

# National Testing Agency

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## GPAT 2021

<b>Group Number :</b>	1
<b>Group Id :</b>	1908891
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<b>Break time :</b>	0
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<b>Is this Group for Examiner? :</b>	No

## PART I Pharmaceuticals

<b>Section Id :</b>	1908891
<b>Section Number :</b>	1
<b>Section type :</b>	Online

<b>Mandatory or Optional :</b>	Mandatory
<b>Number of Questions :</b>	38
<b>Number of Questions to be attempted :</b>	38
<b>Section Marks :</b>	152
<b>Mark As Answered Required? :</b>	Yes
<b>Sub-Section Number :</b>	1
<b>Sub-Section Id :</b>	1908891
<b>Question Shuffling Allowed :</b>	Yes

**Question Number : 1 Question Id : 1908891 Question Type : MCQ Option Shuffling : No Is**

**Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Match the types of terpenes under column I with their respective examples under Column II

Column I	Column II
Types of terpenes	Examples
(A) Monoterpenes	(I) Lycopene
(B) Diterpenes	(II) Camphor
(C) Sesquiterpenes	(III) Taxol
(D) Tetraterpenes	(IV) Zingiberene

Choose the correct answer from the options given below :

- (1) (A)-(II), (B)-(I), (C)-(IV), (D)-(III)
- (2) (A)-(II), (B)-(III), (C)-(IV), (D)-(I)
- (3) (A)-(IV), (B)-(I), (C)-(II), (D)-(III)
- (4) (A)-(I), (B)-(II), (C)-(IV), (D)-(III)

**Options :**

1908891. 1

1908892. 2

1908893. 3

1908894. 4

**Question Number : 2 Question Id : 1908892 Question Type : MCQ Option Shuffling : No Is**

**Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Limit for the following heavy metal/s is/are mentioned in the WHO guidelines for herbal drug evaluation.

- (A) Cadmium (B) Lead  
(C) Mercury (D) Arsenic

Choose the correct answer from the options given below:

- (1) A, B and D only  
(2) Only D  
(3) Only B and D  
(4) Only A and C

**Options :**

1908895. 1  
1908896. 2  
1908897. 3  
1908898. 4

**Question Number : 3 Question Id : 1908893 Question Type : MCQ Option Shuffling : No Is**

**Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Given below are two statements, one is labelled as Assertion (A) and the other is labelled as Reason (R).

Assertion (A) : The Ayurvedic drug **Asava** contains self generated alcohol.

Reason (R) : For preparation of **Asava** the extract of drugs is subjected to a process of calcination.

In light of the above statements, choose the most appropriate answer from the options given below :

- (1) Both (A) and (R) are correct and (R) is the correct explanation of (A)  
(2) Both (A) and (R) are correct but (R) is NOT the correct explanation of (A)  
(3) (A) is correct but (R) is not correct  
(4) (A) is not correct but (R) is correct

**Options :**

1908899. 1  
19088910. 2  
19088911. 3

19088912. 4

**Question Number : 4 Question Id : 1908894 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

The ring structure present in strychnine is:

- |               |                  |
|---------------|------------------|
| (1) Indole    | (2) Purine       |
| (3) Imidazole | (4) Phenanthrene |

**Options :**

19088913. 1

19088914. 2

19088915. 3

19088916. 4

**Question Number : 5 Question Id : 1908895 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Marker compound analysis is one of the useful methods for evaluation of herbal drugs. The following statement is NOT true about marker compound analysis:

- (1) Used to verify potency or identity of herbal drug
- (2) Marker compounds are always therapeutically active
- (3) Quantification of marker compounds can be carried out by HPLC/HPTLC/GC
- (4) The marker compounds are generally secondary metabolites.

**Options :**

19088917. 1

19088918. 2

19088919. 3

19088920. 4

**Question Number : 6 Question Id : 1908896 Question Type : MCQ Option Shuffling : No Is**

**Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

The following classification of herbal drugs gives better understanding of biosynthetic pathway in the drug

- |                 |                      |
|-----------------|----------------------|
| (1) Botanical   | (2) Chemotaxonomical |
| (3) Taxonomical | (4) Chemical         |

**Options :**

19088921. 1

19088922. 2

19088923. 3

19088924. 4

**Question Number : 7 Question Id : 1908897 Question Type : MCQ Option Shuffling : No Is**

**Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Match the following under chemical compounds under Column I with their respective chemical tests under Column II

Column I	Column II
Compounds	Chemical tests
(A) Quinine	(I) Borntrager's
(B) Digitoxin	(II) Thallequin
(C) Atropine	(III) Vitali Morin
(D) Sennosides	(IV) Keller killiani

Choose the correct answer from the options given below:

- (1) (A)-(II), (B)-(IV), (C)-(III), (D)-(I)
- (2) (A)-(III), (B)-(IV), (C)-(II), (D)-(I)
- (3) (A)-(I), (B)-(II), (C)-(III), (D)-(IV)
- (4) (A)-(IV), (B)-(III), (C)-(II), (D)-(I)

**Options :**

19088925. 1

19088926. 2

19088927. 3

19088928. 4

**Question Number : 8 Question Id : 1908898 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Match the following vaccines under Column I with their respective content under Column II.

Column I Vaccine	Column II Content
(A) OPV	(I) Killed bacteria
(B) Typhoid (TAB)	(II) Live bacteria
(C) Tetanus	(III) Killed virus
(D) BCG	(IV) Live virus
	(V) Toxoid

Choose the correct answer from the options given below:

- (1) (A)-(III), (B)-(V), (C)-(I), (D)-(II)
- (2) (A)-(I), (B)-(II), (C)-(V), (D)-(III)
- (3) (A)-(IV), (B)-(I), (C)-(V), (D)-(II)
- (4) (A)-(II), (B)-(III), (C)-(IV), (D)-(I)

**Options :**

19088929. 1

19088930. 2

19088931. 3

19088932. 4

**Question Number : 9 Question Id : 1908899 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Which of the following microbial form listed below, exhibits the highest level of resistance to physical and chemical methods of growth control?

- (1) Naked Virus
- (2) Protozoan cyst
- (3) Vegetative bacterial cell
- (4) Bacterial endospore

**Options :**

- 19088933. 1
- 19088934. 2
- 19088935. 3
- 19088936. 4

**Question Number : 10 Question Id : 19088910 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

The immunity acquired by inoculation of living organism of attenuated virulence is:

- (1) Natural passive immunity
- (2) Passive immunity
- (3) Artificial acquired immunity
- (4) Natural active immunity

**Options :**

- 19088937. 1
- 19088938. 2
- 19088939. 3
- 19088940. 4

**Question Number : 11 Question Id : 19088911 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Given below are two statements, one is labelled as Assertion (A) and the other is labelled as Reason (R).

Assertion (A) : Gram negative bacteria do not retain the primary stain when washed with alcohol and subsequently stained again with secondary stain.

Reason (R) : The outer membrane of gram negative bacteria contains lipopolysaccharides.

In light of the above statements, choose the correct answer from the options given below

- (1) Both (A) and (R) are true and (R) is the correct explanation of (A)
- (2) Both (A) and (R) are true but (R) is NOT the correct explanation of (A)
- (3) (A) is true but (R) is not false
- (4) (A) is false but (R) is true

**Options :**

- 19088941. 1
- 19088942. 2
- 19088943. 3
- 19088944. 4

**Question Number : 12 Question Id : 19088912 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

HEPA filters are defined as A or more efficient in removing, from the air, B particles generated by vaporization of the hydrocarbon Emory 3004.

