

# National Testing Agency

**Question Paper Name:** GPAT Set2  
**Subject Name:** GPAT  
**Creation Date:** 2019-01-28 18:58:37  
**Duration:** 180  
**Total Marks:** 500  
**Display Marks:** Yes

## GPAT

**Group Number :** 1  
**Group Id :** 416529145  
**Group Maximum Duration :** 0  
**Group Minimum Duration :** 180  
**Show Attended Group? :** No  
**Edit Attended Group? :** No  
**Break time:** 0  
**Group Marks:** 500  
**Is this Group for Examiner?:** No

## Other Subjects

**Section Id :** 416529219  
**Section Number :** 1  
**Section type :** Online  
**Mandatory or Optional:** Mandatory  
**Number of Questions:** 11  
**Number of Questions to be attempted:** 11  
**Section Marks:** 44

**Sub-Section Number:** 1  
**Sub-Section Id:** 416529343  
**Question Shuffling Allowed :** Yes

**Question Number : 1 Question Type : MCQ Option Shuffling : Yes**  
**Correct Marks : 4 Wrong Marks : 1**

**In India the patent office has its head office at Kolkata and branch offices at :**

**Options :**

1. Mumbai, Chennai and New Delhi
2. Kashmir, Ahmedabad and Trivandrum

3. Chandigarh, Hyderabad and Goa

4. Dibrugarh, Indore and Vapi

Question Number : 2 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

**Penalty for the cultivation of any cannabis plant to produce, sell, purchase transport in contravention of Narcotic Drugs and Psychotropic substances Act and Rules on First conviction is :**

Options :

1. Rigorous imprisonment up to 10 years or fine up to Rs. 1 Lakh

2. Rigorous imprisonment up to 6 months

3. Fine up to Rs. 10 Lakh

4. Rigorous imprisonment up to 10 years or fine up to Rs. 10 Lakhs

Question Number : 3 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

**Choose the CORRECT statement with respect to 'The Pharmacy Act, 1948' :**

Options :

1. Section 12 of the act deals with the approval of course of study under chapter 2 thereof.

2. Section 12 of the act deals with the approval of course of study and examination under chapter 2 thereof.

3. State Govt. is authorised to make any rules with respect to course of study.

4. Education regulation 1991 does not prescribe the minimum qualification for the registration as Pharmacist

Question Number : 4 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

As per the Medical Termination of Pregnancy Act and rules, the safe custody of "Forms" is with :

Options :

1. Registered Medical Practitioner
2. Chief Medical Officer
3. Owner of the approved place
4. Standing committee

Question Number : 5 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

ELISA is based upon :

Options :

1. Antigen Antibody Interaction
2. Antigen Protein Interaction
3. Lectin - Antibody Interaction
4. Antibody protein Interaction

Question Number : 6 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

For protein detection most commonly used probe is :

Options :

1. Antibody

2. Lectin

3. Antigen

4. Interferon

Question Number : 7 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

The relation between emissive power of the surface and its absorptivity is given by :

Options :

1. Fourier's Law

2. Stefan - Boltzmann Law

3. Kirchhoff's Law

4. Darcy's Law

Question Number : 8 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

Hardinge mill is a variant of :

Options :

1. Fluid energy mill

2. Ball mill

3. Hammer mill

4. Rotary cutter mill

Question Number : 9 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

In Direct, Contact or Jet condensers, barometric leg serves one of the following functions :

Options :

1. To measure the pressure difference across the tube
2. To transfer the feed in to the evaporating chamber
3. To remove the condensate/cooling water mixture
4. To Heat the liquid feed to it's boiling point

Question Number : 10 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

Which of the following is considered as differentiated product ?

Options :

1. Ranitidine
2. Paracetamol
3. Isoniazid
4. Zantac

Question Number : 11 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

Consumer who are loyal to two-three brands are considered as :

Options :

1. Switcher loyals
2. Shifting loyals

3. Split loyals

4. Semi-core loyals

## Pharmaceutical Chemistry

Section Id :	416529220
Section Number :	2
Section type :	Online
Mandatory or Optional:	Mandatory
Number of Questions:	38
Number of Questions to be attempted:	38
Section Marks:	152

Sub-Section Number:	1
Sub-Section Id:	416529344
Question Shuffling Allowed :	Yes

Question Number : 12 Question Type : MCQ Option Shuffling : Yes  
Correct Marks : 4 Wrong Marks : 1

**This semisynthetic derivative of penicillin is synthesized by acylation of 6-APA with *p*-hydroxy phenyl glycine :**

Options :

1. Carbenicillin

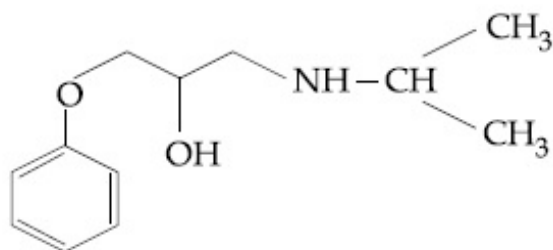
2. Ampicillin

3. Becampicillin

4. Amoxicillin

Question Number : 13 Question Type : MCQ Option Shuffling : Yes  
Correct Marks : 4 Wrong Marks : 1

Identify the name of drug with the following structure :



Note: For this question, discrepancy is found in question/answer. Full Marks is being awarded to all candidates.

