



PHARMACY INDIA

PRACTICE WORK SHEET - 1

Name of Candidate:-.....

Date:-.....

Mobile No.:-.....

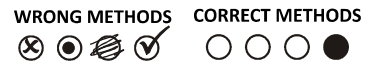
College Name:-.....

Candidate Sign

INSTRUCTIONS:-

1. The Questions Booklet contains 125 questions. Examinee is required to answer all 125 questions in the OMR Answer-Sheet and not in the questions Booklet. All questions carry equal marks.
2. Examine the Questions Booklet and OMR Answer-Sheet very carefully before you proceed. Faulty Questions Booklet due to missing or duplicate paper/question or having any other discrepancy should be immediately replaced.
3. Features:- (i) Each Worksheet Contain 125 Question (ii) Subject Wise Distribution (iii) According To Syllabus (iv) Designed By Team Of Experts

Invigilator Sign



PRACTICE WORK SHEET - 1

INDIA'S 1ST OFFLINE TEST SERIES WITH DETAILED EXPLANATION

FEATURES

- Each Worksheet Contain 125 Question
- Subject Wise Distribution
- According To Syllabus
- Designed By Team Of Experts



PHARMACY INDIA

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PHARMACEUTICS

- The intracellular fluid volume including those of the blood cells is approximately**
 - 15 litres
 - 27 litres
 - 20 litres
 - 35 litres
- India's first Central Drug Laboratory was established at**
 - Mumbai
 - Kolkata
 - Lucknow
 - Hyderabad
- Which of the following instrument is used to determine surface area and pore structure of pharmaceutical powders**
 - Coulter counter
 - Anderson apparatus
 - Quantasorb
 - Optical microscopy
- In the process of extraction, if maceration is accomplished by heating the drug and solvent in a close vessel, then this modification is known as**
 - Digestion
 - Expression
 - Refining
 - Rendering
- The below mentioned complex is not the type of inclusion compounds**
 - Channel-Lattice type
 - Quinhydrone complex
 - Layer type
 - Clathrates
- The desired vapour pressure for the mixture of propellants is calculated by following equation**
 - Raoult's law
 - Dalton's law
 - Both (a) and (b)
 - None of the above
- Which is a fractional method of sterilization**
 - Dry heat sterilization
 - Moist heat sterilization
 - Gaseous sterilization
 - Tyndallization
- Manufacturing temperature of aerosol in cold filling is carried out at**
 - 20°F
 - 10°F
 - 40°F
 - 10°C
- Hydroxyl value of suppository base reflects**
 - Glyceride content of fatty bases
 - Type & amount of triglyceride present
 - Free acid content of lipids
 - Rancidity of lipids
- Which type of USP dissolution apparatus is used for quality control of suppositories**
 - Type-I
 - Type-IV
 - Type-III
 - Type-VI
- An agent used to clean the surface of teeth and there by decreases the tooth decay, mouth odour is**
 - Abrasive
 - Dentifrice
 - Dental paste
 - Dental cone
- Determine the correctness or otherwise of the following Assertion [A] and Reason [R] Assertion [A]: Shaving soap contain little amount of sodium soap than potassium soap Reason [R]: Because it is higher solubility, quicker effect and dense lather**
 - Both [A] and [R] are true and [R] is not the correct reason for [A]
 - Both [A] and [R] are true and [R] is the correct reason for [A]
 - Both [A] and [R] are false
 - [A] is true but [R] is false
- Read all statements and find out correct one about flow measurement device**