- (1) A – 99.99 % B – 0.1  $\mu\text{m}$
- (2) A – 99.00 % B – 0.3  $\mu\text{m}$
- (3) A – 99.99 % B – 0.3  $\mu\text{m}$
- (4) A – 99.00 % B – 0.1  $\mu\text{m}$

**Options :**

- 19088945. 1
- 19088946. 2
- 19088947. 3
- 19088948. 4

**Question Number : 13 Question Id : 19088913 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Compendium of pharmaceuticals and specialties is an International drug compendia from

- (1) German Pharmaceutical Association
- (2) Australian Pharmaceutical Association
- (3) Indian Pharmaceutical Association
- (4) Canadian Pharmaceutical Association

**Options :**

- 19088949. 1
- 19088950. 2
- 19088951. 3
- 19088952. 4



**Question Number : 14 Question Id : 19088914 Question Type : MCQ Option Shuffling : No Is**

**Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

The initial concentration of a drug decomposing according to first order kinetics is 28 units/mL. The specific decomposition rate,  $k$ , obtained from an Arrhenius plot is  $2.09 \times 10^{-5} \text{ hr}^{-1}$  at room temperature,  $25^\circ\text{C}$ . Previous experimentation has shown that when the concentration of the drug falls below 15 units/mL it is not sufficiently potent for use and should be removed from the market. What expiration date should be assigned to this product?

- (1) Approximately 31,012.15 hours      (2) Approximately 32,225.56 hours  
(3) Approximately 27,216.12 hours      (4) Approximately 29,869.23 hours

**Options :**

19088953. 1

19088954. 2

19088955. 3

19088956. 4

**Question Number : 15 Question Id : 19088915 Question Type : MCQ Option Shuffling : No Is**

**Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Dynamic Vapour Sorption (DVS) isotherm is a plot of A versus B

- (1) A - Crystallization Peak Energy (J/g) B - Percentage Relative Humidity  
(2) A - Percentage Change in Mass B - Percentage Relative Humidity  
(3) A - Crystallization Peak Energy (J/g) B - Percentage Change in Mass  
(4) A - Crystallization Peak Energy (J/g) B - Amorphous Content

**Options :**

19088957. 1

19088958. 2

19088959. 3

19088960. 4

**Question Number : 16 Question Id : 19088916 Question Type : MCQ Option Shuffling : No Is**

**Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

In case of solvates the following are examples of Class I residual solvents that have been classified by the ICH.

- (1) Benzene, carbon tetrachloride and 1, 2 – dichloroethane
- (2) Acetonitrile, cyclohexane and toluene
- (3) Methanol and N,N-dimethylacetamide
- (4) Acetic acid, acetone and ethanol

**Options :**

19088961. 1

19088962. 2

19088963. 3

19088964. 4

**Question Number : 17 Question Id : 19088917 Question Type : MCQ Option Shuffling : No Is**

**Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Hemophilia A is caused due to the reduction in the quantity or activity of which of the following clotting factors?

- |                            |                          |
|----------------------------|--------------------------|
| (1) Vitamin - K            | (2) Clotting factor - IV |
| (3) Clotting factor – VIII | (4) Clotting factor-IX   |

**Options :**

19088965. 1

19088966. 2

19088967. 3

19088968. 4

**Question Number : 18 Question Id : 19088918 Question Type : MCQ Option Shuffling : No Is**

**Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Match the following :

- |               |   |
|---------------|---|
| (A) Apoptosis | (I) Progressive degradative action of Enzymes                               |
| (B) Necrosis  | (II) Tightly regulated intracellular program in which destined cells to die |
| (C) Anaplasia | (III) Abnormal mass of tissue   |
| (D) Neoplasm  | (IV) Lack of differentiation  |

Codes:

- (1) (A)-(II), (B)-(I), (C)-(IV), (D)-(III)
- (2) (A)-(IV), (B)-(III), (C)-(II), (D)-(I)
- (3) (B)-(I), (C)-(II), (D)-(III), (A)-(IV)
- (4) (C)-(II), (D)-(III), (A)-(IV), (B)-(I)

**Options :**

19088969. 1

19088970. 2

19088971. 3

19088972. 4

**Question Number : 19 Question Id : 19088919 Question Type : MCQ Option Shuffling : No Is**

**Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

To determine the effect of breath holding on the deposition of particles, the sedimentation efficiency,  $S$ , is defined as,

- (1)  $S = (\text{Distance the particle falls during breath holding}) \div (\text{Mean regional airway diameter})$
- (2)  $S = (\text{Distance the particle falls during breath holding}) \times (\text{Half the mean regional airway diameter})$
- (3)  $S = (\text{Distance the particle falls during breath holding}) + (\text{Twice mean regional airway diameter})$
- (4)  $S = (\text{Distance the particle falls during breath holding}) - (\text{Mean regional airway diameter})$

**Options :**

19088973. 1

19088974. 2

19088975. 3

19088976. 4

**Question Number : 20 Question Id : 19088920 Question Type : MCQ Option Shuffling : No Is**

**Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Which of the following ICH Harmonized Tripartite Guidelines related to stability, provides approaches that allows for bracketing and matrixing designs for stability testing. This is especially important when a new drug product is to be commercialized with multiple strengths in multiple packaging configurations.

- |         |         |
|---------|---------|
| (1) Q1F | (2) Q1D |
| (3) Q1B | (4) Q1A |

**Options :**

19088977. 1

19088978. 2

19088979. 3

19088980. 4

**Question Number : 21 Question Id : 19088921 Question Type : MCQ Option Shuffling : No Is**

**Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Match List I with List II :

List I	List II
Ingredients Found in Rubber Closures	Example
(A) Activator	(I) Zinc dibutyldithiocarbamate
(B) Curing agent	(II) Stearic acid
(C) Accelerator	(III) Carbon black
(D) Fillers	(IV) Neoprene
	(V) Peroxides

Choose the correct answer from the options given below:

- (1) (A)-(II), (B)-(V), (C)-(I), (D)-(III)
- (2) (A)-(V), (B)-(IV), (C)-(II), (D)-(I)
- (3) (A)-(IV), (B)-(II), (C)-(III), (D)-(V)
- (4) (A)-(III), (B)-(IV), (C)-(II), (D)-(I)

**Options :**

19088981. 1

19088982. 2

19088983. 3

19088984. 4

**Question Number : 22 Question Id : 19088922 Question Type : MCQ Option Shuffling : No Is**

**Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Match List I with List II :

List I	List II
Equipment	Model / Trade Name / Type
(A) Low shear mixer	(I) Manestry Drycota
(B) Rotary tablet machine	(II) Chilsonator (Fitzpatrick)
(C) Capsule filling machine	(III) Slated Double Cone Mixer
(D) Compaction mill	(IV) Prosolv (JRS Pharma)
	(V) PCF 1200 Model (PharmaLand)

Choose the correct answer from the options given below:

- (1) (A)-(I), (B)-(II), (C)-(IV), (D)-(III)
- (2) (A)-(II), (B)-(III), (C)-(I), (D)-(IV)
- (3) (A)-(III), (B)-(I), (C)-(V), (D)-(II)
- (4) (A)-(I), (B)-(II), (C)-(IV), (D)-(III)

**Options :**

19088985. 1  
19088986. 2  
19088987. 3  
19088988. 4

**Question Number : 23 Question Id : 19088923 Question Type : MCQ Option Shuffling : No Is**

**Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

The USP defines \_\_\_\_\_ as liquid preparations of vegetable drugs, containing alcohol 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 g of the standard drug that it represents.

- (1) Tinctures
- (2) Extracts
- (3) Infusion
- (4) Fluid extracts

**Options :**

19088989. 1  
19088990. 2

19088991. 3

19088992. 4

**Question Number : 24 Question Id : 19088924 Question Type : MCQ Option Shuffling : No Is**

**Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Which one of the following is a competitive antagonist at benzodiazepine site of GABA-receptor gated chloride channel?

