

PHARMACY INDIA

PRACTICE WORK SHEET - 11

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

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WRONG METHODS CORRECT METHODS







PRACTICE WORK SHEET - 11



NDIA'S TSTOFFLINE 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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Practice Worksheet

PHARMACEUTICS

- 1. The growth of large particles at the expense of smaller ones, as a result of a difference in the solubility of the particles of varying sizes, is termed as
 - (a) Interfacial phenomenon
 - (b) Partitioning
 - (c) Erosive formulation
 - (d) Ostwald ripening
- 2. Draves test is associated with measuring the efficiency of
 - (a) Detergent
 - (b) Wetting agents
 - (c) Suspending agents
 - (d) Adsorbent
- 3. A super disintegrant in tablet formulation is
 - (a) Sodium starch glycollate
 - (b) Starch
 - (c) PVP
 - (d) Mg--Aluminium silicate
- 4. A drug was administered to 30 subjects as a tablet (30 mg), an oral aqueous solution (30 mg) and as an intravenous (0.3 mg). Mean AUC's (ng hr/ml.), dose normalized to 1 mg, for tablet, oral solution and IV were 0.91, 0.87 and 103 0 respectively. Calculate the relative bioavailability of the drug in tablet compared to the oral solution absolute bioavailability of tablet from
 - (a) 104.6%, 0.883%
 - (b) 81% 5.6%
 - (c) 10.46% 8.83%
 - (d) 19 %, 56%
- 5. When ammonium chloride is gradually and slowly incorporates in

to an emulsion stabilized with ammonium oleate

- (a) Emulsion will crack immediately
- (b) It will invert from o/w to w/o type
- (c) It will invert from w/o to o/w type
- (d) There will be no impact on its physical stability
- 6. Two ex-officio members of the Drugs
 Technical Advisory Board under
 Drugs and Cosmetic Act are
 - [P] The Drugs Controller General of India
 - [Q] The President, Medical Council of India
 - [R] The Secretary, Pharmacy Council of India
 - [S] The Director, National
 Institute of Pharmaceutical
 Education and Research, India
 - (a) [P], [Q] (b) [P], [<mark>S]</mark>
 - (c) [R], [S] (d) [P], [S]
- 7. In cross over bioavailability studies, in which the subjects must be rested for sufficient time between each drug administration to ensure that 'washout is complete Practically wash out is deemed complete, when
 - [P] 95% is wash out
 - [Q] 100% is wash out
 - [R] 5 biological -half-lives have elapsed
 - [S] 2 biological half-lives have elapsed
 - (a) [P], [R]

(b) [P], [S]

(c) [Q], [R] **Group I** (d) [Q], [S] **Group II**

Industrial dryers

- 1. Drum dryer
- 2. Fluidized bed dryer
- 3. Spray dryer
- 4. Freeze dryer

8.

- 48. All of the followings are indications for use of ACE inhibitors EXCEPT for one, Identify that
 - (a) Hypertension
 - (b) Myocardial infarction
 - (c) Left ventricular dysfunction
 - (d) Pheochromocytoma
- 49. Anti-retroviral drugs to be avoided for the therapeutic regimens is/are
 - (a) Zidovudine + Stavudine
 - (b) Stavudine+ Didanosine
 - (c) Lamivudine + Didanosine
 - (d) All of the above
- 50. Black water fever is caused by
 - (a) Quinidine
- (b) Quinine
- (c) Artisunate
- (d) Mefloquine
- 51. Dapsone act by
 - (a) Inhibiting PABA incorporation into folic acid
 - (b) Interfering mitosis in M. phase
 - (c) Interfering with template function of DNA in M. phase
 - (d) Inhibiting dihydrofolate reductase
- 52. Drug of choice for brain tumour is
 - (a) Melphalan
 - (b) Nitrosoureas
 - (c) VAMP
 - (d) None of the above.
- 53. Highly effective antibiotics used in treatment of rhabdomyosarcoma
 - (a) Daunorubicin
- (b) Mitomycin C
- (c) Actinomycin D
- (d) Procarbazine
- 54. Which of the following statement are true
 - [P] Macrolides antibiotics are carbapenem derivatives
 - [Q] Macrolide exhibit antimicrobial action by Premature termination of protein synthesis
 - [R] Adverse effect of Macrolides include hepatitis, cardiac arrhythmia, hypersensitivity
 - [S] Macrolide antibiotics are useful in Orodental infections
 - [T] Macrolides bind to 50S ribosomes of bacterial
 - (a) P, Q, R and S O, R, S and T (b)
 - (d) All of the above (c) P, Q, S and T
- 55. Which of the following antibiotic is third generation oral Cephalosporin
 - (a) Cefoxitin
- (b) Cephalexin

