6** | D+5 | To study the morphology of Gokhru and Black pepper. | 0 | 0 | 4 | 4 |
| **7** | D+6 | To study the morphology of Aloe and Castor oil. | 0 | 0 | 4 | 4 |
| **8** | D+7 | To study the morphology of Clove and Ginger. | 0 | 0 | 4 | 4 |
| **9** | D+8 | To perform the identification tests for alkaloids. | 0 | 0 | 4 | 4 |
| **10** | D+9 | To study the morphology of Tulsi and Neem. | 0 | 0 | 4 | 4 |
| **11** | D+10 | To study the morphology of Guggul and Amla. | 0 | 0 | 4 | 4 |
|  |  | **TOTAL** |  |  |  | **40** |
| **12** | D+11 | To study the transverse section of Clove. | 0 | 0 | 4 | 4 |
| **13** | D+12 | To study the microscopy of Datura leaf. | 0 | 0 | 4 | 4 |
| **14** | D+13 | To study the transverse section of Fennel. | 0 | 0 | 4 | 4 |

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| --- | --- | --- | --- | --- | --- | --- |
| **15** | D+14 | To study the transverse section of Senna leaf. | 0 | 0 | 4 | 4 |
| **16** | D+15 | To study the transverse section of Nux-vomica seed. | 0 | 0 | 4 | 4 |
| **17** | D+16 | To study the transverse section of Ipecacuanha. | 0 | 0 | 4 | 4 |
| **18** | D+17 | To study the morphorlogy of Senna and Belladona. | 0 | 0 | 4 | 4 |
| **19** | D+18 | To study the morphorlogy of Ipecac and Punarnava. | 0 | 0 | 4 | 4 |
| **20** | D+19 | To study the morphorlogy of Shatavari and  Shankhpushpi. | 0 | 0 | 4 | 4 |
| **21** | D+20 | To study the morphorlogy of Digitalis and Arjuna. | 0 | 0 | 4 | 4 |
| **22** | D+21 | To study the morphorlogy of Datura and Liquorice. | 0 | 0 | 4 | 4 |
| **23** | D+22 | To perform the identification tests for starch, tragacanth  and agar. | 0 | 0 | 4 | 4 |
| **24** | D+23 | To study the various types of calcium oxalate crystals in  powdered drug.i.e. Liquorice& Rhubarb. | 0 | 0 | 4 | 4 |
| **25** | D+24 | To study the morphological and microscopical (powder)  characters of Liquorice along with its chemical test. | 0 | 0 | 4 | 4 |
| **26** | D+25 | To study the morphological and microscopical (powder)  characters of Rhubarb along with its chemical test. | 0 | 0 | 4 | 4 |
| **27** | D+26 | To determine the swelling index of Isabgol seeds. | 0 | 0 | 4 | 4 |
| **28** | D+27 | To determine the ash value, total ash for given plant  sample-Cinchona. | 0 | 0 | 4 | 4 |
| **29** | D+28 | To determine the LOD (Loss on Drying) for given  powder sample i.e. Coriander and Liquorice. | 0 | 0 | 4 | 4 |
|  |  | **TOTAL** |  |  |  | **72** |

Signature of faculty



**SARASWATI MODERN COLLEGE OF PHARMACY MOHNA**

**Lesson plan**

**Program- DIPLOMA IN PHARMACY**

Course- BIOCHEMISTRY AND CLINICAL PATHOLOGY

Session- 2020-2021

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **S. No.** | **Day** | **Subject** | **L** | **T** | **P** | **Total** |
| **1** | D Day |  |  |  |  |  |
| **2** | D+1 | Introduction about biochemistry | 1 | 0 | 0 | 1 |
| **3** | D+2 | Chemistry of proteins and qualitative test for proteins | 1 | 0 | 0 | 1 |
| **4** | D+3 | Role and functions of proteins and its deficiency diseases | 1 | 0 | 0 | 1 |
| **5** | D+4 | Role and functions of proteins and its deficiency diseases | 1 | 0 | 0 | 1 |
| **6** | D+5 | Problem Solving Session/ class test | 0 | 1 | 0 | 1 |
| **7** | D+6 | Chemistry of polypeptides and amino acids | 1 | 0 | 0 | 1 |
| **8** | D+7 | Classification of amino acids and polypeptides | 1 | 0 | 0 | 1 |
| **9** | D+8 | Qualitative tests of amino acids | 1 | 0 | 0 | 1 |
| **10** | D+9 | Deficiency Diseases of amino acids and polypeptides | 1 | 0 | 0 | 1 |
| **11** | D+10 | Problem Solving Session/ class test | 0 | 1 | 0 | 1 |
| **12** | D+11 | Chemistry of carbohydrates | 1 | 0 | 0 | 1 |
| **13** | D+12 | Role of carbohydrates | 1 | 0 | 0 | 1 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **14** | D+13 | Qualitative tests for carbohydrates | 1 | 0 | 0 | 1 |
| **15** | D+14 | Diseases related to carbohydrates metabolism | 1 | 0 | 0 | 1 |
| **16** | D+15 | Problem Solving Session/ class test | 0 | 1 | 0 | 1 |
| **17** | D+16 | Classification of carbohydrates | 1 | 0 | 0 | 1 |
| **18** | D+17 | Diseases related to deficiency of amino acids | 1 | 0 | 0 | 1 |
| **19** | D+18 | Chemistry of amino acids | 1 | 0 | 0 | 1 |
| **20** | D+19 | Chemistry of polypeptides | 1 | 0 | 0 | 1 |
| **21** | D+20 | Qualitatively test for carbohydrates | 1 | 0 | 0 | 1 |
| **22** | D+21 | Problem Solving Session/class test | 0 | 1 | 0 | 1 |
|  |  | TOTAL | 17 | 04 | 0 | 21 |
| **23** | D+22 | Chemistry of lipids | 1 | 0 | 0 | 1 |
| **24** | D+23 | Role of lipids | 1 | 0 | 0 | 1 |
| **25** | D+24 | Classification of lipids | 1 | 0 | 0 | 1 |
| **26** | D+25 | Problem Solving Session/ class test | 0 | 1 | 0 | 1 |
| **27** | D+26 | Diseases related to lipid metabolism | 1 | 0 | 0 | 1 |
| **28** | D+27 | Qualitative test for lipids | 1 | 0 | 0 | 1 |
| **29** | D+28 | Qualitative test for lipids | 1 | 0 | 0 | 1 |
| **30** | D+29 | Important and function of lipids | 1 | 0 | 0 | 1 |
| **31** | D+30 | Problem Solving Session/ class test | 0 | 1 | 0 | 1 |

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| --- | --- | --- | --- | --- | --- | --- |
| **S. No.** | **Day** | **Subject** | **L** | **T** | **P** | **Total** |
| **32** | D Day |  |  |  |  |  |
| **33** | D+31 | chemistry of Vitamins | 1 | 0 | 0 | 1 |
| **34** | D+32 | Problem Solving Session/ class test | 0 | 1 | 0 | 1 |
| **35** | D+33 | Importance and function of Vitamins | 1 | 0 | 0 | 1 |
| **36** | D+34 | Important types of vitamin body required balance diet | 1 | 0 | 0 | 1 |
| **37** | D+35 | Problem Solving Session/ class test | 0 | 1 | 0 | 1 |
| **38** | D+36 | Chemistry of Coenzymes | 1 | 0 | 0 | 1 |
| **39** | D+37 | Importance of Coenzymes | 1 | 0 | 0 | 1 |
| **40** | D+38 | Functions of Coenzymes | 1 | 0 | 0 | 1 |
| **41** | D+39 | Role of Vitamins | 1 | 0 | 0 | 1 |
| **42** | D+40 | Problem Solving Session/ class test | 0 | 1 | 0 | 1 |
| **43** | D+41 | Role of minerals in life processes | 1 | 0 | 0 | 1 |
| **44** | D+42 | Classification of minerals | 1 | 0 | 0 | 1 |
| **45** | D+43 | Functions of minerals and its uses | 1 | 0 | 0 | 1 |
| **46** | D+44 | Importance of water and its resources | 1 | 0 | 0 | 1 |
| **47** | D+45 | Problem Solving Session/ class test | 0 | 1 | 0 | 1 |
| **48** | D+46 | Functions of Water | 1 | 0 | 0 | 1 |

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| --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |
| **49** | D+47 | Role of Water in life processes | 1 | 0 | 0 | 1 |
| **50** | D+48 | Problem Solving Session/ class test | 0 | 1 | 0 | 1 |
|  |  | TOTAL | 20 | 07 | 0 | 27 |

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| --- | --- | --- | --- | --- | --- | --- |
| **S. No.** | **Day** | **Subject** | **L** | **T** | **P** | **Total** |
| **51** | D Day |  |  |  |  |  |
| **52** | D+49 | Enzymes and its types | 1 | 0 | 0 | 1 |
| **53** | D+50 | Functions of enzymes | 1 | 0 | 0 | 1 |
| **54** | D+51 | Factor affecting enzymatic action | 1 | 0 | 0 | 1 |
| **55** | D+52 | Therapeutic and pharmaceutical importance of enzymes | 1 | 0 | 0 | 1 |
| **56** | D+53 | Problem Solving Session/ class test | 0 | 1 | 0 | 1 |
| **57** | D+54 | Concept of normal and abnormal metabolism of proteins | 1 | 0 | 0 | 1 |
| **58** | D+55 | Concept of Metabolism of Carbohydrates | 1 | 0 | 0 | 1 |
| **59** | D+56 | Concept of Metabolism of Lipids | 1 | 0 | 0 | 1 |
| **60** | D+57 | Importance of balance diet | 1 | 0 | 0 | 1 |
| **61** | D+58 | Problem Solving Session/ class test | 0 | 1 | 0 | 1 |
|  |  | TOTAL | 08 | 2 | 0 | 10 |
| **62** | D+59 | Introduction, pathology of blood | 1 | 0 | 0 | 1 |
| **63** | D+60 | Introduction and pathology of urine | 1 | 0 | 0 | 1 |
| **64** | D+61 | Lymphocytes their role in health and disease | 1 | 0 | 0 | 1 |
| **65** | D+62 | Platelets their role in health and disease | 1 | 0 | 0 | 1 |
| **66** | D+63 | Problem Solving Session/ class test | 0 | 1 | 0 | 1 |
| **67** | D+64 | Function of erythrocytes | 1 | 0 | 0 | 1 |
| **68** | D+65 | Erythrocytes abnormal cells and their significance | 1 | 0 | 0 | 1 |
| **69** | D+66 | Concept of abnormal constituents of urine and their significance in diseases. | 1 | 0 | 0 | 1 |
| **70** | D+67 | Erythrocytes importance and function | 1 | 0 | 0 | 1 |
| **71** | D+68 | Problem Solving Session/ class test | 0 | 1 | 0 | 1 |
|  |  | TOTAL | 08 | 2 | 0 | 10 |

Signature Faculty

**SARASWATI MODERN COLLEGE OF PHARMACY MOHNA**

**Lesson plan**

**Program- DIPLOMA OF PHARMACY**

**D.Pharma- Ist Year**

**Course- BIOCHEMISTRY AND CLINICAL PATHOLOGY**

**Session- 2020-2021**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **S. No.** | **Day** | **Subject** | **L** | **T** | **P** | **Total** |
| **1** | D Day |  |  |  |  |  |
| **2** | D+1 | To determine the identification test for carbohydrate  (Glucose). | 0 | 0 | 4 | 4 |
| **3** | D+2 | To determine the identification test for carbohydrate  (fructose). | 0 | 0 | 4 | 4 |
| **4** | D+3 | To determine the identification test for protein. | 0 | 0 | 4 | 4 |
| **5** | D+4 | To determine the identification test for lipid (Paraffin oil) | 0 | 0 | 4 | 4 |
| **6** | D+5 | To determine the identification test for lipid (peppermint  oil). | 0 | 0 | 4 | 4 |
| **7** | D+6 | To determine the identification test for carbohydrates in unknown solution. | 0 | 0 | 4 | 4 |
| **8** | D+7 | To perform physical test for urine. | 0 | 0 | 4 | 4 |
| **9** | D+8 | To identify the normal inorganic constituents in the  urine. | 0 | 0 | 4 | 4 |
| **10** | D+9 | To identify the normal organic constituents in the urine. | 0 | 0 | 4 | 4 |
| **11** | D+10 | To perform the qualitative test for abnormal constituents  in the urine. | 0 | 0 | 4 | 4 |
| **12** | D+11 | To analyze the sample of saliva. | 0 | 0 | 4 | 4 |
| **13** | D+12 | To calculate the Rf value to given amino acid by the thin layer chromatography. | 0 | 0 | 4 | 4 |

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| --- | --- | --- | --- | --- | --- | --- |
| **16** | D+15 | To perform the chemical and physical test for cholesterol ( stearic acid ). | 0 | 0 | 4 | 4 |
| **17** | D+ 17 | To perform the identification test for the given lipid sample ( Bee Wax). | 0 | 0 | 4 | 4 |
| **18** | D+18 | To perform the study of estimation of glucose in the blood. | 0 | 0 | 4 | 4 |
| **19** | D+19 | To perform the study of determination of creatinine in  the blood. | 0 | 0 | 4 | 4 |
| **20** | D+20 | To perform the identification test for carbohydrates (Dextrose). | 0 | 0 | 4 | 4 |
| **21** | D+21 | To perform the practice in injecting the drug by I.V and  I.M. | 0 | 0 | 4 | 4 |
|  |  | TOTAL | 0 | 0 | 84 | 84 |