- (1) Muscimol (2) Picrotoxin  
(3) Flumazenil (4) Beta-carboline (DMCM)

**Options :**

19088993. 1

19088994. 2

19088995. 3

19088996. 4

**Question Number : 25 Question Id : 19088925 Question Type : MCQ Option Shuffling : No Is**

**Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Which one of the following is NOT an endogenous opioid peptide?

- (1) *met enkephalin* (2) *leu enkephalin*  
(3) *dynorphin* (4) *beta lipotropin*

**Options :**

19088997. 1

19088998. 2

19088999. 3

190889100. 4

**Question Number : 26 Question Id : 19088926 Question Type : MCQ Option Shuffling : No Is**

**Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Total number of facial bones in the human adult

- |     |    |     |    |
|-----|----|-----|----|
| (1) | 1  | (2) | 7  |
| (3) | 14 | (4) | 21 |

**Options :**

- 190889101. 1
- 190889102. 2
- 190889103. 3
- 190889104. 4

**Question Number : 27 Question Id : 19088927 Question Type : MCQ Option Shuffling : No Is**

**Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

The split up of time cycle of cardiac cycle

- (1) VS-0.3 sec VD-0.5 sec AS-0.1sec AD-0.7 sec
- (2) VS-0.5 sec VD-0.3 sec AS-0.7 sec AD-0.1 sec
- (3) VS-0.3 sec VD-0.5 sec AS-0.5 sec AD-0.3 sec
- (4) VS-0.5 sec AD-0.3 sec AS-0.3 sec AD-0.5 sec

**Options :**

- 190889105. 1
- 190889106. 2
- 190889107. 3
- 190889108. 4

**Question Number : 28 Question Id : 19088928 Question Type : MCQ Option Shuffling : No Is**

**Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**



The  $\beta_1$  and  $\beta_2$  adrenergic receptor subtype agonist acting at atrioventricular node produces following responses

- (1) Increases contractility and conduction velocity
- (2) Increases automaticity and conduction velocity
- (3) Increases contractility and automaticity
- (4) Increases conduction velocity and heart rate

**Options :**

190889109. 1  
190889110. 2  
190889111. 3  
190889112. 4

**Question Number : 29 Question Id : 19088929 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Conversion of pseudostratified columnar epithelium in chronic bronchitis and bronchiectasis to columnar type epithelium is an example of which type of metaplasia?

- |                         |                              |
|-------------------------|------------------------------|
| (1) Squamous metaplasia | (2) Columnar metaplasia      |
| (3) Osseous metaplasia  | (4) Cartilaginous metaplasia |

**Options :**

190889113. 1  
190889114. 2  
190889115. 3  
190889116. 4

**Question Number : 30 Question Id : 19088930 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

The part of prescription that means 'take thou' is

- |                    |                 |
|--------------------|-----------------|
| (1) Subscription   | (2) Inscription |
| (3) Superscription | (4) Signatura   |

**Options :**

- 190889117. 1
- 190889118. 2
- 190889119. 3
- 190889120. 4

**Question Number : 31 Question Id : 19088931 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Amine group protection during peptide synthesis can be accomplished by converting the amine to

- (1) 9 – Fluorenylmethylcarbamate
- (2) 1,3 – Dithiane
- (3) Tetrahydropyranyl ether
- (4) Dimethylacetal

**Options :**

- 190889121. 1
- 190889122. 2
- 190889123. 3
- 190889124. 4

**Question Number : 32 Question Id : 19088932 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Some individuals are obsessed with using purgatives regularly as a reflection of their psychological problem. Dangers of purgative overuse include all of the following EXCEPT:

- (1) Flaring up of intestinal pathology like rupture of inflamed appendix
- (2) Fluid and electrolyte imbalance, especially hypokalemia
- (3) Steatorrhoea, malabsorption syndrome
- (4) Protein build up in the body as a result of enteropathy

**Options :**

- 190889125. 1
- 190889126. 2

190889127. 3

190889128. 4

**Question Number : 33 Question Id : 19088933 Question Type : MCQ Option Shuffling : No Is**

**Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Long-term use of thiazide diuretics in hypertension can produce all of the following EXCEPT?

- |                    |                   |
|--------------------|-------------------|
| (1) Hyperkalemia   | (2) Hyperuricemia |
| (3) Hyperlipidemia | (4) Hyperglycemia |

**Options :**

190889129. 1

190889130. 2

190889131. 3

190889132. 4

**Question Number : 34 Question Id : 19088934 Question Type : MCQ Option Shuffling : No Is**

**Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

An epoxy ring can be prepared by

- |                                      |                      |
|--------------------------------------|----------------------|
| (1) DCC oxidation of alcohol         | (2) Prevost reaction |
| (3) Darzens glycidic ester synthesis | (4) Swern oxidation  |

**Options :**

190889133. 1

190889134. 2

190889135. 3

190889136. 4

**Question Number : 35 Question Id : 19088935 Question Type : MCQ Option Shuffling : No Is**

**Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Hospital formulary consists of

- |                            |   |
|----------------------------|---|
| (1) List of hospital staff | (2) List of drugs present in the hospital |
| (3) List of equipments     | (4) List of patients                      |

**Options :**

190889137. 1

190889138. 2

190889139. 3

190889140. 4

**Question Number : 36 Question Id : 19088936 Question Type : MCQ Option Shuffling : No Is**

**Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

The size of aqueous filled pores is \_\_\_\_\_ °A.

- |           |           |
|-----------|-----------|
| (1) 1-3   | (2) 11-18 |
| (3) 19-25 | (4) 4-10  |

**Options :**

190889141. 1

190889142. 2

190889143. 3

190889144. 4

**Question Number : 37 Question Id : 19088937 Question Type : MCQ Option Shuffling : No Is**

**Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

The majority of drugs that least binded to antivasular tissue is

- |           |             |
|-----------|-------------|
| (1) Liver | (2) Muscle  |
| (3) Lungs | (4) Kidneys |

**Options :**

190889145. 1

190889146. 2

190889147. 3

190889148. 4

**Question Number : 38 Question Id : 19088938 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Distribution is perfusion rate limited in case of .....drugs

(1) Ionic

(2) Lipophilic

(3) Polar

(4) Water soluble

**Options :**

190889149. 1

190889150. 2

190889151. 3

190889152. 4

## **PART II Pharmaceutical Chemistry**

<b>Section Id :</b>	1908892
<b>Section Number :</b>	2
<b>Section type :</b>	Online
<b>Mandatory or Optional :</b>	Mandatory
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<b>Sub-Section Id :</b>	1908892
<b>Question Shuffling Allowed :</b>	Yes

**Question Number : 39 Question Id : 19088939 Question Type : MCQ Option Shuffling : No Is**

**Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Given below are two statements, one is labelled as Assertion (A) and the other is labelled as Reason (R)

Assertion (A) : Quillaia tincture is included in Potassium Citrate Mixture BPC.

Reason (R) : Because Quillaia tincture act as an emulgent in Potassium Citrate Mixture BPC, and prevent separation of lemon oil as a surface layer when the lemon spirit is added.

In light of the above statements, choose the correct answer from the options given below

- (1) Both (A) and (R) are true and (R) is the correct explanation of (A)
- (2) Both (A) and (R) are true but (R) is NOT the correct explanation of (A)
- (3) (A) is true but (R) is false
- (4) (A) is false but (R) is true

**Options :**

190889153. 1

190889154. 2

190889155. 3

190889156. 4

**Question Number : 40 Question Id : 19088940 Question Type : MCQ Option Shuffling : No Is**

**Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Match List I with List II :

List I	List II
Term or Phrase	Meaning
(A) Gutturii	(I) Into the left ear
(B) In oculum sinistram	(II) Into the right eye
(C) In aurem sinistram	(III) For the left eye
(D) In oculum dextrum	(IV) To the throat

Choose the correct answer from the options given below:

- (1) (A)-(IV), (B)-(III), (C)-(I), (D)-(II)
- (2) (A)-(II), (B)-(I), (C)-(IV), (D)-(III)
- (3) (A)-(III), (B)-(IV), (C)-(I), (D)-(II)
- (4) (A)-(I), (B)-(III), (C)-(II), (D)-(IV)

**Options :**

190889157. 1

190889158. 2

190889159. 3

190889160. 4

**Question Number : 41 Question Id : 19088941 Question Type : MCQ Option Shuffling : No Is**

**Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Which one of the following calcium channel blockers used as anti-anginal agents has the highest possibility to produce a negative inotropic effect, AV nodal block, bradycardia, decreased cardiac output, constipation, edema and is contra-indicated in sick sinus syndrome?

