



*Knowledge Resource & Relay Centre (KRRC)*

AIKTC/KRRC/SoP/ACKN/QUES/2022-23/

Date: 25/01/23

School: SoP-PCI

Branch: SoP

SEM: V

To,  
**Exam Controller,**  
**AIKTC, New Panvel.**

Dear Sir/Madam,

*Reg.*

Received with thanks the following **Semester/Periodic** question papers from your exam cell:

| Sr. No. | Subject Name                        | Subject Code | Format |    | No. of Copies |
|---------|-------------------------------------|--------------|--------|----|---------------|
|         |                                     |              | SC     | HC |               |
| 1       | Medicinal Chemistry II              | BP501T       |        | ✓  |               |
| 2       | Industrial Pharmacy I               | BP502T       |        | ✓  |               |
| 3       | Pharmacology II                     | BP503T       |        | ✓  |               |
| 4       | Pharmacognosy and Phytochemistry II | BP504T       |        | ✓  |               |
| 5       | Pharmaceutical Jurisprudence        | BP505T       |        | ✓  |               |
|         |                                     |              |        |    |               |
|         |                                     |              |        |    |               |
|         |                                     |              |        |    |               |

Note: SC – Softcopy, HC - Hardcopy

(Shaheen Ansari)  
**Librarian, AIKTC**

09.11.2022

Sem I

Paper / Subject Code: 66111 / Medicinal Chemistry- II

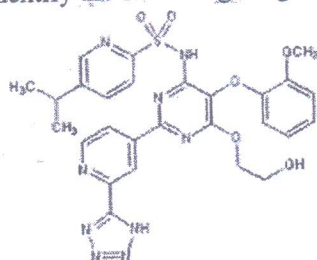
Time: 3 hours

Total marks: 75

- N.B. :** 1. All questions are compulsory  
2. Figures to right indicate full marks

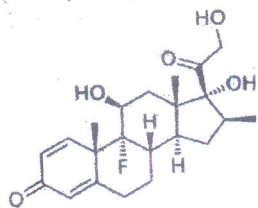
- I. Choose appropriate option for following multiple choice based questions. 20**
- 1 The piperazine nucleus is present in all of the following drugs except
- Cetirizine
  - Chlorocyclizine
  - Meclizine
  - Phenindamine
- 2 The gauche conformer of histamine has a preferred affinity for \_\_\_\_\_receptor/s
- H1
  - H2
  - H3
  - H1 and H2
- 3 The active intermediate of proton pump inhibitors that is responsible for inhibiting the H<sup>+</sup>/K<sup>+</sup> ATPase pump is
- Sulphonamide
  - Sulphonyl
  - Sulphacetamide
  - Sulfenamide
- 4 Anticancer drug metabolized by Xanthine Oxidase is \_\_\_\_\_
- Allopurinol
  - Methotrexate
  - Vincristine
  - 6-Mercaptopurine
- 5 Identify the correct pair from the following.
- Thiotepa: Mesna
  - Busulfan: Aziridinium ion
  - Chlorambucil: L-isomer
  - 5-Flurouracil: False substrate
- 6 Choose the correct non-dihydropyridine calcium channel blocker
- Nifedipine
  - Felodipine
  - Bepidil
  - Nicardipine
- 7 Chlorthiazide inhibits
- Carbonic anhydrase
  - Na<sup>+</sup>/K<sup>+</sup>/2Cl<sup>-</sup> cotransporter
  - Na<sup>+</sup>/Cl<sup>-</sup> symporter
  - Ca<sup>+2</sup> transporter

- 8 Isoquinoline ring is present in \_\_\_\_\_
- Enalapril
  - Captopril
  - Lisinopril
  - Quinapril
- 9 Amyl nitrite is an ester of \_\_\_\_\_ & \_\_\_\_\_
- Amyl alcohol & nitrous acid
  - Isoamyl alcohol & nitrous acid
  - Amyl alcohol & nitric acid
  - Isoamyl alcohol & nitric acid
- 10 Identify the following drug