Signature Faculty

**SARASWATI MODERN COLLEGE OF PHARMACY MOHNA**

Lesson Plan

**Program:- D.Pharm**

**Year :- 1st year**

**Course:- HUMAN ANATOMY AND PHYSIOLOGY**

**Session:- 2020-21**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **S. No.** | **Day** | **Subject** | **L** | **T** | **P** | **Total** |
| **1** | D Day |  |  |  |  |  |
| **2** | D+1 | Scope of Anatomy and Physiology. | 1 | 0 | 0 | 1 |
| **3** | D+2 | Definition of various terms used in anatomy. | 1 | 0 | 0 | 1 |
| **4** | D+3 | Structure and functions of cell. | 1 | 0 | 0 | 1 |
| **5** | D+4 | Cell Membrane | 1 | 0 | 0 | 1 |
| **6** | D+5 | Cell organelles | 1 | 0 | 0 | 1 |
| **7** | D+6 | Tutorial | 0 | 1 | 0 | 1 |
| **8** | D+7 | Structure of cytoplasm and nucleus. | 1 | 0 |  | 1 |
| **9** | D+8 | Structure and function of mitochondria and golgi complex. | 1 | 0 | 0 | 1 |
| **10** | D+9 | Structure and functions of lysosomes and ribosomes | 1 | 0 | 0 | 1 |
| **11** | D+10 | Tutorial | 0 | 1 | 0 | 1 |

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| --- | --- | --- | --- | --- | --- | --- |
| **12** | D+11 | Difference between prokaryotic and eukaryotic cell | 1 | 0 | 0 | 1 |
| **13** | D+12 | **Elementary tissues of the body** | 1 | 0 | 0 | 1 |
| **14** | D+13 | Tutorial | 0 | 1 | 0 | 1 |
| **15** | D+14 | Epithelial tissue | 1 | 0 | 0 | 1 |
| **16** | D+15 | Muscular tissue, | 1 | 0 | 0 | 1 |
| **17** | D+16 | Connective tissue, | 1 | 0 | 0 | 1 |
| **18** | D+17 | Nervous tissue | 1 | 0 | 0 | 1 |
| **19** | D+18 | Structure and function of skeleton. | 1 | 0 | 0 | 1 |
| **20** | D+19 | Tutorial | 0 | 1 | 0 | 1 |
| **21** | D+20 | Classification of joints | 1 | 0 | 0 | 1 |
| **22** | D+21 | Functions of joints | 1 | 0 | 0 | 1 |
| **23** | D+22 | Joint disorders | 1 | 0 | 0 | 0 |
|  |  | **TOTAL** | **18** | **4** |  | 22 |
| **24** | D+23 | **Description about blood** | 1 | 0 | 0 | 0 |
| **25** | D+24 | Composition of blood | 1 | 0 | 0 | 1 |
| **26** | D+25 | RBC, WBC and Platelets | 1 | 0 | 0 | 1 |
| **27** | D+26 | Functions of blood elements. | 1 | 0 | 0 | 1 |
| **28** | D+27 | **Tutorial** | 0 | 1 | 0 | 1 |
| **29** | D+28 | Blood group. | 1 | 0 | 0 | 1 |
| **30** | D+29 | Coagulation of blood | 1 | 0 | 0 | 1 |
| **31** | D+30 | Brief information regarding disorders of blood | 1 | 0 | 0 | 1 |
| **32** | D+31 | Name of lymph glands | 1 | 0 | 0 | 1 |
| **33** | D+32 | Tutorial | 0 | 1 | 0 | 1 |
| **34** | D+33 | Functions of lymph glands | 1 | 0 | 0 | 1 |
| **35** | D+34 | Structure of various parts of heart | 1 | 0 | 0 | 1 |
| **36** | D+35 | Functions of various parts of heart | 1 | 0 | 0 | 1 |
| **37** | D+36 | Arterial system of heart with reference to name of main arteries | 1 | 0 | 0 | 1 |

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| --- | --- | --- | --- | --- | --- | --- |
| **38** | D+37 | Tutorial | 0 | 1 | 0 | 1 |
| **39** | D+38 | Venous system of heart with reference to name of main veins | 1 | 0 | 0 | 1 |
| **40** | D+39 | Blood pressure and its recording | 1 | 0 | 0 | 1 |
| **41** | D+40 | Brief information about cardiovascular disorders | 1 | 0 | 0 | 1 |
| **42** | D+41 | Cardiovascular disorders | 1 | 0 | 0 | 1 |
| **43** | D+42 | **Various parts of respiratory system and their functions** | 1 | 0 | 0 | 1 |
| **44** | D+43 | Structure and functions of respiratory tract | 1 | 0 | 0 | 1 |
| **45** | D+44 | Tutorial | 0 | 1 | 0 | 1 |
| **46** | D+45 | Class test | 1 | 0 | 0 | 1 |
| **47** | D+46 | Physiology of respiration | 1 | 0 | 0 | 1 |
|  |  | **TOTAL** | **20** | **4** |  | **24** |
| **48** | D+47 | Urinary system | 1 | 0 | 0 | 1 |
| **49** | D+48 | **Various parts of urinary system and their functions** | 1 | 0 | 0 | 1 |
| **50** | D+49 | Structure and function of kidney | 1 | 0 | 0 | 1 |
| **51** | D+50 | Physiology of urine formation | 1 | 0 | 0 | 1 |
| **52** | D+51 | **Tutorial** | 0 | 1 | 0 | 1 |
| **53** | D+52 | Pathophysiology of renal diseases | 1 | 0 | 0 | 1 |
| **54** | D+53 | Pathophysiology of edema | 1 | 0 | 0 | 1 |
| **55** | D+54 | Class test | 1 | 0 | 0 | 1 |
| **56** | D+55 | **Structure of skeletal muscle** | 1 | 0 | 0 | 1 |
| **57** | D+56 | **Tutorial** | 0 | 1 | 0 | 1 |
| **58** | D+57 | Physiology of muscle contraction | 1 | 0 | 0 | 1 |
| **59** | D+58 | Names and position of various skeletal muscles | 1 | 0 | 0 | 1 |
| **60** | D+59 | Class test | 1 | 0 | 0 | 1 |
| **61** | D+60 | Attachment and functions of various skeletal muscles | 1 | 0 | 0 | 1 |
| **62** | D+61 | **Tutorial** | 0 | 1 | 0 | 1 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **63** | D+62 | Physiology of neuromuscular junction | 1 | 0 | 0 | 1 |
| **64** | D+63 | **Various parts of central nervous system** | 1 | 0 | 0 | 1 |
| **65** | D+64 | Brain and its parts | 1 | 0 | 0 | 1 |
| **66** | D+65 | Class test | 1 | 0 | 0 | 1 |
| **67** | D+66 | Functions and reflex action | 1 | 0 | 0 | 1 |
| **68** | D+67 | Anatomy and physiology of autonomic nervous system | 1 | 0 | 0 | 1 |
| **69** | D+68 | **Tutorial** | 0 | 1 | 0 | 1 |
|  |  | Total | 18 | 4 |  | 22 |
| **70** | D+69 | **Elementary knowledge of structure and functions of the organs** of taste and smell | 1 | 0 | 0 | 1 |
| **71** | D+70 | Structure and functions of the organs of ear, eye and skin  continue… | 1 | 0 | 0 | 1 |
| **72** | D+71 | Structure and functions of the organs of ear, eye and skin | 1 | 0 | 0 | 1 |
| **73** | D+72 | Physiology of pain | 1 | 0 | 0 | 1 |

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| --- | --- | --- | --- | --- | --- | --- |
| **74** | D+73 | **Tutorial** | 0 | 1 | 0 | 1 |
| **75** | D+74 | **Digestive system** | 1 | 0 | 0 | 1 |
| **76** | D+75 | Names of various parts of digestive system and their functions | 1 | 0 | 0 | 1 |
| **77** | D+76 | Class test | 1 | 0 | 0 | 1 |
| **78** | D+77 | Structure and functions of liver | 1 | 0 | 0 | 1 |
| **79** | D+78 | **Tutorial** | 0 | 1 | 0 | 1 |
| **80** | D+79 | Physiology of digestion | 1 | 0 | 0 | 1 |
| **81** | D+80 | And physiology of absorption | 1 | 0 | 0 | 1 |
| **82** | D+81 | Class test | 1 | 0 | 0 | 1 |
| **83** | D+82 | **Endocrine glands and hormones.** location of glands | 1 | 0 | 0 | 1 |
| **84** | D+83 | Location and functions of pituitary gland | 1 | 0 | 0 | 1 |

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| --- | --- | --- | --- | --- | --- | --- |
| **85** | D+84 | Tutorial | 0 | 1 | 0 | 1 |
| **86** | D+85 | Class test | 1 | 0 | 0 | 1 |
| **87** | D+86 | Location and function of thyroid gland and its hormones | 1 | 0 | 0 | 1 |
| **88** | D+87 | Location and functions of adrenal gland | 1 | 0 | 0 | 1 |
| **89** | D+88 | Location and functions of Pancreas and its hormones | 1 | 0 | 0 | 1 |
| **90** | D+89 | Tutorial | 0 | 1 | 0 | 1 |
| **91** | D+90 | **Reproductive system**- Anatomy and Physiology of Reproductive system continue… | 1 | 0 | 0 | 1 |
| **92** | D+91 | Anatomy and physiology of reproductive system | 1 | 0 | 0 | 1 |
| **93** | D+92 | Tutorial | 0 | 1 | 0 | 1 |
|  |  | Total | 19 | 5 |  | 24 |

Signature of faculty

**Program- D.Pharm**

**SARASWATI MODERN COLLEGE OF PHARMACY MOHNA**

**Lesson plan**

**year- 1st year**

**Course name HUMAN ANATOMY AND PHYSIOLOGY**

Session - 2020-21

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **S. No.** | **Day** | **Subject** | **L** | **T** | **P** | **Total** |
| **1** | D Day | To study the human skeleton system with the help of charts and models. | 0 | 0 | 0 | 0 |
| **2** | D+1 | To study the compound microscope. | 0 | 0 | 4 | 4 |
| **3** | D+2 | To find the bleeding time of our own sample. | 0 | 0 | 4 | 4 |
| **4** | D+3 | To find the clotting time of our own sample. | 0 | 0 | 4 | 4 |
| **5** | D+4 | To determine the blood pressure of a person. | 0 | 0 | 4 | 4 |
| **6** | D+5 | To estimate the own body temperature. | 0 | 0 | 4 | 4 |
| **7** | D+6 | To record the pulse rate. | 0 | 0 | 4 | 4 |
| **8** | D+7 | To determine the amount of haemoglobin in human blood sample. | 0 | 0 | 4 | 4 |
| **9** | D+8 | To count the RBCs in our own blood sample by haemocytometer. | 0 | 0 | 4 | 4 |
| **10** | D+9 | To count the WBCs in our own blood sample. | 0 | 0 | 4 | 4 |
| **11** | D+10 | To study the blood glucose level with the help of glucometer. | 0 | 0 | 4 | 4 |

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| --- | --- | --- | --- | --- | --- | --- |
|  |  | **TOTAL** |  |  |  | **44** |
| **13** | D+12 | To study the respiratory system. | 0 | 0 | 4 | 4 |
| **14** | D+13 | To study the Nervous system. | 0 | 0 | 4 | 4 |
| **15** | D+14 | To study the digestive system. | 0 | 0 | 4 | 4 |
| **16** | D+15 | To study the cardiovascular system. | 0 | 0 | 4 | 4 |
| **17** | D+16 | To study the urinary system. | 0 | 0 | 4 | 4 |
| **18** | D+17 | To study the special sense organs (Ear & Eye). | 0 | 0 | 4 | 4 |
| **19** | D+18 | To study smooth muscle with the help of microscope . | 0 | 0 | 4 | 4 |
| **20** | D+19 | To study cardiac muscle with the help of microscope. | 0 | 0 | 4 | 4 |
| **21** | D+20 | To study the nervous and muscular tissue with the help of microscope. | 0 | 0 | 4 | 4 |
| **22** | D+21 | To study the Epithelial and connective tissue with the help of microscope. | 0 | 0 | 4 | 4 |
| **23** | D+22 | To study the histology of taste buds and salivary glands. | 0 | 0 | 4 | 4 |
| **24** | D+23 | To study the histology of endocrine glands. | 0 | 0 | 4 | 4 |
|  |  | **TOTAL** |  |  |  | **48** |