- (1) Nifedipine
- (2) Amlodipine
- (3) Diltiazem
- (4) Verapamil

**Options :**

190889161. 1

190889162. 2

190889163. 3

190889164. 4

**Question Number : 42 Question Id : 19088942 Question Type : MCQ Option Shuffling : No Is**

**Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Desmethyl diazepam is an active metabolite, having an elimination half-life of more than 40 hours, of all the following drugs EXCEPT:

- |                 |                      |
|-----------------|----------------------|
| (1) Flurazepam  | (2) Chlordiazepoxide |
| (3) Clorazepate | (4) Diazepam         |

**Options :**

190889165. 1

190889166. 2

190889167. 3

190889168. 4

**Question Number : 43 Question Id : 19088943 Question Type : MCQ Option Shuffling : No Is**

**Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Which one of the following drugs that is not absorbed orally, is not a bronchodilator, does not have any direct effects on smooth muscles yet is effective in antigen-induced, exercise-induced and irritant-induced asthma though not all asthmatics respond to it positively?

- |                         |                 |
|-------------------------|-----------------|
| (1) Salbutamol          | (2) Montelukast |
| (3) Sodium cromoglycate | (4) Terbutaline |

**Options :**

190889169. 1

190889170. 2

190889171. 3

190889172. 4

**Question Number : 44 Question Id : 19088944 Question Type : MCQ Option Shuffling : No Is**

**Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**



To monitor the safety of the new drug under actual conditions of use in large number of patients has been classified as \_\_\_\_\_ clinical trials.

- (1) Phase III
- (2) Phase II
- (3) Phase IV
- (4) Phase I

**Options :**

190889173. 1

190889174. 2

190889175. 3

190889176. 4

**Question Number : 45 Question Id : 19088945 Question Type : MCQ Option Shuffling : No Is**

**Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Vigabatrin produces anti-epileptic activity through

- (1) Potentiating GABA mediated neuronal inhibition by depressing GABA transporters
- (2) Modifying synaptic release of glutamate/GABA by binding to a specific synaptic protein
- (3) Inhibiting GABA transaminase enzyme which degrades GABA
- (4) Potentiating post synaptic GABA receptor effect

**Options :**

190889177. 1

190889178. 2

190889179. 3

190889180. 4

**Question Number : 46 Question Id : 19088946 Question Type : MCQ Option Shuffling : No Is**

**Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

A condition in which there is severe loss of extra-cellular fluid due to hemorrhage, diarrhea, severe vomiting or sweating followed by shrinkage of blood volume, reduction of venous inflow to the heart, reduction of cardiac output and fall of blood pressure is known as:

- |                       |                        |
|-----------------------|------------------------|
| (1) Hypovolemic shock | (2) Anaphylactic shock |
| (3) Septic shock      | (4) Cardiogenic shock  |

**Options :**

190889181. 1

190889182. 2

190889183. 3

190889184. 4

**Question Number : 47 Question Id : 19088947 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Which one of the following plexus is a part of the central nervous system in the brain and consists of capillaries, ventricles, and ependymal cells?

- |                     |                     |
|---------------------|---------------------|
| (1) Celiac plexus   | (2) Choroid plexus  |
| (3) Cervical plexus | (4) Brachial plexus |

**Options :**

190889185. 1

190889186. 2

190889187. 3

190889188. 4

**Question Number : 48 Question Id : 19088948 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Which is NOT the colligative property?

- (A) Depression of freezing point                      (B) Elevation of boiling point  
(C) Elevation of vapour pressure                      (D) Osmotic pressure

Choose the correct one of the following :

- (1) (A), (B) and (D)  
(2) (A) and (B)  
(3) (A) and (D)  
(4) (C) only

**Options :**

190889189. 1  
190889190. 2  
190889191. 3  
190889192. 4

**Question Number : 49 Question Id : 19088949 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

The system volume is increased when sheared is called

- (1) Dilatant flow    (2) Newtonian flow  
(3) Plastic flow    (4) Pseudoplastic flow

**Options :**

190889193. 1  
190889194. 2  
190889195. 3  
190889196. 4

**Question Number : 50 Question Id : 19088950 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

The value of R in energy of activation is

- (1) 1.98 cal/deg.molecule                      (2) 1.89 cal/deg.molecule  
(3) 8.91 cal/deg.molecule                      (4) 9.18 cal/deg.molecule

**Options :**

190889197. 1

190889198. 2

190889199. 3

190889200. 4

**Question Number : 51 Question Id : 19088951 Question Type : MCQ Option Shuffling : No Is**

**Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Which of the following is false about HMP shunt?

- (1) No ATP formation  
(2) Formation of NADPH  
(3) Synthesis of ribose - 5 - phosphate  
(4) Non-oxidative phase of HMP pathway is irreversible

**Options :**

190889201. 1

190889202. 2

190889203. 3

190889204. 4

**Question Number : 52 Question Id : 19088952 Question Type : MCQ Option Shuffling : No Is**

**Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

All the following can determine the protein structure except

- (1) Mass spectrometry
- (2) X-ray crystallography
- (3) High performance liquid chromatography
- (4) NMR spectroscopy

**Options :**

- 190889205. 1
- 190889206. 2
- 190889207. 3
- 190889208. 4

**Question Number : 53 Question Id : 19088953 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

How many molecules of acyl-CoA are produced in beta-oxidation of palmitic acid

- (1) Six
- (2) Seven
- (3) Eight
- (4) Nine

**Options :**

- 190889209. 1
- 190889210. 2
- 190889211. 3
- 190889212. 4

**Question Number : 54 Question Id : 19088954 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Select the equation that gives the rate of drug dissolution from a tablet

- (1) Fick's law
- (2) Henderson Hasselbach equation
- (3) Noyes Whitney Equation
- (4) Michaelis Menton equation

**Options :**

190889213. 1

190889214. 2

190889215. 3

190889216. 4

**Question Number : 55 Question Id : 19088955 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

One of the following apparatus is used to determine particle size by the gravity sedimentation method

- |                        |                         |
|------------------------|-------------------------|
| (1) Pyknometer         | (2) Ostwalds viscometer |
| (3) Anderson apparatus | (4) Friabilator         |

**Options :**

190889217. 1

190889218. 2

190889219. 3

190889220. 4

**Question Number : 56 Question Id : 19088956 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

The phenomenon of increasing the solubility of weak electrolytes and non- polar molecules by the addition of a water miscible solvent in which the drug has good solubility is called.

- |                    |                 |
|--------------------|-----------------|
| (1) Complexation   | (2) Co-solvency |
| (3) Solubilization | (4) Hydrotrophy |

**Options :**

190889221. 1

190889222. 2

190889223. 3

190889224. 4

**Question Number : 57 Question Id : 19088957 Question Type : MCQ Option Shuffling : No Is**

**Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

The properties of solutions containing surface active agents change sharply over a narrow concentration range and are called as

- |                                    |                         |
|------------------------------------|-------------------------|
| (1) Critical micelle concentration | (2) Ionic concentration |
| (3) Hydrogen ion concentration     | (4) Surface tension     |

**Options :**

190889225. 1

190889226. 2

190889227. 3

190889228. 4

**Question Number : 58 Question Id : 19088958 Question Type : MCQ Option Shuffling : No Is**

**Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Powers of drug inspectors appointed under the Drugs and Cosmetic Act, 1940 are mentioned under which of the following section of the Act?

