Name of Candidate: $\qquad$
Date:- $\qquad$
$\qquad$
Mobile No.:- $\qquad$
College Name:- $\qquad$

## 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 $\otimes \bigcirc \bigcirc \bigcirc \bigcirc \bigcirc$

## PRACTICE WORK SHEET-2

## INDIA'S IS OFFLINE TEST SERIES WITH DETAILED EXPLANATION

## FEATURES

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


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## Practice Worksheet

## PHARMACEUTICS

1. The USP defines $\qquad$ as liquid preparations of vegetable drugs, containing akohol as a solvent or as a preservative, or both, so made that, unless otherwise specified in an Individual monograph, each milliliter contains the therapeutic constituents of 1 gram of the standard drug that it represents
(a) Tinctures
(b) Extracts
(c) Infusion
(d) Fluid extracts
2. Match List I with List II List-I (Equipment)
3. Low shear mixer
4. Rotary tablet machine
3.Capsule filling machine
5. Compaction mill

List-II (Model/Trade Name/Type)
[P]Manestry Drycota
[Q] Chilsonator (Fitzpatrick)
[R]Slated Double Cone Mixer
[S] Prosoly (JRS Pharma)
[T] PCF 1200 Model (Pharma Land)
Choose the correct answer from the options given below
(a) $1-[\mathrm{P}], 2-[\mathrm{Q}], 3-[\mathrm{S}], 4-[\mathrm{R}]$
(b) $1-[\mathrm{Q}], 2-[\mathrm{R}], 3-[\mathrm{P}], 4-[\mathrm{S}]$
(c) $1-[\mathrm{R}], 2-[\mathrm{P}], 3-[\mathrm{S}], 4-[\mathrm{Q}]$
(d) $1-[\mathrm{P}], 2-[\mathrm{Q}], 3-[\mathrm{S}], 4-[\mathrm{R}]$
3. The properties of solutions containing surface active agents change sharply over a narrow concentration range and are called as
(a) Critical micelle concentration
(b) lonic concentration
(c) Hydrogen ion concentration
(d) Surface tension
4. HEPA filters are defined as A or more efficient in removing, from the air. $B$
particles generated by vaporization of the hydrocarbon Emory 3004
(a) A-99.99\% B-0.1 mm
(b) A-99.00 \% B-0.3 mm
(c) $\mathrm{A}-99.99 \% \mathrm{~B}-0.3 \mathrm{~mm}$
(d) A-99.00 \% B-0.1 mm
5. Name the popular system for ocular delivery of pilocarpine. Based on membrane-controlled reservoir systems
(a) Ocusert
(b) Alzet pump
(c) Progestasert
(d) Nitrodur
6. Identify the mismatched pair
(a) Flow through cell- USP apparatus-4
(b) Reciprocating cylinder- USP Apparatus-3
(c) Paddle over disc- USP Apparatus-5
(d) Reciprocating holder- USP Apparatus-6
7. Neosorb is the trade name of
(a) Sorbitol
(b) Mannitol
(c) Inositol
(d) MCC
8. Identify the condition for determination of bloom strength of gelatin
(a) $4 \mathrm{~mm}, 66.66 \% \mathrm{w} / \mathrm{w}, 20^{\circ} \mathrm{C}, 24$ hours
(b) $4 \mathrm{~mm}, 66.66 \% \mathrm{w} / \mathrm{w}, 10^{\circ} \mathrm{C}, 24$ hours
(c) $4 \mathrm{~mm}, 6.66 \% \mathrm{w} / \mathrm{w}, 25^{\circ} \mathrm{C}, 20$ hours
(d) $4 \mathrm{~mm}, 6.66 \% \mathrm{w} / \mathrm{w}, 10^{\circ} \mathrm{C}, 17$ hours
9. The entire cycle of the capsule shell manufacturing lasts for
(a) 30 minutes
(b) 90 minutes
(c) 45 minutes
(d) 60 minutes
10. Surfactants having an HLB value of more than 16 are useful as:
(a) Solubilizing agents
(b) Detergents
(c) Antifoaming agents
(d) w/o emulgents
11. Unit of kinematic viscosity is:
(a) Dynes/cm2
(b) Stoke
(c) Dynes. $\mathrm{sec} / \mathrm{cm}$
(d) Poise
69. Papaverine, Narcotine and Narceine belongs to
(a) Benzyl Isoquinoline ring system
(b) Phenanthrene ring system
(c) Yohimbine ring system
(d) None of the above
70. Here given is Plants and their respected family. Match the following with correct answer.
1.Iridaceae
[P] Gaultheria
2. Ericaceae
[Q] Saffron
3. Meliaceae
[R] Ambergris
4. Physeteridae
[S] Neem
5. Labitae
[T] Tulsi
(a) 1 - [P], 2 - [Q], 3 - [R], 4 - [S], 5 - [T]
(b) $1-[\mathrm{P}], 2-[\mathrm{Q}], 3-[\mathrm{S}], 4-[\mathrm{T}], 5-[\mathrm{R}]$
(c) $1-[\mathrm{Q}], 2-[\mathrm{P}], 3-[\mathrm{S}], 4-[\mathrm{R}], 5-[\mathrm{T}]$
(d) $1-[\mathrm{Q}], 2-[\mathrm{P}], 3-[\mathrm{R}], 4-[\mathrm{S}], 5-[\mathrm{T}]$
71. A sample of Cinnamomum zeylanicum purchased from market was evaluated for its authenticity. It shows
(a) Presence of cork and cortex
(b) Absence of xylem parenchyma
(c) Absence of cork and cortex
(d) Absence of phloem fibres
72. Presence of sunken stomata found in
(a) Eucalyptus
(b) Clove
(c) Cinnamon
(d) Dill
73. The Aglycone of the cardiac glycoside synthesized through the biogenetic pathway of
(a) Shikimic acid
(b) Hexose mono phosphate
(c) Melonic acid
(d) Mevalonic acid
74. The difference in chemical structure of Digitoxigenin from that of Gitoxigenin is
(a) Presence of OH group at $16^{\text {th }}$ position
(b) Absence of OH group at $16^{\text {th }}$ position
(c) Presence of methyl group at $16^{\text {th }}$ position
(d) Absence of methyl group at $16^{\text {th }}$ position
75. The swelling factor of Isapgol husk is
(a) 8-11
(b) 3-8
(c) $2-7$
(d) $10-14$
76. Pancreatin contain enzymes namely
(a) Diastase, Pepsin, Trypsin
(b) Protease, Amylase, lipase
(c) Protease, Lipase, Trypsin
(d) Pepsin, Trypsin, Lipase