**SARASWATI MODERN COLLEGE OF PHARMACY MOHNA**

**Lesson Plan**

**Program-DIPLOMA IN PHARMACY**

**Year - Istyr**

**Course-HEALTH EDUCATION & COMMUNITY PHARMACY**

**Session-2020-21**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **S. No.** | **Day** | **Subject** | **L** | **T** | **Total** |
| **1** | D+1 | Definition of physical health, mental health, social health, spiritual health | 1 | 0 | 1 |
| **2** | D+2 | Determinants of health, indicators of health | 1 | 0 | 1 |
| **3** | D+3 | Concept of disease | 1 | 0 | 1 |
| **4** | D+4 | Discussion Session/ Revision/Class Test | 0 | 1 | 1 |
| **5** | D+5 | Natural history of diseases | 1 | 0 | 1 |
| **6** | D+6 | The disease agents | 1 | 0 | 1 |
| **7** | D+7 | Concept of prevention of diseases | 1 | 0 | 1 |
| **8** | D+8 | Discussion Session/ Revision/Class Test | 0 | 1 | 1 |
| **9** | D+9 | Classification of foods requirements | 1 | 0 | 1 |
| **10** | D+10 | Disease induced due to deficiency of Proteins | 1 | 0 | 1 |
| **11** | D+11 | Disease induced due to deficiency of Vitamins | 1 | 0 | 1 |
| **12** | D+12 | Discussion Session/ Revision/Class Test | 0 | 1 | 1 |
| **13** | D+13 | Disease induced due to deficiency of minerals | 1 | 0 | 1 |
| **14** | D+14 | Treatment and prevention | 1 | 0 | 1 |
| **15** | D+15 | Treatment and prevention | 1 | 0 | 1 |
| **16** |  | **TOTAL CLASS** | **12** | **3** | **15** |
| **17** | D+16 | Discussion Session/ Revision/Class Test | 0 | 1 | 1 |
| **18** | D+17 | Demography cycle, fertility, family planning | 1 | 0 | 1 |
| **19** | D+18 | Contraceptive methods | 1 | 0 | 1 |
| **20** | D+19 | Behavioral methods | 1 | 0 | 1 |
| **21** | D+20 | Discussion Session/ Revision/Class Test | 0 | 1 | 1 |
| **22** | D+21 | Natural family planning method | 1 | 0 | 1 |
| **23** | D+22 | Hormonal contraceptives | 1 | 0 | 1 |
| **24** | D+23 | Emergency treatment in shock, snake-bite, burns poisoning,  heart disease | 1 | 0 | 1 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **25** | D+24 | Discussion Session/ Revision/Class Test | 0 | 1 | 1 |
| **26** | D+25 | Fractures and resuscitation methods | 1 | 0 | 1 |
| **27** | D+26 | Sources of water supply, water pollution, purification of water, health and air | 1 | 0 | 1 |
| **28** | D+27 | Noise light–solid waste disposal and control –medical  entomology | 1 | 0 | 1 |
| **29** | D+28 | Discussion Session/ Revision/Class Test | 0 | 1 | 1 |
| **30** | D+29 | Arthropod borne diseases and their control | 1 | 0 | 1 |
| **31** | D+ 30 | Rodents, animals and diseases | 1 | 0 | 1 |
| **32** | D+31 | Chemical method, mechanical methods | 1 | 0 | 1 |
| **33** | D+32 | Elements of minor surgery and dressings | 1 | 0 | 1 |
| **34** | D+33 | Discussion Session/ Revision/Class Test | 0 | 1 | 1 |
| **35** | D+34 | Population problem of India | 1 | 0 | 1 |
| **36** | D+35 | Discussion Session/ Revision/Class Test | 0 | 1 | 1 |
| **37** |  | **Total Class** | **14** | **6** | **20** |
| **38** | D+36 | Fundamental principles of microbiology classification of  microbes | 1 | 0 | 1 |
| **39** | D+37 | isolation, staining techniques of organisms of common diseases | 1 | 0 | 1 |
| **40** | D+38 | Communicable diseases,Causative agents | 1 | 0 | 1 |
| **41** | D+39 | Discussion Session/ Revision/Class Test | 0 | 1 | 1 |
| **42** | D+40 | Modes of transmission and prevention | 1 | 0 | 1 |
| **43** | D+41 | Respiratory infections—Chicken pox, measles | 1 | 0 | 1 |
| **44** | D+42 | Influenza, diphtheria, whooping cough, Tuberculosis | 1 | 0 | 1 |
| **45** | D+43 | Discussion Session/ Revision/Class Test | 0 | 1 | 1 |
| **46** | D+44 | Arthropod borne infections –plague, Malaria, Filariasis | 1 | 0 | 1 |
| **47** | D+45 | Surface infections –Rabies, Trachoma, Tetanus, and  Leprosy | 1 | 0 | 1 |
| **48** | D+46 | Sexually transmitted diseases –Syphilis. Gonorrhea. AIDS | 1 | 0 | 1 |
| **49** | D+47 | Discussion Session/ Revision/Class Test | 0 | 1 | 1 |
| **50** | D+48 | Typhoid, Food poisoning, Hookworm infection. | 1 | 0 | 1 |
| **51** |  | Total Class | **10** | **3** | **13** |
| **52** | D+49 | Non-communicable diseases –Causative agents, prevention, care and control | 1 | 0 | 1 |
| **53** | D+50 | Cancer, Diabetes, Blindness | 1 | 0 | 1 |
| **54** | D+51 | Cardiovascular diseases | 1 | 0 | 1 |
| **55** | D+52 | Discussion Session/ Revision/Class Test | 0 | 1 | 1 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **56** | D+53 | Epidemiology– Its scope, methods, uses, and dynamics of disease transmission | 1 | 0 | 1 |
| **57** | D+54 | Immunity and immunization | 1 | 0 | 1 |
| **58** | D+55 | Immunological products and their dose schedule | 1 | 0 | 1 |
| **59** | D+56 | Discussion Session/ Revision/Class Test | 0 | 1 | 1 |
| **60** | D+57 | Principles of disease control and prevention, hospital  acquired infection, prevention and control | 1 | 0 | 1 |
| **61** | D+58 | Disinfection, types of disinfection, disinfection procedures,  for faeces, urine, sputum | 1 | 0 | **1** |
| **62** | D+59 | Room linen, dead –bodies, instruments | 1 | 0 | 1 |
| **63** | D+60 | Discussion Session/ Revision/Class Test | 0 | 1 | 1 |
| **64** |  | **Total Class** | **9** | **3** | **12** |

Signature Faculty

**SARASWATI MODERN COLLEGE OF PHARMACY MOHNA**

## Lesson Plan

**Program- D.Pharm year- 2nd year**

**Course PHARMACEUTICS-II**

**Session - 2020-21**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **S. No.** | **Day** | **Subject** | | | | | | | **L** | **T** | **P** | **Total** |
| **1** | D Day | **1. Dispensing Pharmacy:**  **(i) Prescriptions –**Reading and understanding of prescription; | | | | | | | 1 | 0 | 0 | 1 |
| **2** | D+1 | Latin terms  necessary), | commonly | used | (Detailed | study | is | not | 1 | 0 | 0 | 1 |
| **3** | D+2 | Modern methods of prescribing, | | | | | | | 1 | 0 | 0 | 1 |
| **4** | D+3 | adoption of metric system. | | | | | | | 1 | 0 | 0 | 1 |
| **5** | D+4 | Calculations involved in dispensing. | | | | | | | 1 | 0 | 0 | 1 |
| **6** | D+5 | **(ii) Incompatibilities in Prescriptions –**Study of various types of incompatibilities –physical | | | | | | | 1 | 0 | 0 | 1 |
| **7** | D+6 | **Tutorial** | | | | | | | 0 | 1 | 0 | 1 |
| **8** | D+7 | Chemical and therapeutic incompatibility | | | | | | | 1 | 0 | 0 | 1 |
| **9** | D+8 | **(iii) Posology—**Dose and Dosage of drugs, Factors  influencing dose, | | | | | | | 1 | 0 | 0 | 1 |
| **10** | D+9 | Calculations of doses on the basis of age sex and surface area. Veterinary doses. | | | | | | | 1 | 0 | 0 | 1 |
| **11** | D+10 | **2. Dispensed Medications:**  **(Note: A detailed study of the following dispensed** | | | | | | | 1 | 0 | 0 | 1 |

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|  |  | **medication is necessary. Methods of preparation with theoretical and practical aspects, use of appropriate containers and closures. Special labelling requirements and storage conditions should be high –lighted).** |  |  |  |  |
| **12** | D+11 | **Tutorial** | 0 | 1 | 0 | 1 |
| **13** | D+12 | **(i) Powders –**Types of powders –Advantages and  disadvantages of powders, Granules, Cachets | 1 | 0 | 0 | 1 |
| **14** | D+13 | and Tablet triturates. | 1 | 0 | 0 | 1 |
| **15** | D+14 | Preparation of different types of powders encountered in  prescriptions. | 1 | 0 | 0 | 1 |
| **16** | D+15 | Weighing methods, possible errors in weighing, | 1 | 0 | 0 | 1 |
| **17** | D+16 | minimum weighable amounts and weighing of material  below the minimum weighable amount, | 1 | 0 | 0 | 1 |
| **18** | D+17 | **Tutorial** | 0 | 1 | 0 | 1 |
| **19** | D+18 | geometric dilution and proper usage and care of dispensing  **balance.** | 1 | 0 | 0 | 1 |
| **20** | D+19 | **(ii) Liquid Oral Dosage Forms:**  **(a). Monophasic–**Theoretical aspects including commonly used vehicles, essential adjuvant like stabilizers, | 1 | 0 | 0 | 1 |
| **21** | D+20 | , colourants and flavours, with examples. | 1 | 0 | 0 | 1 |
| **22** | D+21 | Tutorial | 0 | 1 | 0 | 0 |
| **23** | D+22 | Review of the following monophasic liquids with details of formulation and practical methods.   * Liquids for internal administration | 1 | 0 | 0 | 1 |
| **24** | D+23 | * Liquids for external administration or used on mucus membranes. | 1 | 0 | 0 | 1 |
| **25** | D+24 | * Mixtures and concentrates * Gargles | 1 | 0 | 0 | 1 |
| **26** | D+25 | * Syrups * Mouth washes Throat –paints Douches | 1 | 0 | 0 | 1 |
| **27** | D+27 | **Tutorial** | 0 | 1 | 0 | 1 |
| **28** | D+28 | * Elixirs | 1 | 0 | 0 | 1 |

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| --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |
| **29** | D+29 | * Ear Drops Nasal drops & Sprays Liniments, Lotions. | 1 | 0 | 0 | 1 |
| **30** | D+30 | **(b) Biphasic Liquid Dosage Forms:**  **(i) Suspension (elementary study)-** Suspensions containing diffusible solids | 1 | 0 | 0 | 1 |
| **31** | D+31 | and liquids and their preparations. | 1 | 0 | 0 | 1 |
| **32** | D+32 | Tutorial | 0 | 1 | 0 | 1 |
| **33** | D+33 | Study of the adjuvants used like thickening agents, wetting  agents, | 1 | 0 | 0 | 1 |
| **34** | D+34 | their necessity and quantity to be incorporated. | 1 | 0 | 0 | 1 |
| **35** | D+35 | Suspensions of precipitate forming liquids like, tinctures,  their preparations and stability. | 1 | 0 | 0 | 1 |
| **36** | D+36 | Suspensions produced by chemical reaction | 1 | 0 | 0 | 1 |
| **37** | D+37 | Tutorial | 0 | 1 | 0 | 1 |
| **38** | D+38 | An introduction to flocculated, non-flocculated suspension  system. | 1 | 0 | 0 | 1 |
| **39** | D+39 | **(b) Biphasic Liquid Dosage Forms:**  **(ii) Emulsions –**Types of emulsions, identification of emulsion system, | 1 | 0 | 0 | 1 |
| **40** | D+40 | formulation of emulsions, selection of emulsifying agents. | 1 | 0 | 0 | 1 |
| **41** | D+41 | Instabilities in emulsions. Preservation of emulsions. | 1 | 0 | 0 | 1 |
| **42** | D+42 | Tutorial | 0 | 1 | 0 | 1 |
| **43** | D+43 | **(iii) Semi –Solid Dosage Forms:** | 1 | 0 | 0 | 1 |
| **44** | D+44 | **(a) Ointments–**Types of ointments, classification and  selection of dermatological vehicles. | 1 | 0 | 0 | 1 |
| **45** | D+45 | Preparation and stability of ointments by the following processes:  (i) Trituration (ii) Fusion | 1 | 0 | 0 | 1 |
| **46** | D+46 | (iii) Chemical reaction (iv) Emulsification. | 1 | 0 | 0 | 1 |
| **47** | D+47 | **Total** | **38** | **8** |  | **46** |
| **48** | D+48 | **(b) Pastes---** Difference between ointments and pastes,  bases of pastes. | 1 | 0 | 0 | 1 |
| **49** | D+49 | Preparation of pastes and their preservation. | 1 | 0 | 0 | 1 |

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| --- | --- | --- | --- | --- | --- | --- |
| **50** | D+50 | **(c) Jellies –**An introduction to the different types of jellies | 1 | 0 | 0 | 1 |
| **51** | D+51 | and their preparation. | 1 | 0 | 0 | 1 |
| **52** | D+52 | **Tutorial** | 0 | 1 | 0 | 1 |
| **53** | D+53 | **(d) An elementary study of poultice.** | 1 | 0 | 0 | 1 |
| **54** | D+54 | **(e) Suppositories and pessaries –**Their relative merits  and demerits, | 1 | 0 | 0 | 1 |
| **55** | D+55 | types ofsuppositories, | 1 | 0 | 0 | 1 |
| **56** | D+56 | **Tutorial** | 0 | 1 | 0 | 1 |
| **57** | D+57 | suppository bases, classification, properties, | 1 | 0 | 0 | 1 |
| **58** | D+58 | Preparation and packing of suppositories. | 1 | 0 | 0 | 1 |
| **59** | D+59 | Use of suppositories for drug absorption | 1 | 0 | 0 | 1 |
| **60** | D+60 | Tutorial | 0 | 1 | 0 | 1 |
| **61** | D+61 | **(iv)Dental and Cosmetic Preparations:** Introduction to  Dentrifices, | 1 | 0 | 0 | 1 |
| **62** | D+62 | Facial cosmetics, | 1 | 0 | 0 | 1 |
| **63** | D+63 | Deodorants, Antiperspirants, Shampoos, | 1 | 0 | 0 | 1 |
| **64** | D+64 | Hair dressing and Hair removers. | 1 | 0 | 0 | 1 |
| **65** | D+65 | **(v) Sterile Dosage Forms:** | 1 | 0 | 0 | 1 |
| **66** | D+66 | Tutorial | 0 | 1 | 0 | 1 |
| **67** | D+67 | **(a) Parenteral dosage forms—**Definitions | 1 | 0 | 0 | 1 |
| **68** | D+68 | , General requirements for parenteral dosage forms. | 1 | 0 | 0 | 1 |
| **69** | D+69 | Types of parenteral formulations, | 1 | 0 | 0 | 1 |
| **70** | D+70 | vehicles, adjuvants, processing, | 1 | 0 | 0 | 1 |
| **71** | D+71 | personnel, facilities and Quality control. | 1 | 0 | 0 | 1 |
| **72** | D+72 | **Tutorial** | 0 | 1 | 0 | 1 |
| **73** | D+73 | Preparation of Intravenous fluids and admixtures – | 1 | 0 | 0 | 1 |
| **74** | D+74 | Total parenteral nutrition, Dialysis fluids. | 1 | 0 | 0 | 1 |