- |        |        |
|--------|--------|
| (1) 20 | (2) 21 |
| (3) 22 | (4) 23 |

**Options :**

190889229. 1

190889230. 2

190889231. 3

190889232. 4

**Question Number : 59 Question Id : 19088959 Question Type : MCQ Option Shuffling : No Is**

**Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Which one of the following is not a gene insertion technique into a eukaryotic cell

- (1) Electroporation (2) Iontophoresis  
(3) Shot gun sequencing (4) Microinjection

**Options :**

190889233. 1

190889234. 2

190889235. 3

190889236. 4

**Question Number : 60 Question Id : 19088960 Question Type : MCQ Option Shuffling : No Is**

**Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Application for the issue of a permit to import small quantities of drugs for personal use are shall be made in

- (1) Form - 12 (2) Form - 12A  
(3) Form - 12AA (4) Form - 13

**Options :**

190889237. 1

190889238. 2

190889239. 3

190889240. 4

**Question Number : 61 Question Id : 19088961 Question Type : MCQ Option Shuffling : No Is**

**Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**



Match List I with List II :

List I	List II
Name of Material	Remark
(A) Brasses	(I) Copper-Tin Alloy
(B) 18/8 Stainless steel	(II) Rigid material
(C) Keebush	(III) Chromium and Nickel
(D) Bronzes	(IV) Flexible material
	(V) Copper-Zinc alloys

Choose the correct answer from the options given below:

- (1) (A)-(V), (B)-(III), (C)-(II), (D)-(I)
- (2) (A)-(III), (B)-(II), (C)-(I), (D)-(V)
- (3) (A)-(IV), (B)-(II), (C)-(I), (D)-(III)
- (4) (A)-(II), (B)-(IV), (C)-(V), (D)-(III)

**Options :**

190889241. 1

190889242. 2

190889243. 3

190889244. 4

**Question Number : 62 Question Id : 19088962 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

The hydrogen deficiency index for a compound with molecular formula  $C_{13}H_9N_2O_4BrS$  is

- (1) 9
- (2) 10
- (3) 13
- (4) 8

**Options :**

190889245. 1

190889246. 2

190889247. 3

190889248. 4

**Question Number : 63 Question Id : 19088963 Question Type : MCQ Option Shuffling : No Is**

**Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Class of enzymes which use oxygen as a hydrogen acceptor are known as \_\_\_\_\_

- |                    |                            |
|--------------------|----------------------------|
| (1) Dehydrogenases | (2) Oxidases               |
| (3) Cytochromes    | (4) Nicotinamide coenzymes |

**Options :**

- 190889249. 1
- 190889250. 2
- 190889251. 3
- 190889252. 4

**Question Number : 64 Question Id : 19088964 Question Type : MCQ Option Shuffling : No Is**

**Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Which among the following nuclei can exhibit NMR spectrum?

- |                      |                     |
|----------------------|---------------------|
| (1) $^{28}\text{Si}$ | (2) $^{16}\text{O}$ |
| (3) $^{14}\text{C}$  | (4) $^{14}\text{N}$ |

**Options :**

- 190889253. 1
- 190889254. 2
- 190889255. 3
- 190889256. 4

**Question Number : 65 Question Id : 19088965 Question Type : MCQ Option Shuffling : No Is**

**Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Which of the following method is used for the determination of osmotic pressure?

- |                       |                                   |
|-----------------------|-----------------------------------|
| (1) Beckmann's method | (2) Berkeley and Hartley's method |
| (3) Cottrell's method | (4) Landsberger's method          |

**Options :**

190889257. 1

190889258. 2

190889259. 3

190889260. 4

**Question Number : 66 Question Id : 19088966 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Which of the following is NOT an intensive property?

(1) Concentration

(2) Density

(3) Pressure

(4) Volume

**Options :**

190889261. 1

190889262. 2

190889263. 3

190889264. 4

**Question Number : 67 Question Id : 19088967 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Which of the following is a half-reaction?

(1)  $\text{Zn} + \text{Cu}^{2+} \rightarrow \text{Zn}^{2+} + \text{Cu}$

(2)  $\text{H}^+ + \text{OH}^- \rightarrow \text{H}_2\text{O}$

(3)  $\text{Ag}^+ + \text{e}^- \rightarrow \text{Ag}$

(4)  $\text{Ag}^+ \text{Cl}^- \rightarrow \text{AgCl}$

**Options :**

190889265. 1

190889266. 2

190889267. 3

190889268. 4

**Question Number : 68 Question Id : 19088968 Question Type : MCQ Option Shuffling : No Is**

**Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Which of the following statement is the correct description of product positioning?

- (1) Selecting one or more segment to enter
- (2) Occupying distinctive position in the mind of customer
- (3) Identifying group of buyers with common need
- (4) Distinguishes company's product form competitor's product

**Options :**

190889269. 1

190889270. 2

190889271. 3

190889272. 4

**Question Number : 69 Question Id : 19088969 Question Type : MCQ Option Shuffling : No Is**

**Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

For solid oral drug products, a change in the concentration of which of the following excipients is more likely to influence the bioavailability of a drug.

- |                                |                        |
|--------------------------------|------------------------|
| (1) Starch                     | (2) Magnesium stearate |
| (3) Microcrystalline cellulose | (4) Lactose            |

**Options :**

190889273. 1

190889274. 2

190889275. 3

190889276. 4

**Question Number : 70 Question Id : 19088970 Question Type : MCQ Option Shuffling : No Is**

**Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

p-gp (p-glycoprotein) is highly expressed on the

- (1) Lungs
- (2) Pancreas
- (3) Superficial columnar epithelial cells of ileum and colon
- (4) Heart

**Options :**

190889277. 1

190889278. 2

190889279. 3

190889280. 4

**Question Number : 71 Question Id : 19088971 Question Type : MCQ Option Shuffling : No Is**

**Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

In Mier's theory of supersaturation, solubility chart displays the profile of curve with positive and very low slope in

- |                     |                       |
|---------------------|-----------------------|
| (1) $\text{KNO}_3$  | (2) $\text{NaCl}$     |
| (3) $\text{MnSO}_4$ | (4) None of the above |

**Options :**

190889281. 1

190889282. 2

190889283. 3

190889284. 4

**Question Number : 72 Question Id : 19088972 Question Type : MCQ Option Shuffling : No Is**

**Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

For depot injections, in which drug is slowly released over weeks or months, which bioequivalence study design is used?

- (1) Multiple dose study design
- (2) Replicated crossover study design
- (3) Nonreplicate, parallel study design
- (4) Randomized crossover design

**Options :**

190889285. 1  
190889286. 2  
190889287. 3  
190889288. 4

**Question Number : 73 Question Id : 19088973 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

The artificial or synthetic seeds are prepared by the following process

- (1) Somatic hybridization and culture
- (2) Somatic embryogenesis and immobilization
- (3) Microprojectile and transformation
- (4) Artificial pollination and embryogenesis

**Options :**

190889289. 1  
190889290. 2  
190889291. 3  
190889292. 4

**Question Number : 74 Question Id : 19088974 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Which one of the following alkaloid contains isoquinoline nucleus?

- |              |                 |
|--------------|-----------------|
| (1) Quinine  | (2) Hyoscyamine |
| (3) Piperine | (4) Papaverine  |

**Options :**

- 190889293. 1
- 190889294. 2
- 190889295. 3
- 190889296. 4

**Question Number : 75 Question Id : 19088975 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Which one of the following is unorganized drug?