- Nesiritide
  - Tozesentan
  - Bosentan
  - Disopyramide
- 11 Select the incorrect statement. Sotalol acts by \_\_\_\_\_
- Potassium channel blockage
  - Increasing repolarization phase
  - Shortening repolarization phase
  - Inhibition of  $\beta$  stimulation
- 12 Clopidogrel acts by
- Inhibiting platelet aggregation
  - Antagonizes Vitamin K
  - Inhibits carboxylation of precursor protein
  - Stimulating coagulation
- 13 Antihyperlipoproteinemics like statins mimic -----.
- Mevalonic acid
  - Tetraedral intermediate in Mevalonic acid pathway
  - HMG CoA
  - Mevastatin

14 Identify the drug



- a. Dexamethasone
- b. Prednisolone
- c. Betamethasone
- d. Hydrocortisone

15 Hydrocortisone is a reduced form of cortisone. Reduction takes place at

- a. 3-one
- b. 11-one
- c. Double bond between C3 and C4
- d. 20-one

16 To which chemical class does Tolbutamide belong to

- a. Sulphonyl ureas
- b. Meglitinides
- c. Thiazolidinediones
- d. Biguanides

17 The starting material for the synthesis of Benzocaine

- a. p- amino benzoic acid
- b. p- amino benzoate
- c. m-nitro benzoic acid
- d. o-nitro benzoic acid

18 Sildenafil contains \_\_\_\_\_ ring.

- a. Pyrazolopyridindole
- b. Pyrazolopyrimidine
- c. Pyrazinopyridine
- d. Imidazoindole

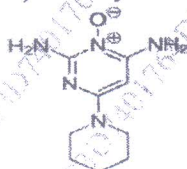
19 Synthetic thyroxine is available in \_\_\_\_\_ form.

- a. Levo
- b. dextro
- c. meso
- d. racemic

20 The primary mechanism of action of local anesthetic is

- a. Activation of ligand-gated potassium channels
- b. Blockade of voltage-gated sodium channels
- c. Stimulation of voltage-gated N-type calcium channels
- d. Blockade the GABA-gated chloride channels

- H. Long Answer Questions (Answer any 2 out of 3)** 20
- Q1** A) Indicate the mechanistic class of cyclophosphamide. Illustrate the chemistry behind its mechanism of action and depict its activation pathway in detail. 4  
 B) Outline the mechanism of action of Doxorubicin and Vincristine. (structure not required) 4  
 C) 5-Fluorouracil is a prodrug. State true or false. Justify 2
- Q2** A) Discuss rationale development of ACE inhibitor containing thiol group. 4  
 B) Outline the synthesis of furosemide mentioning the reagents, intermediates and the reaction conditions. 4  
 C) Identify the structure given below & depict its bioactivation. 2



- Q3** A) Classify local anaesthetic chemically with one structure of each class and describe its mechanism of action. 4  
 B) Discuss 4 structural modifications in corticosteroids to enhance glucocorticoid activity. Support your answer with relevant structures. 4  
 C) Give an example of hypoglycemic containing sugar moiety. Name the mechanistic class to which it belongs. 2

**III. Short Answer Questions (Answer 7 out of 9)** 35

- Q1** Write target enzyme of Pantoprazole and highlight the advantage of proton pump inhibitors over other drugs used in hyperacidity. Depict the activation of Pantoprazole. 5

- Q2** i) Match the following. 3

|   | Name             |   | Nucleus                      |     | Mechanistic class            |
|---|------------------|---|------------------------------|-----|------------------------------|
| 1 | Diltiazem        | a | Steroid Lactones             | i   | Calcium channel blocker      |
| 2 | Spironolactone   | b | Benzothiazepine derivative   | ii  | Carbonic anhydrase inhibitor |
| 3 | Diethylphenamide | c | 1,3-disulfonamide derivative | iii | Aldosterone antagonist       |

