PHARMACY INDIA

PRACTICE WORK SHEET - 6

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

WRONG METHODS CORRECT METHODS

PRACTICE WORK SHEET - 6

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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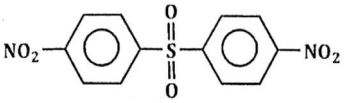
6 Practice Worksheet

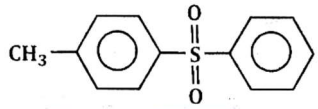
PHARMACEUTICS

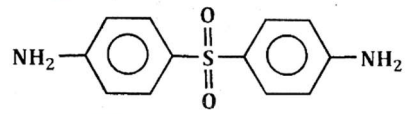
1. **Apparent volume of distribution will be highest in case of the drug with % plasma protein binding**
   (a) 10 (b) 89
   (c) 50 (d) 68
2. **The useful variable form in vitro dissolution test data for IVIVC includes**
   (a) $t_{50\,\%} - t_{63.2\,\%}$
   (b) Sampling interval
   (c) Sample volume
   (d) Vo lume of dissolution fluid
3. **For the measurement of particle size of powders, the distance measured between two tangents on opposite sides of the particle parallel to some fixed direction is called**
   (a) Feret diameter
   (b) Martin diameter
   (c) Projected area diameter
   (d) Edmundson diameter
4. **If the drug substance has been substituted wholly or in part by another drug or substance, it is called as**
   (a) Spurious drug
   (b) Adulterated drug
   (c) Misbranded drug
   (d) Mixed drug
5. **Antioxidant used as blocking agent in sterile product is**
   (a) Ascorbic acid esters
   (b) Sodium bisulphate
   (c) Ascorbic acid
   (d) EDTA
6. **Which of the following is an example of hemiesters anionic surfactant for pharmaceutical emulsions**
   (a) Sulfosuccinates
   (b) Sarcosinates
   (c) Taurates
   (d) Lactylates
7. **The labelling instructions "To be diluted 20 times its volume with water" indicates the dispensed product is a**
   (a) Mixture (b) Elixir
   (c) Linctus (d) Mouthwash
8. **Which of the following dosage form of digoxin will provide greater bioavailability based on value of F**
   (a) F equals 1.0
   (b) F equals 0.32
   (c) F equals 0.62
   (d) F equals 0.77
9. **Which of the following techniques is not useful to detect polymorphs**
   (a) DSC
   (b) HPLC
   (c) PXRD
   (d) Melting point determination
10. **The method by which different constituents of a liquid mixture can be separated without decomposition of the constituents is**
    (a) Distillation under reduced pressure
    (b) Molecular distillation
    (c) Steam distillation
    (d) Fraction distillation
11. **What is the renal clearance of a substance, if its concentration in plasma is 10 m concentration in urine is 100 mg and urine flow is 2 ml/min**
    (a) 0.02 ml/min
    (b) 0.2 ml/min

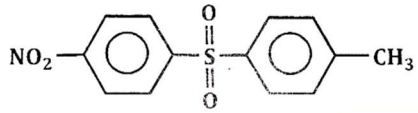
(a) Acrolein
(b) Acetohydroxamic acid
(c) Methoxyurea
(d) Uric acid

89. Identify the structure of Dapsone

(a) 

(b) 

(c) 

(d) 

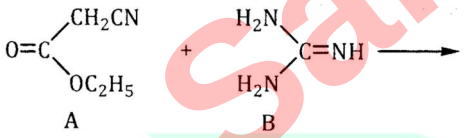
90. Identify the Coumarin containing antibiotics

(a) Fusidic acid (b) Novobioci
(b) Linezolid (d) Fosfomycin

91. Which of the following compound was responsible for Sulfonamide tragedy when it was reacted with Sulfonamides

(a) Acetaphenone (b) Diethyl glycol
(b) Glycerol (d) Gluconic acid

92. Reaction between A and B is used as starting material for the synthesis of



(a) Diazoxide
(b) Sodium nitroprusside
(c) Minoxidil
(d) Tadalafil

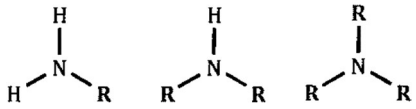
93. Ring present in Captopril is

(a) Pyrrole (b) Pyrrolidine
(b) Pyridine (d) Piperidine

94. Ethacrynic Acid is an unsaturated derivative of aryloxy acetic acid without a Sulfonamide substituent

(a) Ketone (b) Hydroxide
(c) Halide (d) Ester

95. Nitrogen (side chain) of Doxylamine is



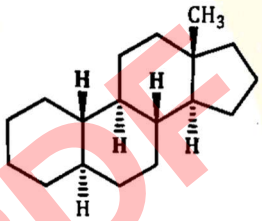
Primary (1^0) Secondary (2^0) Tertiary (3^0)