- |                    |                   |
|--------------------|-------------------|
| (1) Rauwolfia Root | (2) Acacia Gum    |
| (3) Senna Leaves   | (4) Cinchona Bark |

**Options :**

- 190889297. 1
- 190889298. 2
- 190889299. 3
- 190889300. 4

**Question Number : 76 Question Id : 19088976 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

In Gambir-fluorescin test the petroleum spirit layer shows

- |                         |                       |
|-------------------------|-----------------------|
| (1) Green fluorescence  | (2) Blue fluorescence |
| (3) Yellow fluorescence | (4) Red fluorescence  |

**Options :**

- 190889301. 1
- 190889302. 2
- 190889303. 3
- 190889304. 4

## PART III Pharmacology

Section Id :	1908893
Section Number :	3
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	28
Number of Questions to be attempted :	28
Section Marks :	112
Mark As Answered Required? :	Yes
Sub-Section Number :	1
Sub-Section Id :	1908893
Question Shuffling Allowed :	Yes

**Question Number : 77 Question Id : 19088977 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

A compound gives two fragments in a mass spectrometer. They are  $C_{19}H_7N^+$  and  $C_{19}H_5O^+$ . To separate peaks due to these fragments the instrument should have a resolution of

- (1) They cannot be separated                      (2)  $2.417 \times 10^{-2}$   
(3)  $3.402 \times 10^4$                                       (4)  $1.042 \times 10^4$

**Options :**

190889305. 1  
190889306. 2  
190889307. 3  
190889308. 4

**Question Number : 78 Question Id : 19088978 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**



This compound 2,5,8,11,14,17,20,23,26-nona-oxaoctacosan-28-yl p-(butylamino) benzoate is usually known for its \_\_\_\_\_ activity?

- |                |                    |
|----------------|--------------------|
| (1) Antifungal | (2) Antitussive    |
| (3) Vitamin    | (4) Glucocorticoid |

**Options :**

190889309. 1

190889310. 2

190889311. 3

190889312. 4

**Question Number : 79 Question Id : 19088979 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

The total number of amino acids in human insulin (total number of amino acids in A and B chain) is

- |        |        |
|--------|--------|
| (1) 51 | (2) 84 |
| (3) 32 | (4) 08 |

**Options :**

190889313. 1

190889314. 2

190889315. 3

190889316. 4

**Question Number : 80 Question Id : 19088980 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

A diuretic compound cyclothiazide has a \_\_\_\_\_ substituent at C-3 of 1,2,4-benzothioadiazine nucleus?

- |                   |                      |
|-------------------|----------------------|
| (1) 5-Bornen-2-yl | (2) 5-Norbornen-2-yl |
| (3) 2-Bornen-5-yl | (4) 2-Norbornen-5-yl |

**Options :**

190889317. 1

190889318. 2

190889319. 3

190889320. 4

**Question Number : 81 Question Id : 19088981 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Mixed micelle of lipids with bile acids and lipid soluble vitamins are absorbed by

- |                       |                     |
|-----------------------|---------------------|
| (1) Pancreatic lipase | (2) Apolipoproteins |
| (3) Enterocytes       | (4) Chylomicrons    |

**Options :**

190889321. 1

190889322. 2

190889323. 3

190889324. 4

**Question Number : 82 Question Id : 19088982 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Which among the following drugs on standing in aqueous solution can dimerize to 2,5-bis(aminoxy-methyl) 3,6-diketopiperazine?

- |                        |                 |
|------------------------|-----------------|
| (1) Pyrazinamide       | (2) Ethionamide |
| (3) Diethylcarbamazine | (4) Cycloserine |

**Options :**

190889325. 1

190889326. 2

190889327. 3

190889328. 4

**Question Number : 83 Question Id : 19088983 Question Type : MCQ Option Shuffling : No Is**

**Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Light directed synthesis on silica wafers is a part of

- |                           |                             |
|---------------------------|-----------------------------|
| (1) Bulk synthesis        | (2) Combinatorial synthesis |
| (3) Assymmetric synthesis | (4) Inorganic synthesis     |

**Options :**

190889329. 1

190889330. 2

190889331. 3

190889332. 4

**Question Number : 84 Question Id : 19088984 Question Type : MCQ Option Shuffling : No Is**

**Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Silver nitrate reagent is used for limit test in Indian Pharmacopoeia for

- |              |             |
|--------------|-------------|
| (1) Lead     | (2) Iron    |
| (3) Chloride | (4) Mercury |

**Options :**

190889333. 1

190889334. 2

190889335. 3

190889336. 4

**Question Number : 85 Question Id : 19088985 Question Type : MCQ Option Shuffling : No Is**

**Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Substitution constant for meta benzoic acids is denoted by

- (1)  $\sigma_m$  (2)  $pK_{a(H)}$   
(3)  $\rho_m$  (4)  $pH_m$

**Options :**

190889337. 1

190889338. 2

190889339. 3

190889340. 4

**Question Number : 86 Question Id : 19088986 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Which among the following is not a calibration parameter for UV visible spectrophotometer?

- A. Control of wavelength  
B. Control of absorbances  
C. Resolution  
D. Control of transmitted radiation  
E. Spectral slit width

Choose the correct answer from the options given below :

- (1) A, B and D only (2) A, B, C and E only  
(3) A, B and C only (4) A and B only

**Options :**

190889341. 1

190889342. 2

190889343. 3

190889344. 4

**Question Number : 87 Question Id : 19088987 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

The wave length at which maximum absorption of radiation takes place is known as

- (1)  $\beta_{\max}$  (2)  $\alpha_{\max}$   
(3)  $\lambda_{\max}$  (4)  $A_{\max}$

**Options :**

190889345. 1

190889346. 2

190889347. 3

190889348. 4

**Question Number : 88 Question Id : 19088988 Question Type : MCQ Option Shuffling : No Is**

**Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

What will be type of proton NMR spectrum of 2,2,-dimethylpropane

- (1) Quartet (2) Doublet  
(3) Triplet (4) Singlet

**Options :**

190889349. 1

190889350. 2

190889351. 3

190889352. 4

**Question Number : 89 Question Id : 19088989 Question Type : MCQ Option Shuffling : No Is**

**Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

The immunosuppressant action of cyclosporine is due to

- (1) Interference with antigen recognition  
(2) Inhibition of gene transcription of interleukins  
(3) Blockade of tissue response to inflammatory  
(4) Inhibition of cell wall synthesis

**Options :**

- 190889353. 1
- 190889354. 2
- 190889355. 3
- 190889356. 4

**Question Number : 90 Question Id : 19088990 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Which among the following statement is correct with respect to their mechanism of action?

- (1) Sitagliptin/Vildagliptin : Dipeptidyl peptidase-4 inhibitors
- (2) Dapagliflozine/Canagliflozine : AMPk activators
- (3) Glibenclamide/ Glimepiride :  $\alpha$ -Glucosidase inhibitors
- (4) Acarose/Metformin : K<sub>ATP</sub> channel blockers

**Options :**

- 190889357. 1
- 190889358. 2
- 190889359. 3
- 190889360. 4

**Question Number : 91 Question Id : 19088991 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Conversion of T<sub>4</sub> to T<sub>3</sub> inhibition is associated with

- (1) Propylthiouracil
- (2) Radioactive iodine
- (3) Lugol's iodine
- (4) Carbimazole

**Options :**

- 190889361. 1
- 190889362. 2
- 190889363. 3
- 190889364. 4

**Question Number : 92 Question Id : 19088992 Question Type : MCQ Option Shuffling : No Is**

**Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Which of the following is wrongly matched combination of anti-arrhythmic drugs and their class?

- |                    |                       |
|--------------------|-----------------------|
| (1) Lidocaine – IB | (2) Disopyramide – II |
| (3) Diltiazem – IV | (4) Amiodarone – III  |

**Options :**

190889365. 1

190889366. 2

190889367. 3

190889368. 4

**Question Number : 93 Question Id : 19088993 Question Type : MCQ Option Shuffling : No Is**

**Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

A hypertensive patient Mr. Zee already receiving a drug 'X' to control his blood pressure was prescribed a tricyclic antidepressant. This resulted in the abolition of the antihypertensive action of 'X'. Which of the following drug could be 'X'.