- ii) Give schematic representation of binding interactions between ACE inhibitors/substrate and angiotensin converting enzyme 2

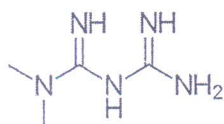
- Q3** Explain mode by which the following drugs exert their action. Mention the clinical condition in which they are used. 5

- a. Nesiritide  
 b. Menadione

- Q4** Draw the structure of estradiol and give its IUPAC nomenclature. What is the effect of the following? 5

- i) Addition of hydroxyl group at 6,7 and 11 position  
 ii) Substitution of 17 $\alpha$  position with ethynyl group  
 iii) Removal of -OH group at C3

Q5 Answer the following questions with respect to given structure. 5



- i) Identify the drug.
  - ii) Which class this drug belongs to?
  - iii) Comment on mechanism of action of the drug
  - iv) Write its therapeutic use
  - v) Write the prominent adverse effect.
- Q6 Classify antiarrhythmic drugs based on mechanism of action. Give one example and structure of each class. 5
- Q7 Outline the synthesis of Tolbutamide with reaction conditions and necessary reagents and write its mechanism of action and use. 5
- Q8 i) Outline synthesis of Warfarin mentioning the reagents and reaction conditions. 3  
ii) Outline the mechanism of fibrates and give an example and structure of drug belonging to this class. 2
- Q9 i) What is the advantage of 2<sup>nd</sup> generation H<sub>1</sub> antagonist over 1<sup>st</sup> generation. Which structural characteristics contribute to these advantages. Draw the structure of any one 2<sup>nd</sup> generation H<sub>1</sub> antagonist. 3  
ii) Why o,o-dichloro substitution is necessary in clonidine? Justify. 2

11.11.2022

Paper / Subject Code: 66112 / Industrial Pharmacy-I

(3 Hours)

[Total Marks : 75]

- N.B.:
1. All question are compulsory
  2. Draw diagram whether necessary.
  3. Figure to right indicate full marks.

Q.1 MCQ: All questions are compulsory

20M

- 1 For a tablet weighing 75 mg, the limit of weight variation as per IP is  $\pm$  \_\_\_\_\_ w/w
  - a. 5%
  - b. 10%
  - c. 7.5%
  - d. 2.5%
- 2 Binder is used in
  - a. shampoo
  - b. lipstick
  - c. toothpaste
  - d. cold cream
- 3 \_\_\_\_\_ is an example of glidant.
  - a. Microcrystalline cellulose
  - b. Sorbitol
  - c. Avicel
  - d. Aerosil
- 4 Analytical method for characterization of solid crystalline forms
  - a. separating funnel
  - b. Differential scanning calorimetry
  - c. sieving
  - d. sedimentation

- 5 Water based systems of Aerosols consist of \_\_\_\_\_ phases.
- a. Two
  - b. One
  - c. Four
  - d. Three
- 6 Tamper resistant packaging provides \_\_\_\_\_
- a. visible evidence if tampered
  - b. no visible evidence if tampered
  - c. easy tampering
  - d. child resistant packaging
- 7 Distillation is one of the methods of preparation of
- a. Water for Injection
  - b. Emulsion
  - c. Eye drop
  - d. Ear drops
- 8 Tap density apparatus is used to determine
- a. Partition coefficient
  - b. Flow property
  - c. organoleptic property
  - d. Intrinsic dissolution
- 9 LAL stands for
- a. Limulus Amebocyte Lysate
  - b. Limulus Amebocyte Liquid
  - c. Limulus Amebocyte Litre
  - d. Limulus Aqueous Liquid