## PHARMACEUTICAL CHEMISTRY

77. Desmethyl diazepam is an active metabolite, having an elimination half-life of more than 40 hours, of all the following drugs EXCEPT
(a) Flurazepam
(b) Chlordiazepoxide
(c) Clorazepate
(d) Diazepam
78. Which of the following method is used for the determination of osmotic pressure
(a) Beckmann's method
(b) Berkeley and Hartley's method
(c) Cottrell's method
(d) Landsberger's method
79. Which is NOT the colligative property
[P] Depression of freezing point
[R] Elevation of vapour pressure
[Q] Elevation of boiling point
[S] Osmotic pressure
Choose the correct one of the following
(a) [P], [Q] and [S]
[b] [P] and [Q]
(c) $[\mathrm{P}]$ and $[\mathrm{S}]$
(d) $[R]$ only
80. Substitution constant for Meta benzoic acids is denoted by
(a) $\sigma \mathrm{m}$ (sigma m )
(b) $\mathrm{pka}(\mathrm{H})$
(c) $\rho \mathrm{m}$ (rho m)
(d) pHm
81. Which of the following is NOT an intensive property
(a) Concentration
(b) Density
(c) Pressure
(d) Volume
82. A diuretic compound Cyclothiazide has a $\qquad$ substituent at $\mathrm{C}-3$ of 1, 2, 4-Benzothiadiazine nucleus
(a) 5-Bornen-2-yl
(b) 5-Norbornen-2-yl
(c) 2-Bornen-5-yl
(d) 2-Norbornen-5-yl
83. Why trans-isomers are more stable than cis-isomers of compounds
(a) Due to less steric repulsion than cis isomers
(b) $2.417 \times 10-2$
(c) $3.402 \times 10^{4}$
(d) $1.042 \times 10^{4}$
84. Xenon arc lamp is source of light in
(a) Colorimeter
(b) IR
(c) Flame photometer
(d) UV
85. Red shift in UV spectroscopy is caused by
(a) Increasing conjugation
(b) Decreasing solvent polarity
(c) Decreasing conjugation
(d) Increasing solvent polarity
86. The $C=0$ band present in
cyclopentanone splits into two bands.
This occurs due to
(a) Presence of impurities
(b) Fermi resonance
(c) Coupled interactions
(d) Interference by $\mathrm{CO}_{2}$
87. The solvent not used for IR is
(a) Chloroform
(b) Carbon tetrachloride
(c) Carbon disulphide
(d) $\mathrm{H}_{2} \mathrm{O}$
88. What is Fourier Transformed in FTNMR to obtain the spectrum
(a) FID
(b) Interferogram
(c) Power spectrum
(d) Digital filter
89. The distance between the centres of two adjacent peaks in a multiplet is called as
(a) Spin-Spin coupling
(b) Coupling constant
(c) Spin-lattice coupling
(d) Relaxation constant
90. The phenomenon of emission of light radiation by substance, when excitation occurs is called as
(a) Fluorescence
(b) Luminescence
(c) Phosphorescence
(d) Absorption