2. Paclitaxel [Q] Metaphase arrest
3. Etoposide [R] Increased polymerization of tubulin
4. Topotecan [S] Inhibition of topoisomerase-II
- (a) 1 - [Q], 2 - [R], 3 - [S], 4 - [P]
 (b) 1 - [Q], 2 - [R], 3 - [P], 4 - [S]
 (c) 1 - [R], 2 - [Q], 3 - [P], 4 - [S]
 (d) 1 - [P], 2 - [Q], 3 - [R], 4 - [S]
50. Select the incorrect statement about the alkylating agents
- [P] They have radiomimetic action.
 [Q] They produce highly reactive hydronium ion intermediate
 [R] None of the alkylating agents have cholinergic properties
 [S] Some of them have CNS stimulant properties
- (a) Q and R (b) P and Q
 (c) Q and S (d) R and S
51. Busulfan is the drug of choice for
- (a) Multiple myeloma
 (b) Chronic myeloid leukaemia
 (c) Acute leukaemia's
 (d) Chronic lymphatic leukaemia
52. Fluoroquinolones which have 100% oral bioavailability is
- (a) Levofloxacin (b) Lomefloxacin
 (c) Gatifloxacin (d) Norfloxacin
53. Study the following statements for the prevention of crystal urea. By giving approaches crystal urea can be prevented
- [P] Co-administration of Sulfadiazine, Sulfamerazine and Sulfamethazine
 [Q] Increasing the pH of the urine
 [R] Co-administration of Sulphanilamide, Sulfamethoxazole and Folic acid
 [S] Administration of Co-trimoxazole
- Choose the correct combination of statements
- (a) Only Q (b) Q and R
 (c) R and S (d) R and P
54. Sumatriptan acts as an agonist at this receptor
- (a) 5HT₁ (b) 5HT_{2A/2C}
 (c) 5HT_{1B/1D} (d) 5HT₃
55. A 60-year-old woman has glaucoma following cataract surgery. Which of the following can be used to reduce intraocular pressure
- (a) Leukotriene LTD₄ or its analogs
 (b) Prostaglandin E₂ or its analogs
 (c) Prostaglandin F_{2α} or its analogs
 (d) Slow-reacting substance of anapylaxis
56. Advantages of 2nd generation antihistaminic over 1st generation is
- (a) Impaired psychomotor performance
 (b) Diminished alertness and concentration
 (c) Cross blood brain barrier
 (d) No anticholinergic action
57. Methysergide used as prophylaxis in migraine but not now because
- (a) Constipation
 (b) Peptic ulcer
 (c) Pulmonary fibrosis
 (d) Arrhythmias
58. First choice DMARD in RA
- (a) Methotrexate (b) Gold salts
 (c) Sulfasalazine (d) Cyclosporine
59. Which of the following drug used in gout act by converting uric acid into allantion
- (a) Colchicine (b) Allopurinol
 (c) Probenecid (d) Rasburicase
60. Choose the correct option
- (1) α₁ - Contraction of radial muscle of iris
 (2) β₂ - Renin release from kidney
 (3) β₁ - ADH secretion from posterior pituitary
 (4) α₁ - Insulin secretion inhibited
- (a) 1 and 2 (b) 3 and 4
 (c) 1 and 3 (d) 2 and 4
61. Which of the following is not a cardio selective drug
- (a) Celiprolol (b) Nebivolol
 (c) Propranolol (d) Bisoprolol
62. The PDE3 selective inhibitors used in the treatment of CHF
- (a) Rolipram (b) Vinpocetine
 (c) Anagrelide (d) Milrinone

- (b) Limiting current
- (c) Diffusion current
- (d) Potential current

113. In nephelometry the intensity of the scattered light is usually measure at which angle

- (a) 90° (b) 44°
- (c) 60° (d) 70°

114. Which of the following is used as an indicator in the titration of a strong acid and a weak base

- (a) -Phenolphthalein
- (b) Thymol blue
- (c) Fluorescein
- (d) Methyl orange

OTHER SUBJECTS

115. Which one of the following is NOT a phospholipid

- (a) Sphingomyelin
- (b) Lysolecithin
- (c) Cardiolipin
- (d) Galactosylceramide

116. Citric acid cycle is the final pathway during the oxidation of

- (a) Carbohydrates (b) Lipids
- (c) Proteins (d) All of these

117. Given below are the two statements

Statement I: Glucose-6-phosphate can be formed from glucose, but not from glycogen