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| --- | --- | --- | --- | --- | --- | --- |
| **75** | D+75 | **(b) Sterility testing, particulate matter monitoring –**  Faulty seal packaging. | 1 | 0 | 0 | 1 |
| **76** | D+76 | **(c) Ophthalmic Products –**Study of essential  characteristics of different ophthalmic preparations. | 1 | 0 | 0 | 1 |
|  |  | **Total** | **24** | **5** |  | **29** |

Signature of faculty

**SARASWATI MODERN COLLEGE OF PHARMACY MOHNA**

## Lesson Plan

**Program- D.Pharm year- 2nd year**

**Course P PHARMACEUTICS-II**

**Session - 2020-21**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **S. No.** | **Day** | **Subject** | **L** | **T** | **P** | **Total** |
| **1** | D Day |  |  |  |  |  |
| **2** | D+1 | To prepare & submit 20 ml of Simple Syrup. | 0 | 0 | 4 | 4 |
| **3** | D+2 | To prepare 20 gm of Zinc Oxide and Starch Dusting  powder. | 0 | 0 | 4 | 4 |
| **4** | D+3 | To prepare and pack 20 gm of Talc dusting powder. | 0 | 0 | 4 | 4 |
| **5** | D+4 | To prepare and pack 20 gm of Kaolin Powder. | 0 | 0 | 4 | 4 |
| **6** | D+5 | To prepare & pack 20 ml of Pottasium Permagnate  gargles. | 0 | 0 | 4 | 4 |
| **7** | D+6 | To prepare & submit 20ml Mouth Wash. | 0 | 0 | 4 | 4 |
| **8** | D+7 | To prepare & submit 20ml of Magnesium Sulphate Oral  Suspension. | 0 | 0 | 4 | 4 |
| **9** | D+8 | To prepare & submit 20ml of Calamine Lotion. | 0 | 0 | 4 | 4 |
| **10** | D+9 | To prepare & submit 20ml of Milk of Magnesia  suspension. | 0 | 0 | 4 | 4 |
| **11** | D+10 | To prepare & submit 20ml of Calamine lotion. | 0 | 0 | 4 | 4 |
|  |  | **Total** |  |  |  | 40 |
| **12** | D+11 | To prepare & pack 20gm of Tooth Powder. | 0 | 0 | 4 | 4 |
| **13** | D+12 | To prepare & pack 20gm Clear Liquid Shampoo. | 0 | 0 | 4 | 4 |
| **14** | D+13 | To prepare & pack 20gm of After Shaving Lotion. | 0 | 0 | 4 | 4 |

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| --- | --- | --- | --- | --- | --- | --- |
| **15** | D+14 | To prepare & pack 20ml of Ferrous Sulphate Syrup USP. | 0 | 0 | 4 | 4 |
| **16** | D+15 | To prepare & pack 20gm Zinc Oxide Ointment. | 0 | 0 | 4 | 4 |
| **17** | D+16 | To prepare & submit 10ml Chloramphenicol Ear Drop. | 0 | 0 | 4 | 4 |
| **18** | D+17 | To prepare & submit 10 ml of Elixir as non-aqueous  preparation. | 0 | 0 | 4 | 4 |
| **19** | D+18 | To prepare & submit 10ml Ephedrine Nasal Drops. | 0 | 0 | 4 | 4 |
| **20** | D+19 | To prepare & submit 10ml Turpentine Liniment. | 0 | 0 | 4 | 4 |
| **21** | D+20 | To prepare & submit 20ml Methyl Salicylate Liniment  B.P. | **0** | **0** | 4 | 4 |
|  |  | **Total** |  |  |  | 40 |
| **22** | D+21 | To prepare & submit 20gm of Sodium Alginate Beads. | **0** | **0** | 4 | 4 |
| **23** | D+22 | To prepare & submit Zinc Sulphate Eye Drop. | **0** | **0** | 4 | 4 |
| **24** | D+23 | To prepare & submit 20gm Toothpaste. | **0** | **0** | 4 | 4 |
| **25** | D+24 | To prepare & submit 20gm clear liquid Shampoo. | **0** | **0** | 4 | 4 |
| **26** | D+25 | To prepare & submit 20gm of Glycerin Suppositories. | **0** | **0** | 4 | 4 |
| **27** | D+26 | To prepare & submit 30 gm insufflations. | **0** | **0** | 4 | 4 |
| **28** | D+27 | To demonstrate physical incompatibility (immiscibility) &  its method of correction. | **0** | **0** | 4 | 4 |
| **29** | D+28 | To prepare & submit 20gm of Glycero gelatin Jelly. | **0** | **0** | 4 | 4 |
| **30** | D+29 | To prepare & submit 20gm Mixture. | **0** | **0** | 4 | 4 |
| **31** | D+30 | To demonstrate chemical incompatibility (immiscibility)  & its method of correction. | **0** | **0** | 4 | 4 |
|  |  | **Total** |  |  |  | **40** |

Signature of faculty

**SARASWATI MODERN COLLEGE OF PHARMACY MOHNA**

**Program- D.Pharma year- 2nd year**

**Course name PHARMACEUTICAL CHEMISTRY-II**

**Session - 2020-21**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **S. No.** | **Day** | **Subject** | **L** | **T** | **P** | **Total** |
| **1** | D Day |  |  |  |  |  |
| **2** | D+1 | **Introduction to the nomenclature** of organic chemical  systems with particular reference | 1 | 0 | 0 | 1 |
| **3** | D+2 | heterocyclic system containing up to 3 rings continue……. | 1 | 0 | 0 | 1 |
| **4** | D+3 | heterocyclic system containing up to 3 rings | 1 | 0 | 0 | 1 |
| **5** | D+4 | **Antiseptics and Disinfectants –**Proflavine, \*  Benzalkoniumchloride, | 1 | 0 | 0 | 1 |
| **6** | D+5 | Cetrimide, Chlorocresol | 1 | 0 | 0 | 1 |
| **7** | D+6 | **Tutorial** | 0 | 1 | 0 | 1 |
| **8** | D+7 | Chloroxylene | 1 | 0 | 0 | 1 |
| **9** | D+8 | Formaldehyde solution, | 1 | 0 | 0 | 1 |
| **10** | D+9 | Liquified | 1 | 0 | 0 | 1 |
| **11** | D+10 | phenol | 1 | 0 | 0 | 1 |
| **12** | D+11 | Nitrofurantoin | 1 | 0 | 0 | 1 |
| **13** | D+12 | Tutorial | 0 | 1 | 0 | 0 |
| **14** | D+13 | **Sulfonamides-Sulfadiazine,** | 1 | 0 | 0 | 1 |
| **15** | D+14 | Sulfaguanidine\*, | 1 | 0 | 0 | 1 |
| **16** | D+15 | Phthalysulfathiazole, | 1 | 0 | 0 | 1 |
| **17** | D+16 | Succinylsulfathiazole | 1 | 0 | 0 | 1 |

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| **18** | D+17 | Class test | 1 | 0 | 0 | 1 |
| **19** | D+18 | Tutorial | 0 | 1 | 0 | 1 |
| **20** | D+19 | Sulfadimethoxine, | 1 | 0 | 0 | 1 |
| **21** | D+20 | Sulfamethoxypridazine, | 1 | 0 | 0 | 1 |
| **22** | D+21 | co-trimoxazole, Sulfacetamide | 1 | 0 | 0 |  |
| **23** | D+22 | Tutorial | 0 | 1 | 0 | 1 |
| **24** | D+23 | **Antileprotic Drugs –**Clofazimine, | 1 | 0 | 0 | 1 |
| **25** | D+24 | Thiambutosine, Dapsone\*, Solapsone | 1 | 0 | 0 | 1 |
| **26** | D+25 | **Anti-tubercular Drugs –**Isoniazid\*, PAS | 1 | 0 | 0 | 1 |
| **27** | D+26 | Streptomycin, Rifampicin, Ethambutol\*, | 1 | 0 | 0 | 1 |
| **28** | D+27 | Tutorial | 0 | 1 | 0 | 1 |
| **29** | D+28 | Thiacetazone, Ethionamide, | 1 | 0 | 0 | 1 |
| **30** | D+29 | Cycloserine, Pyrazinamide | 1 | 0 | 0 | 1 |
|  |  | **Total** | **25** | **5** |  | **30** |
| **31** | D+30 | **Antiamoebic and Anthelmintic Drugs-** Emetine, Metronidazole | 1 | 0 | 0 | 1 |
| **32** | D+31 | Halogenated hydroxyquinolines, | 1 | 0 | 0 | 1 |
| **33** | D+32 | diloxanidefuroate, Paramomycin, | 1 | 0 | 0 | 1 |
| **34** | D+33 | Piperazine\*, Mebendazole | 1 | 0 | 0 | 1 |
| **35** | D+34 | **Tutorial** | 0 | 1 | 0 | 1 |
| **36** | D+35 | **Antibiotics –**Benzyl Penicillin\*, Phenoxy methyl  Penicillin\*, | 1 | 0 | 0 | 1 |
| **37** | D+36 | Benzathine Penicillin Ampicillin | 1 | 0 | 0 | 1 |
| **38** | D+37 | Tutorial | 0 | 1 | 0 | 1 |
| **39** | D+38 | Cloxacillin, Carbenicillin, Gentamicin, | 1 | 0 | 0 | 1 |
| **40** | D+39 | Neomycin, Erythromycin, Tetracycline, Cephalexin,  Cephaloridine, | 1 | 0 | 0 | 1 |
| **41** | D+40 | Cephalothin, Griseofulvin, Chloramphenicol. | 1 | 0 | 0 | 1 |
| **42** | D+41 | **Antifungal agents –**Undecylenic acid, | 1 | 0 | 0 | 1 |
| **43** | D+42 | **Tutorial** | 0 | 1 | 0 | 1 |
| **44** | D+43 | Tolnaftate, Nystatin, | 1 | 0 | 0 | 1 |

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| **45** | D+44 | Amphotericin, Hamycin | 1 | 0 | 0 | 1 |
| **46** | D+45 | **Antimalarial** Drugs–Chloroquine\*, | 1 | 0 | 0 | 1 |
| **47** | D+46 | Amodiaquine, Primaquine, | 1 | 0 | 0 | 1 |
| **48** | D+47 | **Tutorial** | 0 | 1 | 0 | 1 |
| **49** | D+48 | Proguanil, Pyrimethamine\*, | 1 | 0 | 0 | 1 |
| **50** | D+49 | Quinine, Trimethoprim | 1 | 0 | 0 | 1 |
| **51** | D+50 | **Tranquilizers –**Chlorpromazine\*, Prochlorperazine, | 1 | 0 | 0 | 1 |
| **52** | D+51 | TrifluoPerazine, Thiothixene, Haloperidol | 1 | 0 | 0 | 1 |
| **53** | D+52 | Triperidol, Oxypertine, Chlordiazepoxide, | 1 | 0 | 0 | 1 |
| **54** | D+53 | Diazepam\*, Lorazepam, Meprobamate | 1 | 0 | 0 | 1 |
| **55** | D+54 | Tutorial | 0 | 1 | 0 | 1 |
| **56** | D+55 | **Hypnotics—**Phenobarbitone\*, Butobarbitone, Cyclobarbitone, Nitrazepam, Glutethimide\*, Methyprylone, Paraldehyde, Triclofos sodium. | 1 | 0 | 0 | 1 |
| **57** | D+56 | **General Anaesthetics –**Halothane\*, Cyclopropane\*, Diethyl ether\*, Methohexital sodium, Thiopental sodium, Trichloroethyelene. | 1 | 0 | 0 | 1 |
| **58** | D+57 | **Antidepressant Drugs—**Amitriptyline, Nortryptyline,  Imipramine\*, Phenelzine, Tranylcypromine. | 1 | 0 | 0 | 1 |
| **59** | D+58 | **Analeptics –**Theophylline, Caffeine\*, Coramine\*, Dextroamphetamine.  **Adrenergic Drugs –**Adrenaline\*, Noradrenaline, Isoprenaline\*, Phenylephrine Salbutamol, Terbutaline,  Ephedrine \*, Pseudoephedrine. | 1 | 0 | 0 | 1 |
|  |  | **Total** | **25** | **5** |  | **30** |
| **60** | D+59 | **Adrenergic Antagoinst –**Tolazoline, Propranolol\*,  Practolol | 1 | 0 | 0 | 1 |
| **61** | D+60 | **Cholinergic Drugs –**Neostigmine\*, Pyridostigmine,  Pralidoxime, Pilocarpine, Physostigmine\* | 1 | 0 | 0 | 1 |
| **62** | D+61 | **Cholinergic Antagonists –**Atropine\*, Hysocine,  Homatropine, | 1 | 0 | 0 | 1 |
| **63** | D+62 | Propantheline\*, Benztrophine, Tropicamide, Biperiden.\* | 1 | 0 | 0 | 1 |