- 10 Which of the following process is used to fill powdered dry solid into soft gelatin capsules.
- Accogel
  - Rotofil
  - Rotoweigh
  - Rotosort
- 11 Ophthalmic dosage forms administered adjacent to the eye are called?
- Topical
  - Intraocular
  - Periocular
  - Interocular
- 12 Which of the following capsule size number has the maximum capacity?
- 0
  - 1
  - 2
  - 5
- 13 Ethylene Oxide is most commonly used for
- Membrane sterilisation
  - Moist heat sterilisation
  - Dry heat sterilisation
  - Gaseous sterilisation
- 14 Sealing of soft gelatin capsules is achieved at \_\_\_\_\_
- 77°C -80°C
  - 57°C -60°C
  - 37°C -40°C
  - 97°C -100°C

- 15 Large volume parenteral is administered by using
- IV route
  - IM route
  - SC route
  - SM route
- 16 Bulk characterization test include
- partition coefficient
  - polymorphism
  - pKa determination
  - Dissolution
- 17 Tablet coating defect related to inadequate spreading of coating solution before drying is called as \_\_\_
- Marbling
  - Blistering
  - Orange Peel Effect
  - Lamination
- 18 Oil and water phase are mixed at 70 °C in the manufacturing of
- vanishing cream
  - shampoo
  - toothpaste
  - lipstick
- 19 In a multi station tablet press \_\_\_\_\_ guides the movement of punches.
- Recompression Roller
  - Cam track
  - Capacity Control
  - Feed frame

20 Wet gum method is used to manufacture

- a. syrup
- b. suspension
- c. aromatic waters
- d. emulsion

Q.2 Answer any two questions

20M

1. What are the advantages of granulation? Elaborate on wet granulation technique with examples of equipment used in each step. 10
2. Discuss formulation of parenterals and add a note on importance of isotonicity 10
3. Discuss the compatibility studies and solid state stability studies done during preformulation stage of drug development 10

Q.3 Answer any seven questions

35 M

1. Give an account of polymers used for film coating of tablets. 5
2. Explain pressure filling method of propellant in Aerosols. 5
3. Write a short note on different types of plastics used as a packaging material for pharmaceuticals. 5
4. Explain pyrogen testing for parenteral preparation 5
5. Write a note on labelling and packaging of Ophthalmic products 5
6. Explain quality control test for soft gelatin capsules 5
7. Explain various studies done to determine solubility profile of a drug 5
8. Write a formula of lipstick. Explain in detail on manufacturing of Lipstick 5
9. Discuss extrusion spherization process. 5

(3 Hours)

[Total Marks 75]

Q.1. Choose an appropriate option for the following multiple choice based questions (20M)

- 1 Digitalis increases force of contraction by \_\_\_\_\_
  - a Accumulating potassium intracellularly
  - b Enhancing opening of sodium potassium ATPase pump
  - c Extruding calcium
  - d Inhibiting sodium potassium ATPase pump
  
- 2 The \_\_\_\_\_ agents decrease cholesterol absorption and increase its excretion
  - a Bile acid binding resins
  - b Statins
  - c Fibrates
  - d PPAR agonists
  
- 3 The \_\_\_\_\_ class of drugs are the type of vasodilator
  - a Calcium channel blocker
  - b Sodium potassium ATPase pump
  - c Vasopressin
  - d Fibrates
  
- 4 Organic nitrates exert their action by
  - a Phosphorylation of myosin light chain kinase
  - b Phosphorylation of myosin
  - c Dephosphorylation of myosin light chain kinase
  - d Dephosphorylation of myosin
  
- 5 \_\_\_\_\_ is indicated in Diabetes insipidus
  - a Thyroxine
  - b Desmopressin
  - c Bromocriptine
  - d Thyrotropin
  
- 6 The \_\_\_\_\_ class of diuretics acts mainly on the collecting tubule
  - a Potassium sparing diuretics
  - b Thiazide diuretics
  - c Osmotic diuretics
  - d Loop diuretics