Statement II: Glucose-1- phosphate may be hydrolyzed to yield free glucose in liver

Choose the most appropriate answer from the options given below

- (a) Both Statement 1 and Statement II are correct
- (b) Both Statement I and Statement II are incorrect
- (c) Statement I is correct but Statement II is incorrect
- (d) Statement I is incorrect but Statement II is correct

118. All enzymes accelerate the reaction rates by

- (a) Lowering activation energy barrier (ΔG_f) for a reaction

- (b) Denaturing the substate
- (c) Increasing the temperature
- (d) Changing the pH

119. Cori's cycle involves the transfer of

- (a) Lactate from liver to muscles
- (b) Lactate from muscles to liver
- (c) Glucose from muscles to liver
- (d) Pyruvate from liver to muscles

120. Sulphur containing amino acid is

- | | |
|-----------------------|-----------------------|
| [P] Methionine | [Q] Leucine |
| [R] Cysteine | [S] Isoleucine |
| (a) P and S | (b) Q and S |
| (c) P and R | (d) P, Q and R |

121. Assertion and Reason

Assertion [A]: Gelatin gives positive result with aldehyde test

Reason [R]: It does not contain Tryptophan

- (a) Both [A] and [R] are true but [R] is not correct reason for [A]
- (b) [A] is false but [R] is true
- (c) Both [A] and [R] are true and [R] is the correct reason for [A]
- (d) Both [A] and [R] are false

121. Which of the following is a non-reducing sugar

- (a) Isomaltose (b) Maltose
- (c) Lactose (d) Trehalose

123. Anderson disease is associated with

- (a) Lactose Intolerance
- (b) Fructose Intolerance
- (c) Galactosaemia
- (d) Glycogen storage disease

124. Which of the following statement is incorrect

- (a) Chylomicrons have the lowest density
- (b) HDL has the highest protein content
- (c) LDL has the lower lipid content than HDL
- (d) Chylomicrons have the highest triglycerides content

125. The infection that occur at a persistent, usually low level in a certain geographical area are called

- (a) Epidemic (b) Pandemic
- (c) Sporadic (d) Endemic

Practice Worksheet Explanation – 1

1. Ans (c) FLUID COMPARTMENTS OF A 70 KG ADULT

BODY FLUID	Volume (litres)	% of body weight	% OF TBW
Vascular fluid/ blood (Plasma)	6(3)	9 (4.5)	15 (7.5)
Extracellular fluid (excluding plasma)	12	17	28
Intracellular fluid (excluding blood cells)	24	34	57
Total Body Water (TBW)	42	60	100

2. Ans (c) VARIOUS LABORATORIES, INSTITUTES AND ORGANIZATIONS

S. No.	Name of laboratory	Place
1.	Government opium factory	Ghazipur, Neemuch
2.	Institute of microbial technology (IM Tech)	Chandigarh
3.	BCG vaccines laboratory	Kolkata
4.	Central drug laboratory (CDL)	KOLKATA
5.	Central drug research institute (CDRI)	Lucknow

3. Ans (c) DETERMINATION OF SURFACE AREA

PARAMETERS	ADSORPTION METHOD	AIR PERMEABILITY METHOD
Surface area measured by	Volume of nitrogen absorbed to form a monolayer	Rate at which gas or liquid permeates a bed of powder
Equation used	BET equation	Poiseulli's equation, Kozency-Carman equation.
Instrument	Quantasorb	Fisher subsieve sizer
Detector	Thermal conductivity	Water monometer

4. Ans (a) DIGESTION

- This is a form of maceration in which gentle heat is used during the process of extraction.
- It is used when moderately elevated temperature is not objectionable. The solvent efficiency of the menstruum is thereby increased e.g., Extraction of Morphine.