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| **64** | D+63 | **Tutorial** | 0 | 1 | 0 | 1 |
| **65** | D+64 | **Diuretic Drugs –**Furosemide\*, Chlorothiazide,  Hydrochlorothaizide\*, | 1 | 0 | 0 | 1 |
| **66** | D+65 | Benzthiazide, Urea\*, Mannitol \*, Ethacrynic Acid. | 1 | 0 | 0 | 1 |
| **67** | D+66 | Tutorial | 0 | 1 | 0 | 1 |
| **68** | D+67 | **Cardiovascular Drugs –**Ethyl nitrite\*, Glyceryltrinitrate, | 1 | 0 | 0 | 1 |
| **69** | D+68 | Alpha methyl dopa, Guanethidine, | 1 | 0 | 0 | 1 |
| **70** | D+69 | Clofibrate, Quinidine | 1 | 0 | 0 | 1 |
| **71** | D+70 | **Tutorial** | 0 | 1 | 0 | 1 |
| **72** | D+71 | **Hypoglycemic Agents –**Insulin, Chlorpropamide\*,  Tolbutamide, | 1 | 0 | 0 | 1 |

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| **73** | D+72 | Glibenclamide, Phenformin \*, Metformin. | 1 | 0 |  | 1 |
| **74** | D+73 | **Coagulants and Anti –Coagulants –**Heparin, Thrombin,  Menadione | 1 | 0 | 0 | 1 |
| **75** | D+74 | Bishydroxycoumarin, Warfarin Sodium. | 1 | 0 | 0 | 1 |
| **76** | D+75 | **Local Anesthetics –**Lignocaine\*, | 1 | 0 | 0 | 1 |
| **77** | D+76 | Tutorial | 0 | 1 | 0 | 1 |
| **78** | D+77 | Procaine\*, | 1 | 0 | 0 | 1 |
| **79** | D+78 | Benzocaine | 1 | 0 | 0 | 1 |
| **80** | D+79 | **Histamine and Anti–histaminic Agents-**Histamine  cont…… | 1 | 0 | 0 | 1 |
| **81** | D+80 | **Histamine and Anti–histaminic Agents-**Histamine, | 1 | 0 | 0 | 1 |
| **82** | D+81 | Diphenhydramine\*, | 1 | 0 | 0 | 1 |
| **83** | D+82 | Promethazine, | 1 | 0 | 0 | 1 |
| **84** | D+83 | **Tutorial** | 0 | 1 | 0 | 1 |
| **85** | D+84 | **Analgesics and Anti-pyretics–**Morphine, Pethidine\*, Codeine, Methadone | 1 | 0 | 0 | 1 |
| **86** | D+85 | Aspirin\*, Paracetamol\*, Analgin, | 1 | 0 | 0 | 1 |
| **87** | D+86 | Dextropropoxyphene, Pentazocine | 1 | 0 | 0 | 1 |
| **88** | D+87 | Cyproheptadine, Mepyramine, | 1 | 0 | 0 | 1 |

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| **89** | D+88 | Pheniramine, Chlorpheniramine\*. | 1 | 0 | 0 | 1 |
|  |  | **Total** | **25** | **5** |  | **30** |
| **90** | D+89 | **Non-steroidal anti-inflammatory Agents –**  Indomethacin\*, phenylbutazone\*, | 1 | 0 | 0 | 1 |
| **91** | D+90 | Oxyphenbutazone, Ibuprofen, | 1 | 0 | 0 | 1 |
| **92** | D+91 | Thyroxine and Antithyroids –Thyroxine\*, | 1 | 0 | 0 | 1 |
| **93** | D+92 | Methimazole, Methylthiouracil, Propylthiouracil | 1 | 0 | 0 | 1 |
| **94** | D+93 | **Tutorial** | 0 | 1 | 0 | 1 |
| **95** | D+94 | **Diagnostic Agents-**Iopanoic Acid, Propyliodone, | 1 | 0 | 0 | 1 |
| **96** | D+95 | Sulfobromophthalein. Sodium indigotindisulfonate | 1 | 0 | 0 | 1 |
| **97** | D+96 | Indigo Carmine,Evans blue, Congo Red, Fluorescein  Sodium | 1 | 0 | 0 | 1 |
| **98** | D+97 | Tutorial |  | 1 | 0 | 1 |
| **99** | D+98 | **Anticonvulsants,** cardiac glycosides, | 1 | 0 | 0 | 1 |
| **100** | D+99 | Antihypertensives, Antiarrhythmic | 1 | 0 | 0 | 1 |
| **101** | D+100 | Vitamins | 1 | 0 | 0 | 1 |
| **102** | D+101 | Class test | 1 | 0 | 0 | 1 |
| **103** | D+102 | **Tutorial** | 0 | 1 | 0 | 1 |

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| **104** | D+103 | **Steroidal Drugs –**Betamethazone, | 1 | 0 | 0 | 1 |
| **105** | D+104 | Cortisone, Hydrocortisone, | 1 | 0 | 0 | 1 |
| **106** | D+105 | prednisolone, | 1 | 0 | 0 | 1 |
| **107** | D+106 | **Anti- Neoplastic Drugs –**Actinomycins, | 1 | 0 | 0 | 1 |
| **108** | D+107 | Tutorial | 0 | 1 | 0 | 1 |
| **109** | D+108 | Azathioprine, Busulphan, | 1 | 0 | 0 | 1 |
| **110** | D+109 | Chlorambucil, Cisplatin | 1 | 0 | 0 | 1 |
| **111** | D+110 | Cyclophosphamide | 1 | 0 | 0 | 1 |
| **112** | D+111 | **Tutorial** | 0 | 1 | 0 | 1 |
| **113** | D+112 | Daunorubicin hydrochloride, | 1 | 0 | 0 | 1 |

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| --- | --- | --- | --- | --- | --- | --- |
| **114** | D+113 | Fluorouracil, Mercaptopurine | 1 | 0 | 0 | 1 |
| **115** | D+114 | Methotrexate, Mytomycin. | 1 | 0 | 0 | 1 |
| **116** | D+115 | Class test | 1 | 0 | 0 | 1 |
| **117** | D+116 | Progesterone, | 1 | 0 | 0 | 1 |
| **118** | D+117 | Tutorial | 0 | 1 | 0 | 1 |
| **119** | D+118 | Testosterone, | 1 | 0 | 0 | 1 |
| **120** | D+119 | Oestradiol,Nandrolone. | 1 | 0 | 0 | 1 |
|  |  | **Total** | **22** | **6** |  | **28** |

Signature of faculty

**SARASWATI MODERN COLLEGE OF PHARMACY MOHNA**

**Program- D.Pharm year- 2nd year**

**Course name PHARMACEUTICAL CHEMISTRY-II**

**Session - 2020\_21**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **S. No.** | **Day** | **Subject** | **L** | **T** | **P** | **Total** |
| **1** | D Day |  |  |  |  |  |
| **2** | D+1 | To identify the functional groups and elements in a given  sample. | 0 | 0 | 4 | 4 |
| **3** | D+2 | To identify the functional groups and elements in a given  sample | 0 | 0 | 4 | 4 |
| **4** | D+3 | To identify the functional groups and elements in a given  sample | 0 | 0 | 4 | 4 |
| **5** | D+4 | To perform the preliminary examination of unknown  compound | 0 | 0 | 4 | 4 |
| **6** | D+5 | To determine the melting point of unknown compound. | 0 | 0 | 4 | 4 |
| **7** | D+6 | To determine the boiling point of unknown compound. | 0 | 0 | 4 | 4 |
| **8** | D+7 | To determine the Solubility of an unknown compound. | 0 | 0 | 4 | 4 |
| **9** | D+8 | To prepare and submit Aspirin & calculate it’s percent  yield. | 0 | 0 | 4 | 4 |
| **10** | D+9 | To perform the Pharmacopoeialstandardisation of  Aspirin. | 0 | 0 | 4 | 4 |
| **11** | D+10 | To prepare and submit 7 Hydoxyl 4-Methyl Coumarin and  report its Percent yield and Melting point range. | 0 | 0 | 4 | 4 |
|  |  | **TOTAL** |  |  |  | 40 |
| **12** | D+11 | To Prepare and synthesize Benzoyl Peroxide and to  calculate it’spercentyield. | 0 | 0 | 4 | 4 |

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| --- | --- | --- | --- | --- | --- | --- |
| **13** | D+12 | To perform Pharmacopoeial Standardization and analysis  of Benzoyl peroxide. | 0 | 0 | 4 | 4 |
| **14** | D+13 | To prepare and submit Paracetamol and report its  percent yield. | 0 | 0 | 4 | 4 |
| **15** | D+14 | To perform the Pharmacopoeialstandardisation of  Paracetamol. | 0 | 0 | 4 | 4 |
| **16** | D+15 | To prepare and submit Methyl Salicylate and to calculate  it’s percent yield. | 0 | 0 | 4 | 4 |
| **17** | D+16 | To perform the Pharmacopoeialstandardisation of  Methyl Salicylate. | 0 | 0 | 4 | 4 |
| **18** | D+17 | To perform the Pharmacopoeialstandardisation of  Ciprofloxacin. | 0 | 0 | 4 | 4 |
| **19** | D+18 | To prepare and submit Phenacetin& calculate it’s percent  yield. | 0 | 0 | 4 | 4 |
| **20** | D+19 | To prepare and submit benzocaine & calculate  it’spercent yield. | **0** | **0** | 4 | 4 |
|  |  | **Total** |  |  |  | **36** |

Signature of faculty

**SARASWATI MODERN COLLEGE OF PHARMACY MOHNA**

Lesson Plan

Program:- D.Pharm

Year :- 2nd year

**Course:- PHARMACOLOGY AND TOXICOLOGY**

**Session:- 2020-21**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **S. No.** | **Day** | **Subject** | **L** | **T** | **P** | **Total** |
| **1** | D Day |  |  |  |  |  |
| **2** | D+1 | Introduction of Pharmacology, scope of Pharmacology. | 1 | 0 | 0 | 1 |
| **3** | D+2 | Routes of administration of drugs**,** their advantages and  disadvantages. | 1 | 0 | 0 | 1 |
| **4** | D+3 | and their advantages and disadvantages. | 1 | 0 | 0 | 1 |
| **5** | D+4 | Various processes of absorption of drugs and the factors affecting them | 1 | 0 | 0 | 1 |
| **6** | D+5 | Metabolism | 1 | 0 | 0 | 1 |
| **7** | D+6 | Tutorial | 0 | 1 | 0 | 1 |
| **8** | D+7 | Distribution of drugs. | 1 | 0 |  | 1 |
| **9** | D+8 | And excretion of drugs. | 1 | 0 | 0 | 1 |
| **10** | D+9 | General mechanism of drugs action and the factors which modify drug action. Pharmacological classification of drugs. | 1 | 0 | 0 | 1 |

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| --- | --- | --- | --- | --- | --- | --- |
| **11** | D+10 | Tutorial | 0 | 1 | 0 | 1 |
| **12** | D+11 | (i) Drugs acting on the Central Nervous System:  (a) General anaesthetics, adjunctions to anesthesia, intravenous anesthetics continue………. | 1 | 0 | 0 | 1 |
| **13** | D+12 | **(i) Drugs acting on the Central Nervous System:**  (a) General anaesthetics, adjunction to anesthesia, intravenous anesthetics. | 1 | 0 | 0 | 1 |
| **14** | D+13 | Tutorial | 0 | 1 | 0 | 1 |
| **15** | D+14 | b) Analgesic antipyretics | 1 | 0 | 0 | 1 |
| **16** | D+15 | and non-steroidal anti –inflammatory drugs, | 1 | 0 | 0 | 1 |
| **17** | D+16 | Narcotic analgesics, | 1 | 0 | 0 | 1 |
| **18** | D+17 | Anti-rheumatic | 1 | 0 | 0 | 1 |
| **19** | D+18 | antigout remedies, | 1 | 0 | 0 | 1 |
| **20** | D+19 | Tutorial | 0 | 1 | 0 | 1 |
| **21** | D+20 | (c)Centrally acting muscle relaxants | 1 | 0 | 0 | 1 |
| **22** | D+21 | anti-parkinsonism agents | 1 | 0 | 0 | 1 |
| **23** | D+22 | Sedatives and Hypnotics, | 1 | 0 | 0 | 0 |
| **24** | D+23 | Psychopharmacological agents, anti convulsants, analeptics. | 1 | 0 | 0 | 0 |
|  |  | **TOTAL** | **19** | **4** |  | 23 |
| **25** | D+24 | **Pharmacological classification of drugs.** The discussion of drugs should emphasize the following aspect:  **(ii) Local anaesthetics continue…..** | 1 | 0 | 0 | 0 |
| **26** | D+25 | **Pharmacological classification of drugs.** The discussion of drugs should emphasize the following aspect:  **(ii) Local anesthetics.** | 1 | 0 | 0 | 1 |
| **27** | D+26 | 1. **Drug acting on autonomic nervous system.**    1. Cholinergic drug, Anticholinergic drugs, | 1 | 0 | 0 | 1 |
| **28** | D+27 | Anti-cholinesterase drugs continue….. | 1 | 0 | 0 | 1 |
| **29** | D+28 | **Tutorial** | 0 | 1 | 0 | 1 |
| **30** | D+29 | Anti-cholinesterase drugs. | 1 | 0 | 0 | 1 |
| **31** | D+30 | (b) Adrenergic drugs | 1 | 0 | 0 | 1 |
| **32** | D+31 | adrenergic receptor blockers | 1 | 0 | 0 | 1 |
| **33** | D+32 | (c) Neurons | 1 | 0 | 0 | 1 |