**Paper / Subject Code: 66113 / Pharmacology- II**

- 7 \_\_\_\_\_ promotes coagulation, thus indicated in haemorrhagic states
- a Warfarin
  - b Heparin
  - c Menadione
  - d Lepirudin
- 8 Thrombolytic therapy is contraindicated in \_\_\_\_\_
- a Acute myocardial infarction
  - b Deep vein thrombosis
  - c Pulmonary embolism
  - d Peptic ulcer
- 9 Aspirin in low doses produces long lasting inhibition of platelet cyclooxygenase (COX) because:
- a Platelets contain low quantity of COX
  - b Platelets cannot synthesize fresh COX
  - c Platelets bind aspirin with high affinity
  - d Platelet COX is inducible
- 10 Mechanism of action of colchicine is \_\_\_\_\_
- a Inhibits gout inflammation, release of chemotactic factor and granulocyte migration
  - b Inhibit absorption of calcium
  - c Reduced preload and afterload
  - d Inhibits platelet generation of thromboxane A<sub>2</sub>, resulting in an antithrombotic effect
- 11 Activation of H<sub>2</sub> receptor results in \_\_\_\_\_
- a Gastric acid secretion
  - b Smooth muscles contraction
  - c Platelet aggregation
  - d Constrict cranial blood vessels
- 12 The \_\_\_\_\_ class of drugs inhibit specific cytokines which play key role in inflammatory cascade of rheumatoid arthritis
- a Immunosuppressants
  - b Immunomodulators
  - c Biological TNF alpha inhibitors
  - d Colchicine

15.11.22

- 13 The COX-2 inhibitors exert \_\_\_\_\_ action
- a Gastric mucosal damage
  - b Lack cardioprotective effect
  - c Inhibit platelet aggregation
  - d Inhibit thromboxane A2
- 14 \_\_\_\_\_ is the radioactive isotope of Iodine used in the treatment of Hyperthyroidism
- a Iodine 135
  - b Iodine 127
  - c Iodine 129
  - d Iodine 131
- 15 \_\_\_\_\_ is an insulin secretagogues
- a Acarbose
  - b Miglitol
  - c Glimepiride
  - d Pioglitazone
- 16 Somatostatin and its analogues are indicated in the treatment of \_\_\_\_\_
- a Addison's disease
  - b Acromegaly
  - c Prader-Willi syndrome
  - d Turner syndrome
- 17 The pharmacological action of oral contraceptives is mainly achieved by \_\_\_\_\_
- a Suppression of fertility
  - b Stimulation of fertility
  - c Increasing testosterone level
  - d Inhibition of sperm transport
- 18 Hormone replacement therapy is useful in \_\_\_\_\_
- a Vaginal atrophy
  - b Coronary heart disease
  - c Glomerulonephritis
  - d COPD

- 19 The \_\_\_\_\_ hormone in males triggers sertoli cells to synthesize androgen binding globulin (ABG)
- Gonadotropin releasing hormone (GnRH)
  - Luteinizing hormone (LH)
  - Oxytocin
  - Follicle-stimulating hormone (FSH)
- 20 Estrogen basic mechanism of action is
- To stimulation of glucose uptake
  - To regulate the development and function of the uterus
  - To stimulates the production of red blood cells
  - To regulate the glucocorticoid (steroid) hormone cortisol

**Q.2. Long answers (Answer any 2 questions out of 3 questions)**

**(20M)**

- 1 Classify antiarrhythmic. Give detailed account on sodium channel blockers as antiarrhythmic drugs.
- 2 Define and classify anti-coagulants. Give mechanism of action, therapeutic uses and adverse effects of Coumarin anti-coagulants.
- 3 Give any two pharmacological uses of Angiotensin, Leukotrienes, Thromboxane, Substance P and Bradykinin.