- |               |               |
|---------------|---------------|
| (1) Enalapril | (2) Clonidine |
| (3) Atenolol  | (4) Diltiazem |

**Options :**

190889369. 1

190889370. 2

190889371. 3

190889372. 4

**Question Number : 94 Question Id : 19088994 Question Type : MCQ Option Shuffling : No Is**

**Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

A 3-year-old child presented to OPD with the symptoms of influenza. Aspirin is contraindicated in the patient because of increased risk of

- (1) Gastric bleeding
- (2) Thrombocytopenia
- (3) Fanconi Syndrome
- (4) Reye's syndrome

**Options :**

190889373. 1

190889374. 2

190889375. 3

190889376. 4

**Question Number : 95 Question Id : 19088995 Question Type : MCQ Option Shuffling : No Is**

**Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Prostaglandin analogous have therapeutic utility in the following EXCEPT

- (1) Impotence
- (2) Peripheral vascular disease
- (3) Palliative treatment of patent ductus arteriosus
- (4) Pulmonary hypertension

**Options :**

190889377. 1

190889378. 2

190889379. 3

190889380. 4

**Question Number : 96 Question Id : 19088996 Question Type : MCQ Option Shuffling : No Is**

**Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

For very weak acidic drugs, with  $pK_a > 8$ ,

- (1) They are unionized at all pH, hence absorption is rapid and independent of GI pH
- (2) They are affected by changes in pH, hence absorption is pH dependent
- (3) They are ionized in the entire pH range of GIT, hence poorly absorbed from GIT
- (4) They are ionized in the gastric pH, hence better absorbed from the stomach



**Options :**

190889381. 1

190889382. 2

190889383. 3

190889384. 4

**Question Number : 97 Question Id : 19088997 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Which of the following is non-epithelial malignancy tumor?

(1) Naevus

(2) Adenoma

(3) Lipoma

(4) Fibrosarcoma

**Options :**

190889385. 1

190889386. 2

190889387. 3

190889388. 4

**Question Number : 98 Question Id : 19088998 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

“Wheal and Flare” reaction is characteristic reaction associated with identification of:

(1) Type-1 hypersensitivity reaction

(2) Type-2 hypersensitivity reaction

(3) Type-3 hypersensitivity reaction

(4) Type-4 hypersensitivity reaction

**Options :**

190889389. 1

190889390. 2

190889391. 3

190889392. 4

**Question Number : 99 Question Id : 19088999 Question Type : MCQ Option Shuffling : No Is**

**Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

In healing of excised wound, there is

- |  |   |
|--|---|
| (1) Less tissue loss                   | (2) Less inflammatory exudate           |
| (3) Less necrotic tissue to be removed | (4) More granulation tissue is required |

**Options :**

190889393. 1

190889394. 2

190889395. 3

190889396. 4

**Question Number : 100 Question Id : 190889100 Question Type : MCQ Option Shuffling : No Is**

**Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Differential manometer has advantage over simple manometer

- (1) Handling is simple
- (2) It can measure smaller pressure difference
- (3) Viscosity can be determined along with pressure difference
- (4) It is used when pressure difference is high

**Options :**

190889397. 1

190889398. 2

190889399. 3

190889400. 4

**Question Number : 101 Question Id : 190889101 Question Type : MCQ Option Shuffling : No Is**

**Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Match the Tablet Diluents with their properties :

List I Tablet Diluent	List II Properties
(A) Lactose	(I) 2 to 4 percent of moisture
(B) Mannitol	(II) Maillard reaction
(C) Calcium phosphate	(III) Negative heat of solution
(D) Specially dried starch	(IV) Contraindicated for Tetracycline

Choose the correct answer from the options given below:

- (1) (A)-(III), (B)-(IV), (C)-(I), (D)-(II)
- (2) (A)-(II), (B)-(IV), (C)-(I), (D)-(III)
- (3) (A)-(III), (B)-(I), (C)-(IV), (D)-(II)
- (4) (A)-(II), (B)-(III), (C)-(IV), (D)-(I)

**Options :**

190889401. 1

190889402. 2

190889403. 3

190889404. 4

**Question Number : 102 Question Id : 190889102 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Purpose of Seal coating step of Sugar coating is

- (1) Gives smooth surface to the tablet
- (2) Enhances weight of the tablet for coating
- (3) Gives sweet taste to the Tablet
- (4) Prevent moisture penetration into the tablet

**Options :**

190889405. 1

190889406. 2

190889407. 3

190889408.4

**Question Number : 103 Question Id : 190889103 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

The total number of possible stereoisomers for 3-bromo-2-butanol are

- |       |       |
|-------|-------|
| (1) 2 | (2) 4 |
| (3) 6 | (4) 8 |

**Options :**

190889409.1

190889410.2

190889411.3

190889412.4

**Question Number : 104 Question Id : 190889104 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

The dehydration of aldol product of two acetaldehyde molecules through E1cb mechanism affords formation of

- |               |               |
|---------------|---------------|
| (1) 1-Butenal | (2) 2-Butenal |
| (3) 3-Butenal | (4) 4-Butenal |

**Options :**

190889413.1

190889414.2

190889415.3

190889416.4

## **PART IV Pharmacognosy**

**Section Id :**

1908894

<b>Section Number :</b>	4
<b>Section type :</b>	Online
<b>Mandatory or Optional :</b>	Mandatory
<b>Number of Questions :</b>	10
<b>Number of Questions to be attempted :</b>	10
<b>Section Marks :</b>	40
<b>Mark As Answered Required? :</b>	Yes
<b>Sub-Section Number :</b>	1
<b>Sub-Section Id :</b>	1908894
<b>Question Shuffling Allowed :</b>	Yes

**Question Number : 105 Question Id : 190889105 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Formation of pyranose structure from glucose leads to formation of diastereoisomers called

- |               |              |
|---------------|--------------|
| (1) Anomers   | (2) Epimers  |
| (3) Tautomers | (4) Metamers |

**Options :**

- 190889417. 1
- 190889418. 2
- 190889419. 3
- 190889420. 4

**Question Number : 106 Question Id : 190889106 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

For 1,3-butadiene, there are \_\_\_\_ molecular orbitals for  $\pi$  electrons

- |       |       |
|-------|-------|
| (1) 2 | (2) 4 |
| (3) 6 | (4) 8 |

**Options :**

190889421. 1

190889422. 2

190889423. 3

190889424. 4

**Question Number : 107 Question Id : 190889107 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Four-membered fully saturated heterocycle containing one oxygen is called

(1) Oxiren

(2) Oxiran

(3) Oxet

(4) Oxetane

**Options :**

190889425. 1

190889426. 2

190889427. 3

190889428. 4

**Question Number : 108 Question Id : 190889108 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Which of the following is orally active testosterone derivative having progestational activity?

(1) Oxymesterone

(2) Dihydrotestosterone

(3) Ethisterone

(4) Nomegestrol

**Options :**

190889429. 1

190889430. 2

190889431. 3

190889432. 4

**Question Number : 109 Question Id : 190889109 Question Type : MCQ Option Shuffling : No Is**

**Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Which of the following drug belongs to class of antibiotic called ansamycins?