(a) 1° (b) 2°
(c) 3° (d) 4°

96. Thiophene ring is present in

(a) Pyrilamine
(b) Methapyrilene
(c) Tripelennamine
(d) Diphenhydramine

97. Identify the given structure



(a) 5 - β estrange
(b) 5 -α estrange
(c) 5 - αandrostane
(d) 5 – β gonane

98. Ring present in Glipizide is

(a) Pyrrole (b) Pyridine
(c) Pyrazine (d) Pyrimidine

99. When a methyl group is missing from side chain of a steroidal ring it is indicated by

(a) Suffix "nor" (b) Prefix "homo"
(c) Suffix "seco" (d) Prefix "nor"

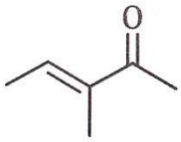
100. Oxidation of quinoline with $KMnO_4$ gives

(a) Perhydroquinoline
(b) 2,3-pyridinedicarboxylic acid
(c) 4- Quinolone
(d) 2-Quinolone

101. Beer's law depends upon

(a) Intensity of incident light
(b) Concentration of the solution
(c) Intensity of incident light & radiation

114. Predict λ_{max} for π-π* absorption band in the UV spectrum of following compound



(a) 237 nm (b) 215 nm
(c) 241 nm (d) 240 nm

OTHER SUBJECTS

115. RNA molecules having intrinsic catalytic activity are called as
(a) mRNAs (b) Ribozymes
(c) sn RNAs (d) rRNAs

116. For protein detection most commonly used probe is
(a) Interferon Consumer who
(b) Antibody
(c) Lectin
(d) Antigen

117. Blockade in B-oxidation results in
(a) Von Gierk's disease
(b) Scurvy
(c) Sudden infant death syndrome
(d) Taruli's disease

118. In treating immunodeficiency disease the goal is to maintain IgG levels at about
(a) 100 mg/dL (b) 400 mg/dL
(b) 200 mg/dL (d) 300 mg/dL.

119. The protein toxins that have been modified to reduce the toxicity without significantly altering the immunogenicity are known as
(a) Sera (b) Antisera
(c) Toxoids (d) Vaccines

120. All of the following vitamins have antioxidant property, EXCEPT
(a) β-carotene
(b) Ascorbic acid
(c) Biotin
(d) Cholecalciferol

121. The differential diagnosis of jaundice is possible by measuring blood level of the enzyme
(a) Alkaline phosphatase
(b) Acid phosphatase
(c) Glutamate pyruvate transaminase
(d) Glutamate oxaloacetate trans-aminase

122. What is the common point of similarity between DNA and RNA
(a) Both are double stranded
(b) Both have identical sugar molecules
(c) Both have identical pyrimidine base
(d) Both are polymers of nucleotides

123. Best method for blood sera sterilization is
(a) Autoclaving (b) Filtration
(c) Radiation (d) Heating

124. Efficiency of ULPA filters is
(a) 95.97% (b) 99.97%
(c) 99% (d) 99.99%

125. Correct sequence in Gram staining
(a) Methyl violet → Iodine → Acetone → Carbol fuchsin
(b) Carbol fuchsin→ lodine → Acetone → Methyl violet
(c) Methyl violet → Acetone → lodine. →Carbol fuchsin
(d) Methyl violet-→ Carbol fuchsin → Acetone → lodine

Practice Worksheet Explanation – 6

1. Ans (a) VOLUME OF DISTRIBUTION

- Apparent volume of distribution is defined as the hypothetical volume of body fluid into which a drug is dissolved or distributed.
- Apparent volume of distribution is expressed in litres and sometimes in litres/Kg body weight.
- The V_d of various drugs ranges from 3 litres (plasma volume) to 40,000 litres (much above the total body size).
- When there is a decrease in protein binding, there is an increase in V, and vice versa.