- (c) Cefotaxime
 - (d) Cefixime
- 56. A drug which is used in hospital for surgical prophylaxis having good efficacy. against MRSA its systemic toxicity is very high, kidney damage is also dose dependent. What is the name of this drug?
 - (a) Linezolid
- (b) Vancomycin
- (c) Erythromycin (d) All of the above
- 57. Impromidine is
 - (a) H₃ Receptor agonist
 - (b) H₃ Receptor antagonist
 - (c) Partial H₃ Receptor agonist
 - (d) Inverse H₃, Receptor agonist
- Ketoprofen is an example of **58**.
 - (a) Salicylic acid derivative
 - (b) Paraaminophenol derivative
 - (c) Arylpropionic acid derivative
 - (d) Anthranilic acid derivative
- 59. Following beta blockers is a NO (Nitric Oxide) donor
 - (a) Propranolol (b) Carvedilol
 - (c) Nebivolol
- (d) Labetalol
- Which of the following is example of **60**. indirect sympathomimetics
 - (a) Ephedrine
- (b) Isoprenaline
- (c) Xylometazoline (d) Tyramine
- Drug of choice in hypertensive emergencies is pregnancy is
 - (a) Phentolamine
 - (b) Phenoxybenzamine
 - (c) Hydralazine
 - (d) Sodium nitroprusside
- The term ischemic heart disease (IHD) is used to designate all of the following conditions EXCEPT
 - (a) Angina pectoris
 - (b) Sudden cardiac death
 - (c) Congestive heart failure (CHF)
 - (d) Arrhythmias
- 63. Improvement of memory in Alzheimer's disease is brought about by drugs which increase transmission in
 - (a) Cholinergic receptors
 - (b) Dopaminergic receptors
 - (c) GABAergic receptors
 - (d) Adrenergic receptors
- 64. Most common receptor for typical anti psychotics is
 - (a) D1
- D2

100. In the following structure of Nimodipine identify X and Y

$$(H_3C)_2HCOOC \longrightarrow X$$

$$X$$

$$X$$

$$X$$

- (a) $X=CH_3$, $Y=CH_3$
- (b) X=F, Y=CH₃
- (c) $X=CH_3$, Y=Cl
- (d) X=I, Y=CH₃
- 101. If an organic compound does not absorb UV visible radiation it means compound does not contain____
 - (a) Single bond
 - (b) Sigma bond
 - (c) Conjugated double bond
 - (d) Dative bond
- 102. Polarographic method of analysis to obtain individual amounts of Cu²⁺ and Cd²⁺ in a given mixture of the ions (Cu²⁺ and Cd²⁺) is achieved by measuring them
 - (a) Half way potentials
 - (b) Migration currents
 - (c) Decomposition potentials
 - (d) Diffusion currents
- 103. The technique in which the change in weight of the substance is recorded as a function of temperature or time is
 - (a) Ignition
- (b) TGA
- (c) Incineration
- (d) DTA
- 104. Kjeldahl analysis is an acid-base titrimetric method for determining the amount of ______ in organic compounds
 - (a) Water
- (b) Carbon
- (c) Nitrogen
- (d) Sulphur
- 105. Which of the following compounds for which beer's & lambert's law is obeyed
 - (a) Tautomers
 - (b) Conjugated double bonds, Aromatic compounds
 - (c) Fluorescent compounds
 - (d) Complexes
- 106. Determine the correctness or otherwise of the following Assertion [A] and the Reason [R]