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| **34** | D+33 | Tutorial | 0 | 1 | 0 | 1 |
| **35** | D+34 | Neurons blockers | 1 | 0 | 0 | 1 |
| **36** | D+35 | ganglion blockers | 1 | 0 | 0 | 1 |
| **37** | D+36 | (d) Neuromuscular blockers | 1 | 0 | 0 | 1 |
| **38** | D+37 | Drugs used in myasthenia gravis. | 1 | 0 | 0 | 1 |
| **39** | D+38 | Tutorial | 0 | 1 | 0 | 1 |
| **40** | D+39 | **Drugs acting on eye,** mydriatics, drugs used in glaucoma. | 1 | 0 | 0 | 1 |
| **41** | D+40 | **Drugs acting on respiratory system**  **–**Respiratory stimulants, Bronchodilators, Nasal decongestants,  Expectorants and Antitussive agents overview | 1 | 0 | 0 | 1 |
| **42** | D+41 | **Drugs acting on respiratory system –**Respiratory stimulants, | 1 | 0 | 0 | 1 |
| **43** | D+42 | Bronchodilators | 1 | 0 | 0 | 1 |
| **44** | D+43 | Nasal decongestants, Expectorants and Antitussive agents. | 1 | 0 | 0 | 1 |
| **45** | D+44 | **Antacids, Physiological role of** histamine and serotonin, Histamine and Antihistamines, Prostaglandins. | 1 | 0 | 0 | 1 |
| **46** | D+45 | Tutorial | 0 | 1 | 0 | 1 |
|  |  | **TOTAL** | **18** | **4** |  | **22** |
| **47** | D+46 | **Cardio Vascular drugs, Cardio tonics,** Antiarrhythmic agents, Antianginal agents, | 1 | 0 | 0 | 1 |
| **48** | D+47 | Antihypertensive agents | 1 | 0 | 0 | 1 |
| **49** | D+48 | Peripheral Vasodilators | 1 | 0 | 0 | 1 |
| **50** | D+49 | drugs used in atherosclerosis | 1 | 0 | 0 | 1 |
| **51** | D+50 | **Tutorial** | 0 | 1 | 0 | 1 |
| **52** | D+51 | **Drugs acting on the blood** | 1 | 0 | 0 | 1 |
| **53** | D+52 | **and blood forming organs** | 1 | 0 | 0 | 1 |
| **54** | D+53 | Haematinics | 1 | 0 | 0 | 1 |
| **55** | D+54 | Class test | 1 | 0 | 0 | 1 |
| **56** | D+55 | **Tutorial** | 0 | 1 | 0 | 1 |
| **57** | D+56 | Coagulants and anti-Coagulants, Haemostatics, Blood | 1 | 0 | 0 | 1 |

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|  |  | substitutes and plasma expanders |  |  |  |  |
| **58** | D+57 | **Drugs affecting renal function-**Diuretics | 1 | 0 | 0 | 1 |
| **59** | D+58 | Antidiuretics | 1 | 0 | 0 | 1 |
| **60** | D+59 | **Hormones and hormone antagonists –**hypoglycemic agents, | 1 | 0 | 0 | 1 |
| **61** | D+60 | **Tutorial** | 0 | 1 | 0 | 1 |
| **62** | D+61 | Antithyroid drugs, | 1 | 0 | 0 | 1 |
| **63** | D+62 | sex hormones and oral contraceptives, corticosteroids | 1 | 0 | 0 | 1 |
| **64** | D+63 | oral contraceptives, corticosteroids | 1 | 0 | 0 | 1 |
| **65** | D+64 | **Drugs acting on digestive system-**Carminatives, digestants Bitters, Antacids | 1 | 0 | 0 | 1 |
| **66** | D+65 | Tutorial | 0 | 1 | 0 | 1 |
| **67** | D+66 | drugs used in Peptic ulcer | 1 | 0 | 0 | 1 |
| **68** | D+67 | purgatives, and laxatives | 1 | 0 | 0 | 1 |
| **69** | D+68 | Antidiarrheal, Emetics | 1 | 0 | 0 | 1 |
| **70** | D+69 | Tutorial | 0 | 1 | 0 | 1 |
|  |  | Total | 20 | 5 |  | 25 |
| **71** | D+70 | **Chemotherapy of microbial disease:** Urinary antiseptics, | 1 | 0 | 0 | 1 |
| **72** | D+71 | Sulphonamides, | 1 | 0 | 0 | 1 |
| **73** | D+72 | Penicillins, | 1 | 0 | 0 | 1 |
| **74** | D+73 | Streptomycin Tetracylines | 1 | 0 | 0 | 1 |

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| **75** | D+74 | antibiotics, Antitubercular agents | 1 | 0 | 0 | 1 |
| **76** | D+75 | Tutorial | 0 | 1 | 0 | 1 |
| **77** | D+76 | Antifungal agents, | 1 | 0 | 0 | 1 |
| **78** | D+77 | antiviral drugs, | 1 | 0 | 0 | 1 |
| **79** | D+78 | antileprotic drugs | 1 | 0 | 0 | 1 |
| **80** | D+79 | Tutorial | 0 | 1 | 0 | 1 |

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| --- | --- | --- | --- | --- | --- | --- |
| **81** | D+80 | Chemotherapy of protozoal | 1 | 0 | 0 | 1 |
| **82** | D+81 | Anthelmintic drugs continue | 1 | 0 | 0 | 1 |
| **83** | D+82 | Anthelmintic drugs | 1 | 0 | 0 | 1 |
| **84** | D+83 | Chemotherapy of cancer continue………. | 1 | 0 | 0 | 1 |
| **85** | D+84 | Chemotherapy of cancer | 1 | 0 | 0 | 1 |
| **86** | D+85 | Tutorial | 0 | 1 | 0 | 1 |
| **87** | D+86 | Class test | 1 | 0 | 0 | 1 |
| **88** | D+87 | Disinfectants | 1 | 0 | 0 | 1 |
| **89** | D+88 | Antiseptics continue…….. | 1 | 0 | 0 | 1 |
| **90** | D+89 | antiseptics. | 1 | 0 | 0 | 1 |
| **91** | D+90 | Anti-spasmodics | 1 | 0 | 0 | 1 |
| **92** | D+91 | Antiemetics | 1 | 0 | 0 | 1 |
| **93** | D+92 | Tutorial | 0 | 1 | 0 | 1 |
|  |  | Total | 18 | 4 |  | 22 |

**SARASWATI MODERN COLLEGE OF PHARMACY MOHNA**

Program- D.Pharm year- 2nd year

**Course name PHARMACOLOGY AND TOXICOLOGY**

Session - 2020-21

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **S. No.** | **Day** | **Subject** | **L** | **T** | **P** | **Total** |
| **1** | D Day | To study about common Lab animals. | 0 | 0 | 0 | 0 |
| **2** | D+1 | To prepare physiological salt solutions | 0 | 0 | 4 | 4 |
| **3** | D+2 | To study the various instruments & apparatus used in the pharmacology laboratory. | 0 | 0 | 4 | 4 |
| **4** | D+3 | To study the anticonvulsant activity by using by electro- convulsometer in rats. | 0 | 0 | 4 | 4 |
| **5** | D+4 | To study muscle relaxant activity of Diazepam by using Rota rod apparatus. | 0 | 0 | 4 | 4 |
| **6** | D+5 | To study the effect of Local anaesthetic on Rabbit cornea. | 0 | 0 | 4 | 4 |
| **7** | D+6 | To study various anaesthetic agents used in Laboratory animal. | 0 | 0 | 4 | 4 |
| **8** | D+7 | To study the effect of pentobarbital sodium on righting reflex (hypnosis) in mice. | 0 | 0 | 4 | 4 |
| **9** | D+8 | To study the effect of K+, Ca++ ach. & adrenaline on frog’s  heart. | 0 | 0 | 4 | 4 |
| **10** | D+9 | To study the biological standardization (bio assay) Methods. | 0 | 0 | 4 | 4 |
| **11** | D+10 | To obtain a raded dose response curve of histamine & | 0 | 0 | 4 | 4 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  |  | determine the concentration of the same in a solution (of unknown concentration) using matching bioassay. |  |  |  |  |
|  |  | **TOTAL** |  |  |  | 40 |
| **12** | D+11 | To study Student Organ Bath. | 0 | 0 | 4 | 4 |
| **13** | D+12 | To take normal DRC and to find out ceiling effect of acetylcholine. | 0 | 0 | 4 | 4 |
| **14** | D+13 | To study the anticonvulsant property of diazepam against pentylenetetrazol induced colonic convulsion in mice. | 0 | 0 | 4 | 4 |
| **15** | D+14 | To study the drug profile of chloramphenicol. | 0 | 0 | 4 | 4 |
| **16** | D+15 | To study the drug profile of Sulphonamide drug. | 0 | 0 | 4 | 4 |
| **17** | D+16 | To study the different types of routes of administration of the drugs. | 0 | 0 | 4 | 4 |
| **18** | D+17 | To record the DRC of atropine using isolated chicken ileum preparation. | 0 | 0 | 4 | 4 |
| **19** | D+18 | To study the CNS depressant property of diazepam on locomotor activity of mice using actophotometer. | 0 | 0 | 4 | 4 |
|  |  | **TOTAL** |  |  |  | **32** |

**Signature** of faculty

**SARASWATI MODERN COLLEGE OF PHARMACY MOHNA**

# Lesson Plan

Course - DIPLOMA IN PHARMACY

Semester- IIndYear

Subject Name - PHARMACEUTICAL JURISPRUDENCE

Session- 2020-21

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **S. No.** | **Day** | **Subject** | **L** | **T** | **Total** |
| **1** | D+1 | **Origin and nature of Pharmaceutical legislation in India** | 1 | 0 | 1 |
| **2** | D+2 | its scope and objectives | 1 | 0 | 1 |
| **3** | D+3 | Evolution of the “Concept of Pharmacy” as an integral part of the Health Care System | 1 | 0 | 1 |
| **4** | D+4 | Discussion Session/ Revision/Class Test | 0 | 1 | 1 |
| **5** | D+5 | Evolution of the “Concept of Pharmacy” as an integral part of the Health Care System | 1 | 0 | 1 |
| **6** | D+6 | **Principles and significance of Professional Ethics** | 1 | 0 | 1 |
| **7** | D+7 | Critical study of the code of Pharmaceutical Ethics drafted by Pharmacy Council of India. | 1 | 0 | 1 |
| **8** | D+8 | Discussion Session/ Revision/Class Test | 0 | 1 | 1 |
| **9** | D+9 | Critical study of the code of Pharmaceutical Ethics drafted  by Pharmacy Council of India. | 1 | 0 | 1 |
| **10** | D+10 | **Pharmacy Act, 1948 –**The General study of the Pharmacy Act with special reference to Education Regulations | 1 | 0 | 1 |
| **11** | D+11 | **Pharmacy Act, 1948 –**The General study of the Pharmacy Act with special reference to Education Regulations | 1 | 0 | 1 |
| **12** | D+12 | Discussion Session/ Revision/Class Test | 0 | 1 | 1 |
| **13** | D+13 | working of State and Central Councils | 1 | 0 | 1 |
| **14** | D+14 | constitution of these councils and functions | 1 | 0 | 1 |
| **15** | D+15 | Registration procedures under the Act. | 1 | 0 | 1 |
| **16** |  | **TOTAL CLASS** | **12** | **3** | **15** |
| **17** | D+16 | Discussion Session/ Revision/Class Test | 0 | 1 | 1 |
| **18** | D+17 | **The Drugs and Cosmetics Act, 1940—**General study of the Drugs and Cosmetics Act and the Rules thereunder. | 1 | 0 | 1 |
| **19** | D+18 | General study of the Drugs and Cosmetics Act and the Rules thereunder. | 1 | 0 | 1 |
| **20** | D+19 | Definitions and salient features related to retail and wholesale distribution of drugs. | 1 | 0 | 1 |
| **21** | D+20 | Discussion Session/ Revision/Class Test | 0 | 1 | 1 |
| **22** | D+21 | The powers of Inspectors | 1 | 0 | 1 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **23** | D+22 | the sampling procedures and the procedure and formalities in obtaining licenses under the rule | 1 | 0 | 1 |
| **24** | D+23 | the sampling procedures and the procedure and formalities in obtaining licenses under the rule | 1 | 0 | 1 |
| **25** | D+24 | Discussion Session/ Revision/Class Test | 0 | 1 | 1 |
| **26** | D+25 | Facilities to be provided for running a Pharmacy effectively | 1 | 0 | 1 |
| **27** | D+26 | Facilities to be provided for running a Pharmacy effectively | 1 | 0 | 1 |
| **28** | D+27 | General study of the Schedules with special reference of  schedules C, C1and salient features of labelling and storage condition of drugs. | 1 | 0 | 1 |
| **29** | D+28 | Discussion Session/ Revision/Class Test | 0 | 1 | 1 |
| **30** | D+29 | General study of the Schedules with special reference of  schedules F, G, and salient features of labelling and storage condition of drugs. | 1 | 0 | 1 |
| **31** | D+30 | General study of the Schedules with special reference of  schedules J,H and salient features of labelling and storage condition of drugs. | 1 | 0 | 1 |
| **32** | D+31 | General study of the Schedules with special reference of  schedules P and X and salient features of labelling and storage condition of drugs. | 1 | 0 | 1 |
| **33** |  | **TOTAL CLASS** | 12 | 4 | 16 |
| **34** | D+32 | Discussion Session/ Revision/Class Test | 0 | 1 | 1 |
| **35** | D+33 | **The Drug and Magic Remedies (Objectionable**  **Advertisement) Act, 1945** | 1 | 0 | 1 |
| **36** | D+34 | General study of the Act Objectives | 1 | 0 | 1 |
| **37** | D+35 | General study of the Act Objectives | 1 | 0 | 1 |
| **38** | D+36 | Discussion Session/ Revision/Class Test | 0 | 1 | 1 |
| **39** | D+37 | special reference to be laid on Advertisements | 1 | 0 | 1 |
| **40** | D+38 | special reference to be laid on Advertisements | 1 | 0 | 1 |
| **41** | D+39 | Magic remedies and objectionable and permitted Advertisements | 1 | 0 | 1 |
| **42** | D+40 | Discussion Session/ Revision/Class Test | 0 | 1 | 1 |
| **43** | D+41 | Magic remedies and objectionable and permitted Advertisements | 1 | 0 | 1 |
| **44** | D+42 | disease which cannot be claimed to be cured. | 1 | 0 | 1 |
| **45** | D+43 | disease which cannot be claimed to be cured. | 1 | 0 | 1 |
| **46** | D+44 | Discussion Session/ Revision/Class Test | 0 | 1 | 1 |
| **47** | D+45 | **Narcotic Drugs and Psychotropic Substances Act, 1985** | 1 | 0 | 1 |
| **48** | D+46 | A brief study of the act with special reference to its objectives | 1 | 0 | 1 |
| **49** | D+47 | A brief study of the act with special reference to its objectives | 1 | 0 | 1 |