2. Ans (a)

- As per FDA IVIVC can be defined as "A predictive mathematical model describing relationship between in-vitro property of a dosage form and in-vivo response".
- The useful variable from in vitro dissolution test data for IVIVC includes $t_{50\%}$ -$t_{63.2\%}$

3. Ans (a) POPULAR MEASUREMENTS ARE

S. NO.	TYPES OF PARTICAL DIAMETER	EXPLANATION
1.	**Martin diameter**	It is the length of the line that bisects the particle image. A line may be drawn in any direction, but must be drawn in the same direction for other particle measured.
2.	**Feret diameter**	It is the distance between two tangents on opposite side of the particle parallel to some fixed directions
3.	**Projected area diameter**	It is the diameter of a circle with the same area as that of the particle observed to the surface on which the particles rest.

4. Ans (a) Spurious Drug

- if it is imported under a name which belongs to another drug, or
- if it is an imitation of or a substitute for another drug or if it resembles another drug in a manner likely to deceive or bears upon it or its label or container the name of another drug, or
- if it has been substituted wholely or in part by another drug substance, or
- if it claims to be the product of a manufacturer or company of whom it is not truly a product.

5. Ans (a) TYPE OF ANTIOXIDANTS USED IN STERILE PRODUCT

TYPE OF ANTIOXIDANTS	EXAMPLE
Reducing agents (By oxidizing itself)	Ascorbic acid, Sodium bisulfide, Sodium metabisulfide, Sodium formaldehyde sulfxolate, Thiourea
Blocking agents (By blocking oxidative chain reaction)	Ascorbic acid esters, Butyl hydroxyl toluene (BHT) Butyl hydroxyl anisole (BHA), Tocopherols
Synergists	Ascorbic acid, Citric acid, Phosphoric acid, Tartaric acid

motion of the entire drying mass.			

32. Ans (a)

SWEETLAND FILTER

- An alternative method is to enclose the filter leaf in a special vessel into which the slurry is pumped under pressure.
- A number of leaves are connected to a common outlet, to provide a large area for filtration.

33. Ans (d)

The Animal Welfare Board of India was established in 1962 under Section 4 of The Prevention of Cruelty to Animals Act, 1960. Its headquarters was in Chennai, which moved to Ballabhgarh of Faridabad district in Haryana state in early 2018.

34. Ans (c)

SCHEDULES	DRUGS
Schedule J	AIDS, Atherosclerosis, Cancer, Diabetes, Disease and disorder of brain, Leprosy, Goiter, Tuberculosis, jaundice, Paralysis, Genetic disorder, Thyroid, Small pox, Ulcer, Obesity, Pneumonia, Epilepsy, blood poisoning, Plague, Syphilis, Gonorrhea, Sterility in woman, Gangrene, etc.

35. Ans (a)

ORDER OF KINETICS

ZERO ORDER	FIRST ORDER	SECOND ORDER
Rate of reaction is independent on the concentration of reacting species	Rate of reaction is directly proportional to first power of concentration of a single reactant	Rate of reaction is proportional to second power of concentration of a single reactant
Half Life $t_{1/2} = A_0/2k$	Half Life $t_{1/2} = 0.693\ K$	Half Life $t_{1/2} = 1/ak$
Unit K= moles/liter/second	Unit $K=sec^{-1}$	Unit $K = litre.mole^{-1}.sec^{-1}$

36. Ans (b)

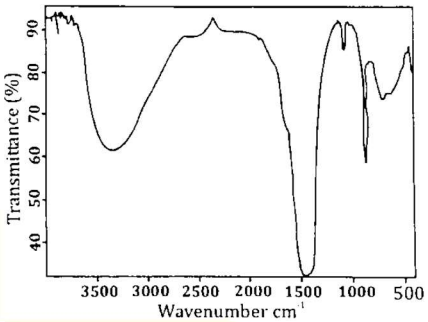
Maximum Safe Concentration (MSC): Abo called as minimum toxic concentration (MTC), it is the concentration of drug in plasma above which adverse or unwanted effects are precipitated Concentration of drug above MSC is said to be in the toxic level.