Assertion [A]: Cis-1,2-dichloroethane is IR active

Reason [R]: It undergoes a net change in dipole moment & hence absorbs in IR

- (a) [A] Both [A] and [R] are true and [R] is the correct reason for [A]
- (b) Both [A] and [R] are true but [R] is not the correct reason for [A]
- (c) [A] is true but [R] is false
 - (d) Both [A] and [R] are false
- 107. S = 0 in sulfoxide gives an IR band at
 - (a) 1500 cm⁻¹
- (b) 50 cm⁻¹
- (c) 2500 cm⁻¹
- (d) 650 cm⁻¹
- 108. Mordant Black II indicator used in
 - (a) Complexometric titration
 - (b) Precipitation titration
 - (c) Non-aqueous titration (d)
 Acid-base titration
- 109. Which one of the following gives the point where the unknown analyte has completely reacted with the titrant
 - (a) End point
 - (b) Equivalence point
 - (c) Mid-point
 - (d) Intermediate point
- 110. No. of signals of H's in NMR for 1,4 Dibromobenzene
 - (a) 1
- (b) 2
- (c) 4 (d) 5
- 111. In ground state, the nuclei is
 - (a) Aligned with the external applied magnetic field
 - (b) Aligned against the external applied magnetic field
 - (c) Aligned with the internal applied magnetic field
 - (d) Aligned against the internal applied magnetic field
- 112. Self-quenching occurs when
 - (a) Low concentration is present
 - (b) High concentration is present
 - (c) Medium concentration is present
 - (d) None of the above
- 113. In which type of chromatography, the stationary phase held in a narrow tube and the mobile phase is forced through it under pressure?
 - (a) Column chromatography

Practice Worksheet

B.E.T equation	$\frac{P}{V(P_0 - P)} = \frac{1}{V_{\rm m}b} + \frac{b - 1}{V_{\rm m}b} \frac{P}{P_0}$	Explain adsorption
Stokes equation	$V = \frac{d^2(P_S - P_O)g}{18\eta_0}$	Explains sedimentation
Higuchi equation	$Q = [D(2A - Cs) Cs \times t]^{\frac{1}{2}}$	To study the release the water soluble and poorly soluble drugs from variety of matrices

10. Ans (b) TYPES OF FILM COATING

COATING MATERIAL	EXAMPLE	
NON-ENTERIC MATERIAL	 Hydroxy Propyl Methyl Cellulose (HPMC) Cellulose Acetate Phthalate Cellulose Acetate Sodium Carboxymethyl Cellulose Hydroxy ethyl cellulose Methyl Hydroxy Ethyl Cellulose (MHEC) Polyethylene glycol (PEG) Polyvinyl Pyrrolidone (PVP) Acrylated Polymer (Eudragit E) Ethyl Cellulose 	
	 Cellulose acetate phthalate (CAP) Hydroxy Propyl Methylcellulose phthalate 	
	(HPMCP)	
ENTERIC MATERIAL	Polyvinyl acetate phthalate (PVAP)	
	Cellulose acetate Trimelliate (CAT)	
	Acrylated polymers (Eudragit L,S)	

11. Ans (c) PROPERTIES OF MICROEMULSION

- 1. It contains droplets of oil in water phase (o/w) or droplet of water in oil (w/o). It contain 0.01mm globules.
- 2. In general, microemulsion or solubilized system are believed to be thermodynamically stable
- 3. A transparent or clear emulsion in which a water-insoluble oil or drug is "dissolved" in an aqueous surfactant system play an important role in drug
- 4. They exhibit a viscoelastic gel phase, when internal phase is added in excess

12. Ans (c) CODE OF FEDERAL REGULATIONS (CFR)

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59. Ans (c) NEBIVOLOL

• Nebivolol This highly selective β₁ blocker is regarded as a third generation β blocker,

• Because in addition to β receptor blockade, it activates endothelial nitric oxide (NO) synthase and enhances NO production.