5. Ans (b) ORGANIC MOLECULAR COMPLEXES

(A) quinhydrone type	Quinhydrone of salicylic acid
(B) picric acid type	Butesin picrate
(C) drug and caffeine complexes	Caffeine complexes
(D) polymer type	Polymer complexes

6. Ans (c) CALCULATION OF THE VAPOUR PRESSURE OF PROPELLANT MIXTURES

DALTON'S LAW	Which states that the total pressure in any system is equal to the sum of the individual or partial pressure of various component $P_{total} = P_1 + P_2$
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- C. **Application of bradykinin-analogue:** There is evidence of the opening of the tight Junctions to occur by activation of bradykinin B2 receptors through a calcium-mediated mechanism.

30. Ans (b)

THEORIES OF MUCOADHESION

THEORY	DESCRIPTIONS
Electronic theory	Attractive electrostatic forces between glycoprotein mucin network & the bioadhesive material.
Wetting theory	Ability of bioadhesive polymers to spread & develop intimate contact with the mucous membrane.
Adsorption theory	Surface forces (covalent bond, ionic bond, hydrogen bond & van der waals forces) resulting in chemical bonding.
Diffusion theory	Physical entanglement of mucin strands and flexible polymer chains.
Fracture theory	Analyses the maximum tensile stress develop during detachment of the BDDS from mucosal surfaces

31. Ans (d)

TYPE	DESCRIPTION	CHARACTERISTICS	GENERAL USE
Type III	Regular soda lime glass	Untreated soda lime glass with average chemical resistance	Dry powder and Oleaginous solution

32. Ans (c)

RUBBER CLOSURE

INGREDIENTS	EXAMPLES
Elastomer	Natural rubber, Butyl rubber, Neoprene
Vulcanizing agent	Sulphur, Peroxides
Accelerator	Zinc dibutyldithiocarbamate
Activator	Zinc oxide, Stearic acid
Antioxidant	Dilauryl thiodipropionate
Plasticizer/Lubricant	Paraffinic oil, Silicone oil
Fillers	Carbon black, Clay, Barium sulfate
Pigments	Inorganic oxides, Carbon black

33. Ans (c)

DRUGS	PURPOSE FOR WHICH ENCAPSULATION PERFORMED
Acetaminophen, Aspirin	Taste masking
Isoniazid dinitrate, Progesterone	Sustain release
Urease	Permeability selection of enzyme, substrate, reaction product
KCl	Reduce gastric irritation
Vitamin A palmitate	Prevent oxidation

34. Ans (c)

47. Ans (c) **ANTIMICROBIAL THERAPY IS GIVEN IN THE FOLLOWING FORMS**

CASUAL PROPHYLAXIS	SUPPRESSIVE PROPHYLAXIS
<ul style="list-style-type: none"> The pre-erythrocytic phase (in liver) which is the cause of malarial infection and clinical attacks, is the target for his purpose Example: Primaquine, Proguanil 	<ul style="list-style-type: none"> The schizontocides which suppress the erythrocytic phase in case of vivax and other relapsing malarias continues, clinical disease does not appear Example: Chloroquine, Proguanil, melfoquine & Doxycycline

48. Ans (d)

Quinine (i.v.) has been the drug of choice for cerebral malaria (falciparum malaria with impaired consciousness) and other forms of complicated malaria.

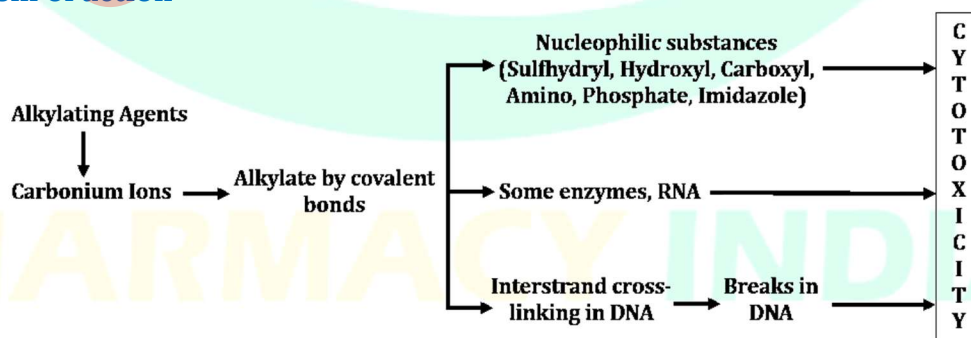
49. Ans (a)