## 114. MALDI is a

(a) Ionization source
(b) Inlet system
(c) Detector
(d) Peak

## OTHER SUBJECTS

115. Which of the following is false about HMP shunt
(a) No ATP formation
(b) Formation of NADPH
(c) Synthesis of ribose-5-phosphate
(d) Non-oxidative phase of HMP pathway is irreversible
116. All the following can determine the protein structure EXCEPT
(a) Mass spectrometry
(b) X-ray crystallography
(c) High performance liquid chromatography
(d) NMR spectroscopy
117. How many molecules of acyl-CoA are produced in beta-oxidation of palmitic acid
(a) Six
(b) Seven
(c) Eight
(d) Nine
118. Class of enzymes which use oxygen as a hydrogen acceptor are known as
(a) Dehydrogenases
(b) Oxidases
(c) Cytochromes
(d) Nicotinamide coenzymes
119. Match the following vaccines under Column I with their respective content under Column II

Vaccine

## Content

1. OPV
2. Typhoid (TAB)
3. Tetanus
4. BCG
[T] Toxoid
Choose the correct answer form the options given below
(a) $1-[\mathrm{R}], 2-[\mathrm{T}], 3-[\mathrm{P}], 4-[\mathrm{Q}]$
(b) $1-[\mathrm{P}], 2-[\mathrm{Q}], 3-[\mathrm{T}], 4-[\mathrm{R}]$
(c) $1-[\mathrm{S}], 2-[\mathrm{P}], 3-[\mathrm{T}], 4-[\mathrm{Q}]$
(d) $1-[\mathrm{Q}], 2-[\mathrm{R}], 3-[\mathrm{S}], 4-[\mathrm{P}]$
5. Which of the following coenzymes is not derived from vitamins
(a) CoA-SH
(b) TPP
(c) Pyridoxal phosphate (PLP)
(d) Coenzyme Q

- Reye syndrome typically occurs after a viral illness, particularly an upper respiratory tract infection, influenza, varicella, or gastroenteritis, and is associated with the use of aspirin during the illness.
- Therefore 3-year-old child with the symptoms of influenza is contraindicated with the use of aspirin. This is due to increased risk of Reye's syndrome.

44. Ans (c) PERIPHERALLY ACTING MUSCLE RELAXANTS

| CLASSES | SUB-CLASSES | DRUGS |
| :---: | :---: | :--- |
| Neuromuscular <br> blocking agent | Nondepolarizing <br> (Competitive <br> blockers) | Short acting: Mivacurium <br> Intermediate: Vacuronium, Atracurium, <br> Cisatracurium, Rocuronium, Rapacuronium. <br> Long acting: Pancuronium, Doxacurium, <br> Pipecuronium, 8-Tubocurarine |
|  | Depolarizing <br> blockers | Succinyl choline (Suxamethonium), <br> Decamethonium |
| Directly acting <br> agent | Dantrolene sodium, Quinine |  |

45. Ans (b) GABA RECEPTOR

| GABA RECEPTOR | AGONIST | ANTAGONIST |
| :--- | :---: | :---: |
| GABA <br> Increases Cl-conduction) | Baclofen | Saclofen |

46. Ans (a)

- LA causing methemoglobinemia

| B | A | L |
| :---: | :---: | :---: |
| Benzocaine | Prilocaine (Max) | Lignocaine |

47. Ans (d)

| GnRH agonist | GnRH antagonists |  |
| :--- | :--- | :---: |
| - Buserelin | • |  |
| - Gotrorelix |  |  |
| - Leuprelin | • |  |
| - | Ganirelix |  |
| - Nafarelin | - |  |
| - | Abarelix |  |
| - Triptorelin |  |  |