Options :

1. Betaxolol
2. Esmolol
3. Bisoprolol
4. Metoprolol

Question Number : 14 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

Which of the following pair of drugs is considered as selective  $\alpha_1$ -Blockers ?

Options :

1. Formoterol and Levalbuterol
2. Yohimbine and Carynanthine
3. Prazosin and Terazosin
4. Timolol and Metoprolol

Question Number : 15 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

The basic ring system present in the antihypertensive and antiglaucoma drug "Timolol" is :

Options :

1. 1, 2, 4 - Thiadiazole and Morpholine
2. 1, 2, 5 - Thiadiazole and Morpholine
3. 1, 3, 5 - Thiadiazole and Morpholine
4. 1, 3 - Thiazole and Morpholine

Question Number : 16 Question Type : MCQ Option Shuffling : Yes  
Correct Marks : 4 Wrong Marks : 1

Which of the following second generation  $\beta_1$  - selective blockers contains 1, 3, 5, - thiadiazole ring in its structure ?

Note: For this question, discrepancy is found in question/answer. Full Marks is being awarded to all candidates.

Options :

1. Pindolol
2. Sotalol
3. Timolol
4. Penbutolol

Question Number : 17 Question Type : MCQ Option Shuffling : Yes  
Correct Marks : 4 Wrong Marks : 1

The following combination of drugs are used in treating severe travellers diarrhoea :

Options :

1. Pyrimethamine and sulfadiazine
2. Pyrimethamine and sulfamethoxazole



3. Trimethoprim and sulfamethoxazole

4. Trimethoprim and sulfadiazine

Question Number : 18 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

The structural features present in anti-cancer antibiotics (Doxorubicin, Daunorubicin, Idarubicin and Epirubicin) are ....

Options :

1. Anthracene nucleus fused to cyclohexane ring that is subsequently connected with amino sugar via glycosidic linkage

2. Phenanthrene nucleus fused to cyclohexane ring that is subsequently connected with amino sugar via glycosidic linkage

3. Naphthalene nucleus connected with amino sugar via glycosidic linkage

4. Quinoline nucleus connected with amino sugar via glycosidic linkage

Question Number : 19 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

The following ACE inhibitor used in treating cardiovascular disorder is synthesized from the natural amino acids L-alanine and L-proline :

Options :

1. Lisinopril

2. Enalapril

3. Captopril

#### 4. Ramipril

Question Number : 20 Question Type : MCQ Option Shuffling : Yes  
Correct Marks : 4 Wrong Marks : 1

Choose the correct sequence of process during Atomization in atomic absorption spectroscopy :

Options :

1. Desolvation → Nebulization → Volatilization → Dissociation → Ionization
2. Desolvation → Nebulization → Dissociation → Volatilization → Ionization
3. Nebulization → Desolvation → Volatilization → Dissociation → Ionization
4. Nebulization → Volatilization → Desolvation → Dissociation → Ionization

Question Number : 21 Question Type : MCQ Option Shuffling : Yes  
Correct Marks : 4 Wrong Marks : 1

Which among the following carrier gases has the highest thermal conductivity ?

Options :

1. Oxygen
2. Compressed Air
3. Helium
4. Nitrogen

Question Number : 22 Question Type : MCQ Option Shuffling : Yes  
Correct Marks : 4 Wrong Marks : 1

pM indicators are used in :

Options :

1. Redox titrations
2. Acid-base titrations
3. Non-Aqueous titrations
4. Complexometric titrations

Question Number : 23 Question Type : MCQ Option Shuffling : Yes  
Correct Marks : 4 Wrong Marks : 1

Amylopectin, a component of starch gives \_\_\_\_\_ colour with iodine

Options :

1. Blue
2. Red-purple
3. Green
4. No colour

Question Number : 24 Question Type : MCQ Option Shuffling : Yes  
Correct Marks : 4 Wrong Marks : 1

Permitted tolerance limit for a 100 mL class B volumetric flask and 1000 mL class B volumetric flask according to BS 1792 specifications respectively are \_\_\_\_\_ mL.