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| --- | --- | --- | --- | --- | --- |
| **50** | D+48 | Discussion Session/ Revision/Class Test | 0 | 1 | 1 |
| **51** | D+49 | offences and punishment | 1 | 0 | 1 |
| **52** |  | **TOTAL CLASS** | **12** | **4** | **16** |
| **53** | D+50 | **Brief introduction to the study of the following acts.** | 1 | 0 | 1 |
| **54** | D+51 | Latest Drugs (Price Control) Order in force. | 1 | 0 | 1 |
| **55** | D+52 | Discussion Session/ Revision/Class Test | 0 | 1 | 1 |
| **56** | D+53 | Latest Drugs (Price Control) Order in force. | 1 | 0 | 1 |
| **57** | D+54 | Poisons Act 1919 (as amended to date) | 1 | 0 | 1 |
| **58** | D+55 | Poisons Act 1919 (as amended to date) | 1 | 0 | 1 |
| **59** | D+56 | Discussion Session/ Revision/Class Test | 0 | 1 | 1 |
| **60** | D+57 | Medicinal and Toilet Preparations (Excise Duties) Act,1995 (as amended to date) | 1 | 0 | 1 |
| **61** | D+58 | Medicinal and Toilet Preparations (Excise Duties) Act,1995 (as amended to date) | 1 | 0 | 1 |
| **62** | D+59 | Medical Termination of Pregnancy Act, 1971 (as amended to date). | 1 | 0 | 1 |
| **63** | D+60 | Discussion Session/ Revision/Class Test | 0 | 1 | 1 |
| **64** | D+61 | Medical Termination of Pregnancy Act, 1971 (as amended to date). | 1 | 0 | 1 |
|  |  | **TOTAL CLASS** | **9** | **3** | **12** |

**SARASWATI MODERN COLLEGE OF PHARMACY MOHNA**

# Lesson Plan

Program- D.Pharm year- 2nd year

Course name- DRUG STORE AND BUSINESS MANAGEMENT

Session - 2020-2021

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **S. No.** | **Day** | **Subject** | **L** | **T** | **P** | **Total** |
| **1** | D Day |  |  |  |  |  |
| **2** | D+1 | Introduction of Trade, Industry and Commerce | 1 | 0 | 0 | 1 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **3** | D+2 | Functions and subdivision of Commerce | 1 | 0 | 0 | 1 |
| **4** | D+3 | Introduction of Elements of Economics and Management | 1 | 0 | 0 | 1 |
| **5** | D+4 | Introduction of Elements of Economics and Management | 1 | 0 | 0 | 1 |
| **6** | D+5 | Forms of Business Organizations. | 1 | 0 | 0 | 1 |
| **7** | D+6 | Tutorial | 0 | 1 | 0 | 1 |
| **8** | D+7 | Forms of Business Organizations. | 1 | 0 |  | 1 |
| **9** | D+8 | Channels of Distribution. | 1 | 0 | 0 | 1 |
| **10** | D+9 | Channels of Distribution. | 1 | 0 | 0 | 1 |
| **11** | D+10 | Tutorial | 0 | 1 | 0 | 1 |
| **12** | D+11 | **Drug House Management –**Selection of Site | 1 | 0 | 0 | 1 |
| **13** | D+12 | Space Lay-out and legal requirements. | 1 | 0 | 0 | 1 |
| **14** | D+13 | Tutorial | 0 | 1 | 0 | 1 |
| **15** | D+14 | Space Lay-out and legal requirements. | 1 | 0 | 0 | 1 |
| **16** | D+15 | Importance and objectives of Purchasing | 1 | 0 | 0 | 1 |

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| --- | --- | --- | --- | --- | --- | --- |
| **17** | D+16 | selection of suppliers, credit information | 1 | 0 | 0 | 1 |
| **18** | D+17 | selection of suppliers, credit information | 1 | 0 | 0 | 1 |
| **19** | D+18 | tenders, contracts and price determination | 1 | 0 | 0 | 1 |
| **20** | D+19 | Tutorial | 0 | 1 | 0 | 1 |
| **21** | D+20 | tenders, contracts and price determination | 1 | 0 | 0 | 1 |
| **22** | D+21 | legal requirements thereto | 1 | 0 | 0 | 1 |
| **23** | D+22 | Codification, handling of drug stores and other hospital supplies. | 1 | 0 | 0 | 0 |
| **24** | D+23 | Codification, handling of drug stores and other hospital supplies. | 1 | 0 | 0 | 0 |
|  |  | **TOTAL** | **19** | **4** |  | 23 |
| **25** | D+24 | **Inventory Control –**objects and importance | 1 | 0 | 0 | 0 |
| **26** | D+25 | modern techniques like ABC, VED analysis | 1 | 0 | 0 | 1 |
| **27** | D+26 | modern techniques like ABC, VED analysis | 1 | 0 | 0 | 1 |
| **28** | D+27 | Class test | 1 | 0 | 0 | 1 |
| **29** | D+28 | **Tutorial** | 0 | 1 | 0 | 1 |
| **30** | D+29 | the lead time  inventory carrying cost | 1 | 0 | 0 | 1 |
| **31** | D+30 | safety stock | 1 | 0 | 0 | 1 |
| **32** | D+31 | minimum and maximum stock levels | 1 | 0 | 0 | 1 |
| **33** | D+32 | minimum and maximum stock levels | 1 | 0 | 0 | 1 |
| **34** | D+33 | Tutorial | 0 | 1 | 0 | 1 |
| **35** | D+34 | economic order quantity | 1 | 0 | 0 | 1 |
| **36** | D+35 | economic order quantity | 1 | 0 | 0 | 1 |
| **37** | D+36 | scrap and surplus disposal | 1 | 0 | 0 | 1 |
| **38** | D+37 | scrap and surplus disposal | 1 | 0 | 0 | 1 |
| **39** | D+38 | Tutorial | 0 | 1 | 0 | 1 |
| **40** | D+39 | Class test/Revision | 1 | 0 | 0 | 1 |
| **41** | D+40 | Market Research | 1 | 0 | 0 | 1 |
| **42** | D+41 | Market Research | 1 | 0 | 0 | 1 |

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| --- | --- | --- | --- | --- | --- | --- |
| **43** | D+42 | Salesmanship | 1 | 0 | 0 | 1 |
| **44** | D+43 | qualities of a salesman | 1 | 0 | 0 | 1 |
| **45** | D+44 | qualities of a salesman | 1 | 0 | 0 | 1 |
| **46** | D+45 | Tutorial | 0 | 1 | 0 | 1 |
|  |  | **TOTAL** | **18** | **4** |  | **22** |
| **47** | D+46 | Advertising and Window Display | 1 | 0 | 0 | 1 |
| **48** | D+47 | Advertising and Window Display | 1 | 0 | 0 | 1 |
| **49** | D+48 | Advertising and Window Display | 1 | 0 | 0 | 1 |
| **50** | D+49 | Recruitment**,** training | 1 | 0 | 0 | 1 |
| **51** | D+50 | **Tutorial** | 0 | 1 | 0 | 1 |
| **52** | D+51 | evaluation and compensation of the pharmacist | 1 | 0 | 0 | 1 |
| **53** | D+52 | evaluation and compensation of the pharmacist | 1 | 0 | 0 | 1 |
| **54** | D+53 | evaluation and compensation of the pharmacist | 1 | 0 | 0 | 1 |
| **55** | D+54 | evaluation and compensation of the pharmacist | 1 | 0 | 0 | 1 |
| **56** | D+55 | **Tutorial** | 0 | 1 | 0 | 1 |
| **57** | D+56 | Banking and Finance Service | 1 | 0 | 0 | 1 |
| **58** | D+57 | Banking and Finance Service | 1 | 0 | 0 | 1 |
| **59** | D+58 | functions of the bank | 1 | 0 | 0 | 1 |
| **60** | D+59 | functions of the bank | 1 | 0 | 0 | 1 |
| **61** | D+60 | **Tutorial** | 0 | 1 | 0 | 1 |
| **62** | D+61 | Finance Planning and sources of finance. | 1 | 0 | 0 | 1 |
| **63** | D+62 | Finance Planning and sources of finance. | 1 | 0 | 0 | 1 |
| **64** | D+63 | Finance Planning and sources of finance. | 1 | 0 | 0 | 1 |
| **65** | D+64 | Introduction to the accounting concepts and conventions | 1 | 0 | 0 | 1 |
| **66** | D+65 | Tutorial | 0 | 1 | 0 | 1 |
| **67** | D+66 | Introduction to the accounting concepts and conventions | 1 | 0 | 0 | 1 |
| **68** | D+67 | Introduction to the accounting concepts and conventions | 1 | 0 | 0 | 1 |
| **69** | D+68 | Double entry Book keeping | 1 | 0 | 0 | 1 |
| **70** | D+69 | Tutorial | 0 | 1 | 0 | 1 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  |  | Total | 20 | 5 |  | 25 |
| **71** | D+70 | Double entry Book keeping | 1 | 0 | 0 | 1 |
| **72** | D+71 | Double entry Book keeping | 1 | 0 | 0 | 1 |
| **73** | D+72 | Different kinds of accounts | 1 | 0 | 0 | 1 |
| **74** | D+73 | Different kinds of accounts | 1 | 0 | 0 | 1 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **75** | D+74 | Class test/ Revision | 1 | 0 | 0 | 1 |
| **76** | D+75 | Tutorial | 0 | 1 | 0 | 1 |
| **77** | D+76 | Class test/ Revision | 1 | 0 | 0 | 1 |
| **78** | D+77 | Class test/ Revision | 1 | 0 | 0 | 1 |
| **79** | D+78 | General Leger and Trial Balance | 1 | 0 | 0 | 1 |
| **80** | D+79 | Tutorial | 0 | 1 | 0 | 1 |
| **81** | D+80 | General Leger and Trial Balance | 1 | 0 | 0 | 1 |
| **82** | D+81 | Profit and Loss Account | 1 | 0 | 0 | 1 |
| **83** | D+82 | Profit and Loss Account | 1 | 0 | 0 | 1 |
| **84** | D+83 | Balance Sheet | 1 | 0 | 0 | 1 |
| **85** | D+84 | Balance Sheet | 1 | 0 | 0 | 1 |
| **86** | D+85 | Tutorial | 0 | 1 | 0 | 1 |
| **87** | D+86 | Simple technique of analyzing financial statements | 1 | 0 | 0 | 1 |
| **88** | D+87 | Simple technique of analyzing financial statements | 1 | 0 | 0 | 1 |
| **89** | D+88 | Introduction to Budgeting | 1 | 0 | 0 | 1 |
| **90** | D+89 | Introduction to Budgeting | 1 | 0 | 0 | 1 |
| **91** | D+90 | Class test/ Revision | 1 | 0 | 0 | 1 |
| **92** | D+91 | Class test/ Revision | 1 | 0 | 0 | 1 |
| **93** | D+92 | Tutorial | 0 | 1 | 0 | 1 |
|  |  | Total | 18 | 4 |  | 22 |