**Q.3. Short answers (Answer any 7 questions out of 9 questions)**

**(35M)**

- 1 Give detailed account on Statins in treatment of hyperlipidaemia.
- 2 Give mechanism of action of Thiazide and Loop diuretics.
- 3 Give a detailed account on Prostaglandins.
- 4 Discuss in detail 5-hydroxy tryptamine antagonists.
- 5 Give mechanism of action and adverse effects of Biguanides.
- 6 Classify Corticosteroids and discuss any one class in detail.
- 7 Write a note on growth hormone and its inhibitor.
- 8 Discuss in detail bioassay of oxytocin.
- 9 Write a short note on Anabolic steroids.

(3 hours)

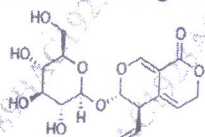
[Total marks: 75]

**N.B.: 1. All questions are compulsory****2. Figures to right indicate full marks****Q. I Choose appropriate option for following multiple choice-based questions. 20**

- 1 Which of the following is not a precursor in shikimic acid pathway.
  - a Prephenic acid
  - b Mevalonic acid
  - c Chorismic acid
  - d Quinic acid
- 2 Shinoda, Alkaline reagent and Zinc HCl test are used to identify \_\_\_\_\_.
  - a Lignans
  - b Alkaloids
  - c Flavonoids
  - d Glycosides
- 3 Which of the following is the source of Rutin?
  - a *Ruta graveolens*
  - b *Podophyllum emodi*
  - c *Camellia sinensis*
  - d *Mentha spicata*
- 4 Diosgenin is used as raw material for synthesis of \_\_\_\_\_.
  - a Corticosteroids
  - b Paracetamol
  - c Acyclovir
  - d Insulin
- 5 Which of the following is the source of fennel?
  - a *Foeniculum vulgare*
  - b *Coriandrum sativum*
  - c *Mentha Piperita*
  - d *Cinnamomum cassia*
- 6 Which of the following drug consist of phenyl propanoidal constituent in volatile oil?
  - a *Foeniculum vulgare*
  - b *Coriandrum sativum*
  - c *Mentha spicata*
  - d *Eugenia caryophyllus*
- 7 Which of the following test is confirmatory test for catechu?
  - a Ferric chloride test
  - b Gold beater's test
  - c Matchstick test
  - d Gelatine test



- 8 \_\_\_\_\_ plant is known as Indian Kino is use for its astringent activity
- Taxus brevifolia*
  - Pterocarpus marsupium*
  - Picrorhiza kurroa*
  - Uncaria gambier*
- 9 Following are the examples of pathological resin containing drug except
- Benzoin
  - Asafoetida
  - Colophony
  - Guggul
- 10 Which of the following drug will give combined umbelliferon test positive?
- Benzoin
  - Asafoetida
  - Colophony
  - Guggul
- 11 Atropine is
- l*-hyoscyamine
  - d*-hyoscyamine
  - dl*-hyoscyamine
  - d*-hyoscine
- 12 \_\_\_\_\_ enzyme plays main role in conversion of 3 -Hydroxy-3 -methylglutaric acid to mevalonic acid
- HMG Co-A Synthase
  - Aceto acetyl Synthase
  - Mevalonic acid Synthase
  - HMG Co-A Reductase
- 13 Which of the following drug will give positive modified Bontrager's test?
- Senna
  - Aloe
  - Bitter almond
  - Digitalis
- 14 \_\_\_\_\_ is the source of Dianthrone glycosides.
- Senna
  - Aloe
  - Bitter almond
  - Digitalis
- 15 Identify the given structure