- |                  |                    |
|------------------|--------------------|
| (1) Rifampin     | (2) Streptomycin   |
| (3) Azithromycin | (4) Streptozotocin |

**Options :**

- 190889433. 1
- 190889434. 2
- 190889435. 3
- 190889436. 4

**Question Number : 110 Question Id : 190889110 Question Type : MCQ Option Shuffling : No Is**

**Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

The absorption maxima of ephedrine hydrochloride and chlorocresol are 257 nm and 279 nm respectively and the A (1%, 1 cm) values in 0.1M hydrochloric acid solution are: 9.0 and zero for ephedrine hydrochloride at 257 nm and at 279 nm respectively. For chlorocresol it is 20.0 and 105.0 at 257 nm and at 279 nm respectively. Calculate the concentration of ephedrine hydrochloride in a batch of *Ephedrine hydrochloride injection*, diluted 1 to 25 with water, giving the absorbance in 1 cm cell of 0.424 at 279 nm and 0.972 at 257 nm.

- |                 |                 |
|-----------------|-----------------|
| (1) 1.010 mg/ml | (2) 6.25 mg/ml  |
| (3) 12.5 mg/ml  | (4) 24.75 mg/ml |

**Options :**

- 190889437. 1
- 190889438. 2
- 190889439. 3
- 190889440. 4

**Question Number : 111 Question Id : 190889111 Question Type : MCQ Option Shuffling : No Is**

**Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Which among the following cations has the lowest molar ionic conductivity in water at infinite dilution and at 25 degree centigrade?

- |                  |                 |
|------------------|-----------------|
| (1) Hydrogen ion | (2) Lithium ion |
| (3) Sodium ion   | (4) Silver ion  |

**Options :**

190889441. 1

190889442. 2

190889443. 3

190889444. 4

**Question Number : 112 Question Id : 190889112 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Match the following

- |                 |   |
|-----------------|---|
| (A) Schedule M  | (I) Regulations regarding Life period and storage of various drugs  |
| (B) Schedule FF | (II) Regulations for manufacturing, premises, waste disposal, requirements of plant and equipments (Good Manufacturing Practices) |
| (C) Schedule G  | (III) Various drugs to be used under the medical supervision  |
| (D) Schedule P  | (IV) Standards for Ophthalmic preparations  |

Choose the correct answer from the options given below:

- (1) (A)-(I), (B)-(II), (C)-(III), (D)-(IV)
- (2) (A)-(II), (B)-(IV), (C)-(III), (D)-(I)
- (3) (A)-(IV), (B)-(II), (C)-(III), (D)-(I)
- (4) (A)-(III), (B)-(I), (C)-(II), (D)-(IV)

**Options :**

190889445. 1

190889446. 2

190889447. 3

190889448. 4



**Question Number : 113 Question Id : 190889113 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Which of the following drugs can be imported without a license?

- (1) Drugs specified in schedule H
- (2) Drugs specified in schedule X
- (3) Drugs in schedule-C1 required for manufacturing and not for medicinal use
- (4) Drugs in schedule-C required for manufacturing and for medicinal use

**Options :**

190889449. 1

190889450. 2

190889451. 3

190889452. 4

**Question Number : 114 Question Id : 190889114 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Which of the following ointment bases is an ingredient of an absorption base?

- |                             |                   |
|-----------------------------|-------------------|
| (1) Petrolatum              | (2) Lanolin       |
| (3) Hydrogenated castor oil | (4) Cetyl alcohol |

**Options :**

190889453. 1

190889454. 2

190889455. 3

190889456. 4

## **PART V Other Subjects**

**Section Id :** 1908895

**Section Number :** 5

<b>Section type :</b>	Online
<b>Mandatory or Optional :</b>	Mandatory
<b>Number of Questions :</b>	11
<b>Number of Questions to be attempted :</b>	11
<b>Section Marks :</b>	44
<b>Mark As Answered Required? :</b>	Yes
<b>Sub-Section Number :</b>	1
<b>Sub-Section Id :</b>	1908895
<b>Question Shuffling Allowed :</b>	Yes

**Question Number : 115 Question Id : 190889115 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Preservatives are usually not added to

- |                              |  |
|------------------------------|--|
| (1) Small volume parenterals | (2) Large volume parenterals           |
| (3) All parenterals          | (4) Bacteriostatic water for injection |

**Options :**

- 190889457. 1
- 190889458. 2
- 190889459. 3
- 190889460. 4

**Question Number : 116 Question Id : 190889116 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Name the popular system for ocular delivery of pilocarpine, based on membrane -controlled reservoir systems

- |                  |                |
|------------------|----------------|
| (1) Ocusert      | (2) Alzet pump |
| (3) Progestasert | (4) Nitrodur   |

**Options :**

- 190889461. 1

190889462. 2

190889463. 3

190889464. 4

**Question Number : 117 Question Id : 190889117 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Chitosan possesses which of the following property?

- |                         |                      |
|-------------------------|----------------------|
| (1) Hypocholesterotemic | (2) Antimicrobial    |
| (3) Wound healing       | (4) All of the above |

**Options :**

190889465. 1

190889466. 2

190889467. 3

190889468. 4

**Question Number : 118 Question Id : 190889118 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Pyridine upon hydrogenation in presence of platinum at 25°C and 3 atm pressure yields

- |                |                         |
|----------------|-------------------------|
| (1) Piperidine | (2) 2,3-Dihydropyridine |
| (3) Pyrazine   | (4) 3,4-Dihydropyridine |

**Options :**

190889469. 1

190889470. 2

190889471. 3

190889472. 4

**Question Number : 119 Question Id : 190889119 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Formaldehyde undergoes Grignard reaction to give

- |                      |                        |
|----------------------|------------------------|
| (1) Primary alcohol  | (2) Secondary alcohol  |
| (3) Tertiary alcohol | (4) Quaternary alcohol |

**Options :**

190889473. 1

190889474. 2

190889475. 3

190889476. 4

**Question Number : 120 Question Id : 190889120 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

One of the following functional group makes benzoic acid weaker

- |                  |                   |
|------------------|-------------------|
| (1) Nitro group  | (2) Hydroxy group |
| (3) Chloro group | (4) Acetyl group  |

**Options :**

190889477. 1

190889478. 2

190889479. 3

190889480. 4

**Question Number : 121 Question Id : 190889121 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

The effect of activation or deactivation of an incoming functional group to an aromatic compound is strongest at

- |                         |                                   |
|-------------------------|-----------------------------------|
| (1) Only ortho position | (2) Only meta position            |
| (3) Only para position  | (4) Both ortho and para positions |

**Options :**

190889481. 1

190889482. 2

190889483. 3

190889484. 4

**Question Number : 122 Question Id : 190889122 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Glucose upon treatment with nitric acid yields

(1) Gluconic acid

(2) Glucaric acid

(3) Glucitol

(4) Heptanoic acid

**Options :**

190889485. 1

190889486. 2

190889487. 3

190889488. 4

**Question Number : 123 Question Id : 190889123 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

The relationship between the vapor pressure and the absolute temperature of a liquid is expressed by

(1) Biles Equation

(2) Lien and Kennon Equation

(3) Joule-Thomson Equation

(4) Clausius- Clapeyron Equation

**Options :**

190889489. 1

190889490. 2

190889491. 3

190889492. 4

**Question Number : 124 Question Id : 190889124 Question Type : MCQ Option Shuffling : No Is**

**Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

When one of the reactants is present in such great excess that its concentration may be considered constant or nearly so, the reaction is said to be of \_\_\_\_

- |                  |                  |
|------------------|------------------|
| (1) Second order | (2) Pseudo-order |
| (3) Zero order   | (4) Third order  |

**Options :**

190889493. 1

190889494. 2

190889495. 3

190889496. 4

**Question Number : 125 Question Id : 190889125 Question Type : MCQ Option Shuffling : No Is**

**Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Which of the following product life cycle' phases, it is indicative of market saturation in the sense that all the potential customers have bought the product except those who have decided not to have it?

- |                   |                        |
|-------------------|------------------------|
| (1) Growth phase  | (2) Introductory phase |
| (3) Decline Phase | (4) Maturity phase     |

**Options :**

190889497. 1

190889498. 2

190889499. 3

190889500. 4