37. Ans (a)

CLASSIFICATION OF POLYMER USED IN TDDS

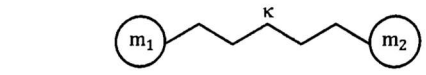
105. Ans (d)

- IR spectroscopy measures the changes in vibrational energies.
- In IR, the absorption peaks are measured in terms of wavenumber or wavelength units.
- Mostly infrared spectra of organic compounds are plotted as % transmittance against wave number as shown.



106. Ans (d)

- The value of stretching vibrational frequency of bond can be calculated by using Hooke's law.
- Hooke's law states that the vibrational frequency of a bond is directly proportional bond strength and inversely proportional to the masses at the ends of the bond
- This is explained in below equation



$$\bar{\upsilon} = \frac{1}{2\pi}\sqrt{\frac{\kappa}{\mu}} \qquad \mu = \frac{m_1 \cdot m_2}{m_1 + m_2}$$

$\bar{\upsilon}$ = frequency

μ = reduced mass

Where,

k - Force constant

M_1, M_2 - Mass

μ =reduced mass

107. Ans (d)

- Precessional frequency represents number of spin carried out by the nucleus in the presence of magnetic field per second.
- Thus, when magnetic field applied the nucleus spins with precessional frequency while before application of magnetic field it was moving with random frequency. Precessional frequency is directly proportional to applied field strength(i).

$$\omega = GH_0$$

where, ω = larmor frequency

However, $\omega = 2\pi\nu$,

$\nu = GB_0/2\pi$

$$G = \mu/I$$

Where,

G = gyro magnetic ratio

μ = nuclear magnetic moment

I = nuclear angular momentum.

108. Ans (b)

Sera	They immediately provide antibody for both prevention and treatment of established disease.

120. Ans (b)

VITAMINS	NAME	FEATURE
A	ß-carotene	Antioxidant, Teratogenic
C	Ascorbic acid	Antioxidant, Tautomeric, used in deodorants
E	α-Tocopherol	Antioxidant
D_3	Cholecalciferol	Absorption & balance of Ca^{++}

121. Ans (a)

ENZYMES	DISEASES OR DISORDERS
Amylase	Acute pancreatitis
Alanine transaminase	Acute hepatitis of viral or toxic Origin, jaundice and cirrhosis of liver
Aspartate transaminase	Myocardial Infarction
Alkaline phosphatase	Rickets, hyperparathyroidism, carcinoma of Bone, and obstructive jaundice
Acid phosphatase	Cancer of prostate gland
Creatine phosphokinase (CPK)	Myocardial infarction

122. Ans (d)

CHARACTERISTICS	DNA	RNA
Present in	In chromosome & little in mitochondria & chloroplast	Distributed throughout the cytoplasm except vacuoles
Strands	Double	Single
Sugar	Deoxyribose sugar	Ribose sugar
Nitrogenous base	A, G, C & T	A, G, C, & U
Transcription	DNA→ DNA (replication) DNA→ RNA (transcription)	RNA dose not replicate
Nucleotide	Made up of large number of nucleotides up to 4 million	Consist of less no. of nucleotide up to 12000

123. Ans (b)

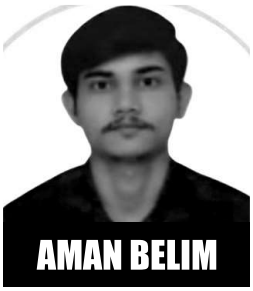
MATERIALS AND SPECIFIC STERILIZATION METHOD

MATERIAL	METHOD OF STERILIZATION/ DISINFECTION
Clinical thermometer	Isopropyl alcohol
Paraffin, glass syringe, flask, slide, oil, grease, fat, glycerol	Hot air oven
Operation theater, entryway, ward, laboratory fumigation, Preservation of anatomical specimen, woolen blanket	Formaldehyde gas > UV > BPL
Cystoscope, bronchoscope	Orthophthaldehyde > glutaraldehyde 2% (cidex)

Heartiest congratulations

FOR THE REMARKABLE RESULT IN GPAT 2023

AIR-07



AMAN BELIM

470+ Selection

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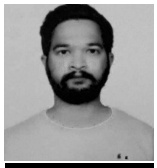

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