- a Picroside  
b Forskolin  
c Taxine  
d Gentiopictin
- 16 \_\_\_\_\_ metabolite of of *A. annua* shows 7-member ring structure.  
a Artemisinic acid  
b Artemisinic aldehyde  
c Artemisinin  
d Dihydroartemisinic acid
- 17 Carotenoids are \_\_\_\_\_ compounds.  
a C-10  
b C-20  
c C-30  
d C-40
- 18 In the extraction of Sennosides \_\_\_\_\_ is prepared in-situ by addition of Calcium chloride and liquor ammonia 30%.  
a HCl  
b  $\text{CaCO}_3$   
c CaOH  
d  $\text{NH}_4\text{Cl}$
- 19 Microwaves are electromagnetic radiations with a frequency from \_\_\_\_\_ GHz  
a 0.3 to 300  
b 300 to 3000  
c 0.003 to 0.3  
d 3000 to 300000
- 20 Which of the following is not true about SFE?  
a SCF is easily recoverable from the extract due to its volatility  
b Low boiling components are extracted at relatively high temperatures.  
c Non-toxic solvents leave no harmful residue  
d Thermally labile compounds can be extracted with minimal damage as low temperatures can be employed by the extraction

**Q. II A Answer any TWO out of THREE**

- 1 a. Give example of an acid resin. Mention it's source, preparation & Chemical tests. 10  
b. Enlist 4 methods use in tracer techniques and explain any 1 method with suitable example.
- 2 Write a short note on the following 10  
a. HPTLC in phytochemical analysis  
b. Electrophoresis in drug identification
- 3 Write a short note on source, industrial production, estimation and uses of following. 10  
a. Sennosides  
b. Digoxin

- Q.II.B. Answer any SEVEN out of NINE** **35**
- 1 Write a note on various methods for feeding radioactive precursors. 5
  - 2 Discuss in detail collection & chemistry of Opium alkaloids. 5
  - 3 Illustrate pathway for biosynthesis of GPP with suitable structures. 5
  - 4 Discuss phytochemistry of Cardiac glycosides, illustrate your answer with appropriate structures. 5
  - 5 Discuss the following phytoconstituents with respect to their isolation and identification. 5
    - a. Rutin
    - b. Caffeine
  - 6 Write a note on the analysis of following phytoconstituents 5
    - a. Citral
    - b. Podophyllotoxin
  - 7 Explain in short with suitable example the modern method of extraction for Volatile oils. 5
  - 8 Write a note on drugs containing iridoids (Any two). 5
  - 9 Write a note on UV Spectroscopy in the identification of crude drugs. 5
-

Duration: 3 hrs

Total marks: 75

- N.B. : 1. All questions are compulsory.  
2. Figures to right indicate full marks.

- Q.1 Choose the appropriate option for following multiple choice based questions. (Write the correct option and the correct answer.) 20
- 1 What is adulterated drug
    - a) Whole or in part of any filthy, putrid or decomposed substance
    - b) Misbranded drug
    - c) Drug in Phase I trial
    - d) Drug in Phase II trial
  - 2 Condition to be fulfilled for import of Schedule X drugs (Narcotics & Psychotropic substances) by the importer is-
    - a) The licence granted even before should not be suspended or cancelled
    - b) Must have good source of income
    - c) Must have good relationship with drug inspector
    - d) Only patented products are sanctioned to import
  - 3 Requirements and guidelines of factory premises, plants, and equipment are found in \_\_\_\_\_ of Drug and Cosmetic Act' 1940.
    - a) Schedule P
    - b) Schedule Q
    - c) Schedule L
    - d) Schedule M
  - 4 A person (applicant) who does not have his own arrangement (factory) for manufacture but who wish to use manufacturing facilities own by another licences is called as-
    - a) Manufacturing licence
    - b) Repackaging licence
    - c) Loan licence
    - d) Proprietary licence
  - 5 For the wholesale of drug specified in schedule C & CI licence is issued in form?
    - a) 20 A
    - b) 20 B
    - c) 21 B
    - d) 21 C