DRUGS	MECHANISMS
Vincristine	It is a spindle poisons which bind to microtubules in the mitotic apparatus and arrest cell division in metaphase
Paclitaxel	It binds to β -tubulin of microtubules enhances its polymerization and arrests mitosis.
Etoposide	It bind to topoisomerase II as well as DNA resulting in DNA strand breakages
Topotecan	It interacts with DNA topoisomerase-1 This binding to this nuclear enzyme allows single strand breaks in DNA, but not its resealing after the strand has untwisted. It damage DNA during replication, act in the S phase and arrest cell cycle at G2 phase

50. Ans (a)

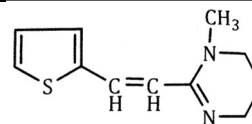
ALKYLATING AGENTS

- Having radiomimetic action (like ionizing radiation)
- They get converted to azindinum ions & bind to 7th position -N atom of guanine of DNA base pairs
- Some have CNS stimulant and cholinergic properties.
- Mechanism of action**

51. Ans (b) **DRUG OF CHOICE FOR SOME IMPORTANT DISEASE**

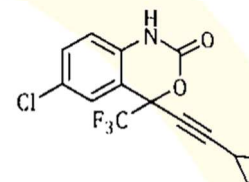
S. NO.	DISEASE	DRUG OF CHOICE
1.	Brain tumour	Nitrosoureas

- **Drug:** Pyrantel pamoate
- **IUPAC Name:** Trans-1,4,5,6,-Tetrahydro-1-methyl 2-[2-(2-thienylethenyl)] pyrimidine pamoate
- **Basic Ring:** Pyrimidine and thiophene
- **Chemical Class:** vinyl pyrimidines

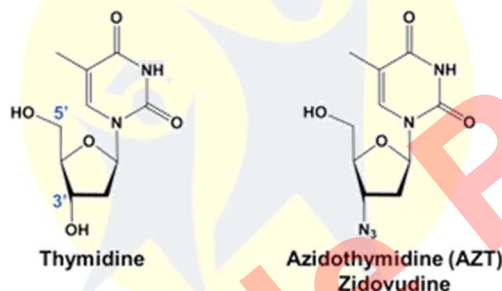


95. Ans (a)

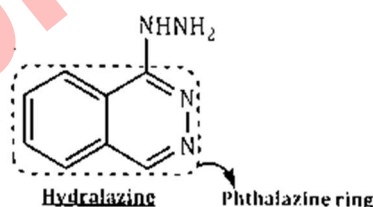
- **Drug:** Efavirenz
- **IUPAC Name:** (S)-6-Chloro 4 (Cyclopropylethynyl) 4 (trifluoromethyl)-1H-benzo [d] [1,3] oxazin 2 (4H)-One.
- **Basic Ring:** Benzooxazin
- **Chemical Class:** Nonnucleoside Reverse Transcriptase Inhibitors
- **Starting material:** 2-Amino-5-chlorobenzoic acid
Clinical Indications: Part of combinational therapy in the treatment of HIV infection.



96. Ans (a)

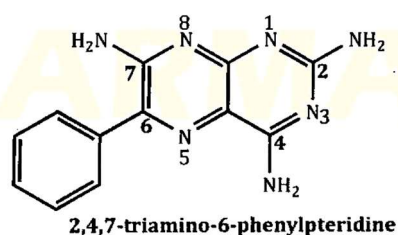
97. Ans (b) **HYDRALAZINE**

- Hydralazine is in a class of medications called vasodilators.
- It works by relaxing the blood vessels so that blood can flow more easily through the body.