## 48. Ans (d) CLASSIFICATION OF GLUCOCORTICOIDS

| TYPES | EXAMPLES |
| :---: | :--- |
| Long-acting glucocorticoids | Dexamethasone, Betamethasone |
| Intermediate acting glucocorticoids | Prednisolone, Methyl prednisolone, <br> Triamcinolone, Deflazacort |
| Short acting glucocorticoids | Hydrocortisone |

## 49. Ans (c) THYROID INHIBITORS

| CLASSES | DRUGS |
| :---: | :---: |

- RULE 1: If four atoms attached to the stereocenter are different, priorities depend on atomic numbers.
- RULE 2: If two atoms are isotopes of the same element, the atom of higher mass number has the higher priority
- RULE 3: If the relative positions of two groups cannot be determined as earlier, they are decided by a comparison of priority atom at the first point difference.
- RULE 4: If two carbon chains are attached to the stereogenic carbon the chain with a secondary carbon is of higher priority than the one with primary carbon.
- RULE 5: In case of double or triple band both the atoms are considered to be duplicated or triplicated
- RULE 6: To assign R and S configuration the molecule has to be viewed with the lowest priority group at the back.
- RULE 7: When the lowest priority group is towards eyes interchanging of the position of any two groups twice at stereocenter retains its configuration and also puts group of lowest priority assay from the viewer.


## 85. Ans (a) ALDOL CONDENSATION

- Aldol Condensation can be defined as an organic reaction in which condensation an enol or an enolate ion reacts with a carbonyl compound to form a 3-hydroxyakdehyde or Bhydroxyketone, followed by dehydration to give conjugated enone takes place.



## 86. Ans (a) BALZ SCHIEMANN REACTION

Balz Schiemann reaction is a chemical reaction in which primary aromatic amine is transformed into an aryl fluoride through diazonium tetrafluroborate. Benzene diazonium chloride and HBF, are reagents used in Balz Schiemann reaction.


## 87. Ans (b) RAOULT'S LAW

## 121. Ans (b)

Summary of the important enzymes useful for the diagnosis of specific diseases is tabulated below

| S. NO. | ENZYMES | DISEASES OR DISORDERS |
| :---: | :---: | :---: |
| 1. | Amylase | Acute pancreatitis |
| 2. | Alanine transaminase | Acute hepatitis of viral or toxic <br> Origin, jaundice and cirrhosis of liver |
| 3. | Aspartate transaminase | Myocardial <br> Infarction |
| 4. | Alkaline phosphatase | Rickets, hyperparathyroidism, <br> carcinoma of <br> Bone, and obstructive jaundice |
| 5. | Acid phosphatase | Cancer of prostate gland |
| 6. | Lactate dehydrogenase <br> Infective hepatitis, leukemia and <br> muscular <br> Dystrophy |  |
| $\mathbf{7 .}$ | Creatine phosphokinase <br> (CPK) | Myocardial infarction |
| $\mathbf{8 .}$ | $\gamma$-Glutamyl transpeptidase | Alcoholism. |

## 122. Ans (a)

## SCIENTIST AND THEIR CONTRIBUTION

| SCIENTIST | ASSOCIATED WITH |
| :---: | :--- |
| Louis Pasteur | Father of microbiology |
| Rebert Koch | Father of medical microbiology Discovered M. <br> tuberculosis and V. cholera Introduced staining <br> techniques methods of obtaining bacteria in pure <br> culture on solid media Suggested Koch's postulate |
| Joseph Lister | Father of Aseptic surgery <br> Proved that sepsis could be prevented by Hand hygiene |
| Antony Van | Invented microscope (Father of compound <br> microscope) Father of Bacteriology |
| Leeuwenhoek | Father of Immunology, Discovery of small pox <br> vaccine |
| Edward Jenner |  |

## 123. Ans (b)

| VARIOUS PHASES OF BACTERIAL GROWTH CURVE |  |  |  |  |
| :---: | :--- | :--- | :--- | :--- |
|  | LAG | LOG | STATIONARY | DECLINE |
| Bacteria <br> divide | No | Yes | Yes | No |
| Bacterial <br> death | No | No | Yes |  |
| Total count | Flat | Raises | Raises | Flat |
| Viable count | Flat | Raises | Flat | Falls |
| Bacterial <br> growth curve | Increase <br> enzymes and <br> metabolites, | Cell uniformly <br> stained, active | Produce <br> granules, <br> spores, <br> exotoxin, | Produce <br> involution <br> forms |

## Heartiest congratulations'

FOR THE REMARKABLE RESULT IN GPAT 2023

## AIR-07



470+ Selection


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