Signature of faculty

**SARASWATI MODERN COLLEGE OF PHARMACY MOHNA**

# Lesson Plan

Program- D.Pharm Year - II

Course - HOSPITAL AND CLINICAL PHARMACY

Session - 2020-21

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **S. No.** | **Day** | **Subject** | **L** | **T** | **P** | **Total** |
| **1** | D Day |  |  |  |  |  |
| **2** | D+1 | Definition of Hospitals and its Function | 1 | 0 | 0 | 1 |
| **3** | D+2 | Classification of hospital based on organization | 1 | 0 | 0 | 1 |
| **4** | D+3 | Classification of hospital based on Management and Health delivery system in India | 1 | 0 | 0 | 1 |
| **5** | D+4 | Definition of Hospital Pharmacy | 1 | 0 | 0 | 1 |
| **6** | D+5 | Tutorial(Discussion Session/Revision/Class Test) | 0 | 1 | 0 | 1 |
| **7** | D+6 | Functions and objectives of Hospital Pharmaceutical Services | 1 | 0 | 0 | 1 |
| **8** | D+7 | Location, Layout, Flow chart of material and men for  Hospital | 1 | 0 | 0 | 1 |
| **9** | D+8 | Personnel and facilities requirements including equipment based on individual and basic needs | 1 | 0 | 0 | 1 |
| **10** | D+9 | Requirements and abilities required for Hospital Pharmacists | 1 | 0 | 0 | 1 |
| **11** | D+10 | Tutorial(Discussion Session/Revision/Class Test) | 0 | 1 | 0 | 1 |
| **12** | D+11 | Drug Distribution system in Hospitals | 1 | 0 | 0 | 1 |
| **13** | D+12 | Out –patient services in Hospitals | 1 | 0 | 0 | 1 |
| **14** | D+13 | In-patient services – (a) types of services (b) detailed discussion of unit Dose system, Floor ward stock  System | 1 | 0 | 0 | 1 |
| **15** | D+14 | Satellite pharmacy services, Central sterile services, Bed Side Pharmacy | 1 | 0 | 0 | 1 |
| **16** | D+15 | Tutorial(Discussion Session/Revision/Class Test) | 0 | 1 | 0 | 1 |
| **17** | D+16 | Manufacturing type based hospitals | 1 | 0 | 0 | 1 |

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| --- | --- | --- | --- | --- | --- | --- |
| **18** | D+17 | Economical considerations, estimation of demand | 1 | 0 | 0 | 1 |
| **19** | D+18 | Sterile manufacture-large and small volume Parenteral | 1 | 0 | 0 | 1 |
| **20** | D+19 | Facilities and requirements for manufacturing Parenteral | 1 | 0 | 0 | 1 |
| **21** | D+20 | Tutorial(Discussion Session/Revision/Class Test) | 0 | 1 | 0 | 1 |
| **22** | D+21 | Layout production and planning and man-power Requirements | 1 | 0 | 0 | 1 |
| **23** | D+22 | Non-sterile manufacture like Liquid orals | 1 | 0 | 0 | 1 |
| **24** | D+23 | External preparations like bulk concentrates and  Procurement of stores and testing of raw materials | 1 | 0 | 0 | 1 |
|  |  | **Total** | **19** | **4** | 0 | **23** |
| **25** | D+24 | Nomenclature and uses of surgical instruments | 1 | 0 | 0 | 1 |
| **26** | D+25 | Hospital Equipment and health accessories | 1 | 0 | 0 | 1 |
| **27** | D+26 | P.T.C (Pharmacy Therapeutic Committee) and its Functions | 1 | 0 | 0 | 1 |
| **28** | D+27 | Hospital Formulary System and their organization | 1 | 0 | 0 | 1 |
| **29** | D+28 | Tutorial(Discussion Session/Revision/Class Test) | 0 | 1 | 0 | 1 |
| **30** | D+29 | Hospital Formulary functioning and composition. | 1 | 0 | 0 | 1 |
| **31** | D+30 | Drug Information service | 1 | 0 | 0 | 1 |
| **32** | D+31 | Drug Information Bulletin and its role in hospitals | 1 | 0 | 0 | 1 |
| **33** | D+32 | Surgical dressing like cotton. | 1 | 0 | 0 | 1 |
| **34** | D+33 | Tutorial(Discussion Session/Revision/Class Test) | 0 | 1 | 0 | 1 |
| **35** | D+34 | Adhesive tapes including their pharmacopoeial tests for  quality | 1 | 0 | 0 | 1 |
| **36** | D+35 | Other hospital supply e.g. I.V sets B.G sets, Ryals tubes, Catheters, Syringes etc | 1 | 0 | 0 | 1 |
| **37** | D+36 | gauze, bandages and their quality control | 1 | 0 | 0 | 1 |
| **38** | D+37 | Application of computer in maintenance of records | 1 | 0 | 0 | 1 |
| **39** | D+38 | Tutorial(Discussion Session/Revision/Class Test) | 0 | 1 | 0 | 1 |
| **40** | D+39 | inventory control and its role in hospital pharmacy | 1 | 0 | 0 | 1 |
| **41** | D+40 | medication and monitoring | 1 | 0 | 0 | 1 |
| **42** | D+41 | drug information and data storage | 1 | 0 | 0 | 1 |
| **43** | D+42 | retrieval in hospital and its functions | 1 | 0 | 0 | 1 |
| **44** | D+43 | Tutorial(Discussion Session/Revision/Class Test) | 0 | 1 | 0 | 1 |
| **45** | D+44 | Retail pharmacy establishments. | 1 | 0 | 0 | 1 |
| **46** | D+45 | Role of surgical instruments in hospital | 1 | 0 | 0 | 1 |
| **47** | D+46 | Quality control of parenteral and its factors. | 1 | 0 | 0 | 1 |

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| --- | --- | --- | --- | --- | --- | --- |
|  |  | **Total** | **19** | **4** | **0** | **23** |
| **48** | D+47 | Introduction of Clinical Pharmacy Practice | 1 | 0 | 0 | 1 |
| **49** | D+48 | Definition and scope of Clinical Pharmacy Practice | 1 | 0 | 0 | 1 |
| **50** | D+49 | Modern dispensing aspects | 1 | 0 | 0 | 1 |
| **51** | D+50 | Pharmacists and Patient counseling | 1 | 0 | 0 | 1 |
| **52** | D+51 | Tutorial(Discussion Session/Revision/Class Test) | 0 | 1 | 0 | 1 |
| **53** | D+52 | Pharmacist advice for the use of common drugs | 1 | 0 | 0 | 1 |
| **54** | D+53 | Maintenance of medication history | 1 | 0 | 0 | 1 |
| **55** | D+54 | Common daily terminology used in the Practice of Medicine | 1 | 0 | 0 | 1 |
| **56** | D+55 | manifestation and pathophysiology including salient  symptoms to understand the disease like Tuberculosis and Hepatitis | 1 | 0 | 0 | 1 |
| **57** | D+56 | Tutorial(Discussion Session/Revision/Class Test) | 0 | 1 | 0 | 1 |
| **58** | D+57 | Manifestation and pathophysiology including salient symptoms to understand the disease Rheumatoid and  Arthritis | 1 | 0 | 0 | 1 |
| **59** | D+58 | Manifestation and pathophysiology including salient  symptoms to understand the disease Diabetes, Peptic Ulcer, Hypertension | 1 | 0 | 0 | 1 |
| **60** | D+59 | Manifestation and pathophysiology including salient symptoms to understand the disease Cardiovascular  diseases, Epilepsy | 1 | 0 | 0 | 1 |
| **61** | D+60 | Physiological parameters with their significance | 1 | 0 | 0 | 1 |
| **62** | D+61 | Tutorial(Discussion Session/Revision/Class Test) | 0 | 1 | 0 | 1 |
| **63** | D+62 | Definition and introduction Drug Interactions | 1 | 0 | 0 | 1 |
| **64** | D+63 | Mechanism of Drug Interaction | 1 | 0 | 0 | 1 |
| **65** | D+64 | Drug –drug interaction with reference to analgesics, Diuretics | 1 | 0 | 0 | 1 |
| **66** | D+65 | Drug –drug interaction with reference to cardiovascular Drugs | 1 | 0 | 0 | 1 |
| **67** | D+66 | Tutorial(Discussion Session/Revision/Class Test) | 0 | 1 | 0 | 1 |
| **68** | D+67 | Drug –drug interaction with reference to Gastro-intestinal Agents | 1 | 0 | 0 | 1 |
| **69** | D+68 | Drug –drug interaction of Vitamins and Hypoglycemic agents. | 1 | 0 | 0 | 1 |
| **70** | D+69 | Drug –food interaction and Some common examples of food food interaction and drug drug interaction | 1 | 0 | 0 | 1 |
|  |  | **Total** | **19** | **4** | **0** | **23** |
| **71** | D+70 | Definition of Adverse Drug Reactions | 1 | 0 | 0 | 1 |
| **72** | D+71 | Significance of Adverse Drug Reactions | 1 | 0 | 0 | 1 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **73** | D+72 | Drug –induced diseases and Teratogenicity | 1 | 0 | 0 | 1 |
| **74** | D+73 | Drugs in Clinical Toxicity | 1 | 0 | 0 | 1 |
| **75** | D+74 | Tutorial(Discussion Session/Revision/Class Test) | 0 | 1 | 0 | 1 |
| **76** | D+75 | Introduction, definition and effects of Drugs in Clinical Toxicity | 1 | 0 | 0 | 1 |
| **77** | D+76 | General treatment of poisoning | 1 | 0 | 0 | 1 |
| **78** | D+77 | Systematic antidotes with examples | 1 | 0 | 0 | 1 |
| **79** | D+78 | Treatment of insecticide poisoning | 1 | 0 | 0 | 1 |
| **80** | D+79 | Tutorial(Discussion Session/Revision/Class Test) | 0 | 1 | 0 | 1 |
| **81** | D+80 | Heavy metal poison | 1 | 0 | 0 | 1 |
| **82** | D+81 | Treatment of Narcotic drugs | 1 | 0 | 0 | 1 |
| **83** | D+82 | Treatments of Barbiturate | 1 | 0 | 0 | 1 |
| **84** | D+83 | Organophosphorus poisons | 1 | 0 | 0 | 1 |
| **85** | D+84 | Tutorial(Discussion Session/Revision/Class Test) | 0 | 1 | 0 | 1 |
| **86** | D+85 | Definition and introduction of Drug dependences | 1 | 0 | 0 | 1 |
| **87** | D+86 | Introduction and causes of Drug abuse | 1 | 0 | 0 | 1 |
| **88** | D+87 | Addictive drugs and their treatment | 1 | 0 | 0 | 1 |
| **89** | D+88 | Drug complications and its treatment | 1 | 0 | 0 | 1 |
| **90** | D+89 | Tutorial(Discussion Session/Revision/Class Test) | 0 | 1 | 0 | 1 |
| **91** | D+90 | Definition of Bio–availability of drugs | 1 | 0 | 0 | 1 |
| **92** | D+91 | Types of bioavailability | 1 | 0 | 0 | 1 |
| **93** | D+92 | Factors affecting bioavailability | 1 | 0 | 0 | 1 |
|  |  | **Total** | **19** | **4** | **0** | **23** |

Signature Faculty

**SARASWATI MODERN COLLEGE OF PHARMACY MOHNA**

# Lesson Plan

Program- D.Pharm Year - II

Course - HOSPITAL AND CLINICAL PHARMACY

Session - 2020-21

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **S.**  **No.** | **Day** | **Subject** | **L** | **T** | **P** | **Total** |
| 1 | D  Day |  |  |  |  |  |
| 2 | D+1 | To prepare 100ml of compound sodium chloride i.v.  infusion. | 4 | 0 | 0 | 4 |
| 3 | D+2 | To prepare 100ml of compound sodium bicarbonate  i.v. infusion. | 4 | 0 | 0 | 4 |
| 4 | D+3 | To prepare 100ml of 5% w/v dextrose solution for  injection I.P. | 4 | 0 | 0 | 4 |
| 5 | D+4 | To prepare 100ml of normal saline solution for  injection. | 4 | 0 | 0 | 4 |
| 6 | D+5 | To sterilize various surgical instruments by dry heat  sterilization. | 4 | 0 | 0 | 4 |
| 7 | D+6 | To sterilize the following objects by moist heat sterilization method using Autoclave.   * Rubber gloves * Rubber closure * Surgical dressing | 4 | 0 | 0 | 4 |
| 8 | D+7 | To study various equipments, clothing and materials  used in aseptic technique. | 4 | 0 | 0 | 4 |
| 9 | D+8 | To perform the identification test for the absorbent  cotton wool. | 4 | 0 | 0 | 4 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 10 | D+9 | To perform the limit test for chloride &sulphate. | 4 | 0 | 0 | 4 |
| 11 | D+10 | To find out the % variation in the length and width of  given sample of bandage. | 4 | 0 | 0 | 4 |
| 12 | D+11 | To prepare 100 ml of 20% w/v Mannitol I.V infusion. | 4 | 0 | 0 | 4 |
| 13 | D+12 | To prepare 100 ml of compound sodium lactate for  injection I.P. | 4 | 0 | 0 | 4 |
| 14 | D+13 | To sterilize rubber gloves. | 4 | 0 | 0 | 4 |
| 15 | D+14 | To prepare water for injection. | 4 | 0 | 0 | 4 |
| 16 | D+15 | To determine the sinking time of absorbent cotton  wool. | 4 | 0 | 0 | 4 |
| 17 | D+16 | To determine the no. of threads per 10 cm of  absorbent ribbon gauge. | 4 | 0 | 0 | 4 |
| 18 | D+17 | To determine the loss on drying of absorbent cotton  wool. | 4 | 0 | 0 | 4 |
| 19 | D+18 | To evaluate the given sample of cotton wool by  fluorescence test. | 4 | 0 | 0 | 4 |
| 20 | D+19 | To prepare 50 ml of 5% dextrose solution and sterilize  it by filtration method. | 4 | 0 | 0 | 4 |
| 21 | D+20 | To study various components of computer | 4 | 0 | 0 | 4 |
|  |  | **Total** | **80** | **0** | **0** | **80** |

Signature faculty