60. INDIRECT SYMPATHOMIMETICS:

These drugs act on adrenergic neurone release NA, which then acts on the adrenoceptors, e.g., Tyramine, amphetamine.

61. Ans (c) DRUG SAFELY USED IN HYPERSENSITIVE PREGNANCY

a. Hydralazine

b. Labetalol

c. Nifedipine

d. Methyldopa

62. Ans (c)

- Ischemic heart disease (IHD) is one of the most important cardiac diseases and defined by an inadequate oxygen supply of the myocardial cells.
- The term ischemic heart disease (IHD) describes a group of clinical syndromes characterized by myocardial ischemia, an imbalance between myocardial blood supply and demand
- In myocardial ischemia the consequences of oxygen deprivation cannot be separated from effects of impaired metabolite washout. The conditions include angina pectoris, sudden can death and arrhythmia falls under this category.

63. Ans (a) ALZHEIMER'S DISEASE

A progressive neurodegenerative disorder which affects older individuals and is most common cause of dementia.

Mechanism by which they act are

- Increase regional cerebral blood flow.
- Direct support of neuronal metabolism.
- Enhancement of neurotransmitter.
- Improvement of discrete cerebral functions e.g. Memory.

64. Ans (b)

- A chronic mental disorder involving a breakdown in the relation between thought, emotion, and behavior, leading to faulty perception, inappropriate actions and feelings, withdrawal from reality and personal relationships into fantasy and delusion, and a sense of mental fragmentation is called schizophrenia.
- As per Dopamine Hypothesis Schizophrenia results from excess activity of dopamine neurotransmission in Mesolimbic and Mesocortical Pathways. Most common receptor for typical antipsychotics is D2.

65. Ans (c) BUMETANIDE

• Bumetanide is similar to furosemide, but it is 40 times more potent

$$4n+2=10 \Rightarrow n=2$$

$$4n+2=14 \Rightarrow n=3$$

$$4n+2=14 \Rightarrow n=3$$

96. Ans (c)

- In Anthracene and Phenanthrene commonly electrophilic substitution occurs at 9, 10 position.
- The reactivity of the 9- and 10-positions toward electrophilic attack, whether reaction leads
 to substitution or addition, is understandable since the initially formed carbocation is the
 most stable one, in which aromatic sextets are preserved in two of the three rings.
- This carbocation can then either give up a proton to yield the substitution product, or accept a nucleophile to yield the addition product.

97. Ans (b) CHICHIBABIN REACTION

98. Ans (c)

- The five membered heterocyclic compounds such as pyrrole, furan, and thiophene don't have any free bond pair electron to donate.
- The basic order will be: pyridine > furan > pyrrole > thiophene.
- In pyridine the lone pair on nitrogen is not involved in resonance of the ring and it can donate electrons.

99. Ans (c)

• The lead molecule for synthesis of semisynthetic cephalosporins is 7-amino cephalosporanic acid.

100. Ans (a) NIMODIPINE

Nimodipine is a dihydropyridine derivative and an analogue of the calcium channel blocker nifedipine, with antihypertensive activity.

$$(H_3C)_2HCOOC$$
 $(H_3C)_2HCOOC$
 $(H_3C)_2HCOOCH_2CH_2OCH_3$
 $(CH_3)_2HCOOCH_2CH_2OCH_3$

Heartiest congratulations



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AIR-257



AIR-636





AIR-297



AIR-677



AIR-1110





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