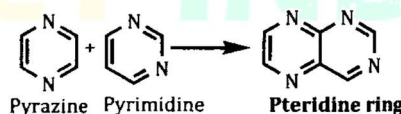
98. Ans (a) **TRIAMTERENE**

- Triamterene is a pteridine derivative with potassium-sparing diuretic property.
- Triamterene blocks the sodium-potassium exchange pump (Na K-ATPase) in the luminal membrane of principal cells in the late distal tubule, cortical collecting tubule and collecting duct in the kidney.

Chemical structure:



Pteridine nucleus= Pyrazine + Pyrimidine ring

99. Ans (b) **FELODIPINE**

- Gelatin does not respond to this test because it does not contain amino acid tryptophan in its structure.

122. Ans (d)

REDUCING SUGAR	NON-REDUCING SUGAR
Carbohydrate with free aldehyde or free ketone	Aldehyde or ketone group absent
They are hemiacetal or hemiketal form	They are in acetal or ketal form
Exhibit mutarotation	Not exhibit mutarotation
Do form osazones with phenyl hydrazine	Do not form osazones with phenyl hydrazine
Do not form oximes with hydroxylamine's	Do not form oximes.
Example - Galactose, Glucose, Xylose, Glycerinaldehyde, Fructose, Ribose, and	Example - Sucrose, Trehalose, Raffinose, Stachyose, Verbascose

123. Ans (d) **GLYCOGEN STORAGE DISEASE**

- Glycogen storage disease (GSD) is a genetic condition in which the body has an enzyme problem and is not able to store or break down the complex sugar glycogen properly. GSD affects the liver, muscles and other areas of the body.
- Example - Andersen disease, Pompe disease, etc.

124. Ans (c) **LIPOPROTEINS**

LIPOPROTEIN	DIAMETER (nm)	TRIACYL GLYCEROL (%)	PROTEIN (%)	FUNCTION
HDL (High density lipoprotein)	10-20	8	40	<ul style="list-style-type: none"> • Formed in the liver • Deliver cholesterol from peripheral to liver
LDL (Low density lipoprotein)	20-25	12	20	<ul style="list-style-type: none"> • Derived from VLDL remnant • Deliver the cholesterol to extrahepatic tissue and to liver

125. Ans (d)

TERMS	DESCRIPTION	EXAMPLE
ENDEMIC	An infection that occurs at a persistent, usually, low level in a certain geographical area	Malaria is another infectious disease that is endemic to Africa
EPIDEMIC	A situation where a disease spreads rapidly to a large number of people in a given population over a short time period	The rise in obesity globally (Often described as an "obesity epidemic")
PANDEMIC	The rapid spread of a transmissible infectious /communicable disease over several continents or worldwide	COVID 19

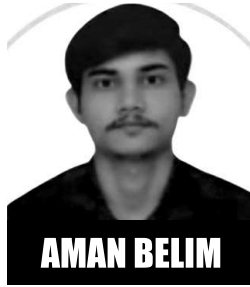
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FOR THE REMARKABLE RESULT IN GPAT 2023



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Selection



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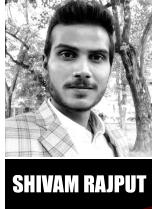
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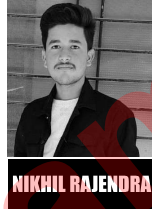
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AIR-487



AIR-505



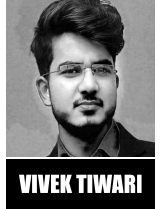
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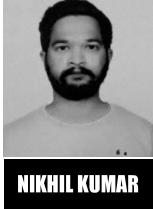
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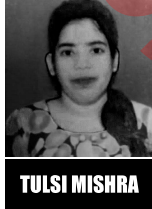
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AIR-697



AIR-787



AIR-869



AIR-909



AIR-971



AIR-1052



AIR-1110



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