- 6 The Schedule H on the label denotes
- Biologicals
  - Ophthalmic
  - To be sold by retail on the prescription of registered medical practitioner only
  - Good manufacturing Practices
- 7 Which of the following is the advisory administrative body appointed by the Central government for execution of Drug and cosmetic act 1940?
- Drug Consultative committee
  - Central drug laboratory
  - licensing authority
  - drug analyst
- 8 The functions of the CDL in respect of Homoeopathy medicines carried out at
- Homoeopathic pharmacopoeia laboratory Ghaziabad
  - Homoeopathic pharmacopoeia laboratory Noida
  - National institute of virology
  - Central drug laboratory at kolkata
- 9 As per Pharmacy Act, First register of state for Pharmacist was prepared by?
- Drugs controller of India
  - central government
  - local FDA
  - Dr. B. Mukerjee
- 10 Find the odd one out with reference to the MTP (ED) Act 1955?
- Azithromycin Tablets
  - Deodorants and perfumes
  - Skin products
  - Hair products
- 11 Medicinal cannabis is also known as
- Opium
  - Hemp
  - Heroin
  - Charas
- 12 The Drugs and magic remedy (OA) Act was passed in \_\_\_\_\_.
- 1954
  - 1948
  - 1985
  - 1972

- 13 Animal welfare board is established by
- Central council
  - State council
  - PCI
  - Central government
- 14 NLEM stands for ----
- National laboratory of essential medicines
  - National list of essential medicines
  - New list of essential medicines
  - New laboratory of essential medicines
- 15 R. N. Chopra was the chairperson of
- DEC
  - Hathi Committee
  - Mudaliar Committee
  - Study of drugs enquiry committee
- 16 Pharmacy ethics provide a framework for
- Pharmacist, pharmacy technician
  - IT
  - Deputy commissioner
  - Registrar
- 17 What is MTP an abbreviation for
- Medical Termination of Pregnancy
  - Menstrual Termination of pregnancy
  - Medical Term of Pregnancy
  - Medical testing of pregnancy
- 18 \_\_\_\_\_ act focuses on building better informed citizens
- Right to information
  - Indian penal code
  - Drug and cosmetic act 1940
  - National list of laboratory testing
- 19 Patent protects
- New Invention
  - Discovery
  - Experiment
  - Invention
- 20 Which of the following is the geographical indication property right
- Bandhani print
  - Textile printing
  - Tattoo making
  - Research publication

- Q. 2 Answer any two questions** 20
- I a.** Define Drug and misbranded drugs as per D and C Act 1940 and discuss the classes of drugs which are prohibited for manufacture and sale. 6
- b.** Give composition and function of PCI. 4
- II a.** Define Opium derivative. Describe power of the central government to control certain operations w.r.t. opium. 5
- b.** Elaborate on procedure to conduct experiments on animals as per Prevention of cruelty to animals act. 5
- III a.** Enlist required qualifications for Drug inspector and elaborate powers and duties of drug inspector as per D and C act 1940. 6
- b.** Elaborate about the minimum requirements to run a Pharmacy as per schedule N of D & C Act. 4
- Q. 3 Answer any seven questions.** 35
- I** Discuss about the conditions to be fulfilled by the importer of the drug to issue an import licence. 5
- II** What do you mean by Loan licence? Describe the forms and provisions required to issue a loan licence. 5
- III** Give legislative intent of DMR (OA) Act. Define advertisement and magic remedy under DMR (OA) Act. 5
- IV a)** Describe the constitution and functions of the institutional animals ethics committee. 2.5
- b)** Explain the ceiling price fixation for scheduled formulations and elaborate on the maximum retail price. 2.5
- V** What is DEC and discuss the recommendations given by Drug enquiry committee. 5
- VI** Define ethics and elaborate the role and responsibilities of Pharmacists in society. 5
- VII** Discuss the provisions made for termination of pregnancy as per MTP Act. 5
- VIII** Define the term "Right to Information". What are the obligations of public authorities towards the right to information 5
- IX** Define Invention and discuss the inventions which are not patentable as per the provisions of Indian Patent Act. 5

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