Options :

1. 1.00 and 10.00
2. 0.15 and 1.5

3. 0.80 and 0.30

4. 0.15 and 0.80

Question Number : 25 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

The infra-red absorption peaks of Nujol is due to vibrations involving :

Options :

1.  $C-H_{str}$  and  $C-H_{def}$

2.  $N-H_{str}$  and  $N-H_{def}$

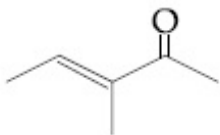
3.  $O-H_{str}$  and  $O-H_{def}$

4.  $S-H_{str}$  and  $S-H_{def}$

Question Number : 26 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

Predict  $\lambda_{max}$  for a  $\pi \rightarrow \pi^*$  absorption band in the UV spectrum of following compound :



Options :

1. 215 nm

2. 237 nm

3. 240 nm

4. 241 nm

Question Number : 27 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

When 50 ml of sodium hydroxide (0.1 M) is added to 100 mL of 0.1 M acetic acid, pH of the resultant solution is \_\_\_\_\_.

$K_a$  of acetic acid =  $1.82 \times 10^{-5}$

Options :

1. 7.42

2. 7.06

3. 8.58

4. 4.74

Question Number : 28 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

Von Gierke's glycogen storage disease is due to defect of which enzyme :

Options :

1. Glucosyl 4 - 6 transferase

2. Glucose - 6 - phosphatase

3. Phosphofructokinase

4. Glycogen phosphorylase

Question Number : 29 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

RNA molecules having intrinsic catalytic activity are called as \_\_\_\_\_.

Options :

1. mRNAs
2. Ribozymes
3. sn RNAs
4. rRNAs

Question Number : 30 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

Which of the following inactive clotting factor is activated by the vitamin-K as a co-enzyme ?

Options :

1. II, VII, IX, X
2. I, II, III, IV
3. II, V, VI, VIII
4. II, V, IX, X

Question Number : 31 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

Retention hyperbilirubemia is caused due to \_\_\_\_\_.

Options :

1. Over production of bilirubin
2. Reflux of bilirubin into blood stream

3. Non clearance of bilirubin

4. Choleric jaundice

Question Number : 32 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

**Blockade in  $\beta$ -oxidation results in :**

Options :

1. Scurvy

2. Sudden infant death syndrome

3. Von Gierk's disease

4. Taruli's disease

Question Number : 33 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

**Identify the molecule which will not exhibit Dipole moment ?**

Options :

1. Carbon monoxide

2. Carbon dioxide

3. Chloroform

4. Ammonia

Question Number : 34 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

Calculate the accurate osmotic pressure at  $0^{\circ}\text{C}$  of a blood serum sample using Lewis equation having freezing point  $-0.53^{\circ}\text{C}$  :

Options :

1. 0.636 atm
2. 6.39 atm
3. 574.28 atm
4. 0.0441 atm

Question Number : 35 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

What will be the Heat of vaporisation of 1 mole of water, when it has the entropy change ( $\Delta S$ ) of  $35.2 \text{ cal/mole}\cdot\text{deg}$  (at  $25^{\circ}\text{C}$ ) ?

Options :

1. 1.408 cal/mole
2. 10489 cal/mole
3. 8465 cal/mole
4. 880 cal/mole

Question Number : 36 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

Phase solubility Analysis curve is not a good tool for :

Options :

1. Impurity detection



2. Polymorph detection
3. Complex formation
4. Bioavailability determination

Question Number : 37 Question Type : MCQ Option Shuffling : Yes  
Correct Marks : 4 Wrong Marks : 1

Kinetically  $\frac{x}{a(a-x)} = kt$  is the expression for :

Options :

1. first order reaction
2. pseudo first order reaction
3. second order reaction
4. fractional order reaction

Question Number : 38 Question Type : MCQ Option Shuffling : Yes  
Correct Marks : 4 Wrong Marks : 1

Select the correct order of ortho/para directing ability of the functional groups from those given below :

(Strongest first, Weakest last)

Options :

1.  $-\text{NHCOR} > -\text{OH} > -\text{C}_6\text{H}_5 > \text{I}$
2.  $-\text{NHCOR} > -\text{NH}_2 > -\text{C}_6\text{H}_5 > \text{I}$
3.  $-\text{NHCOR} > -\text{NR}_2 > -\text{C}_6\text{H}_5 > \text{I}$

4.  $-\text{NHR} > -\text{NHCOR} > -\text{C}_6\text{H}_5 > \text{I}$

Question Number : 39 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

Conversion of aryl diazonium chloride to aryl chloride can be achieved in the presence of :

Options :

1. Copper (I) chloride

2. Copper (II) chloride

3. Sodium chloride

4. Calcium chloride

Question Number : 40 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

Dehydration of this dicarboxylic acid to obtain corresponding anhydride is difficult due to stereochemical arrangement :

Options :

1. Succinic acid

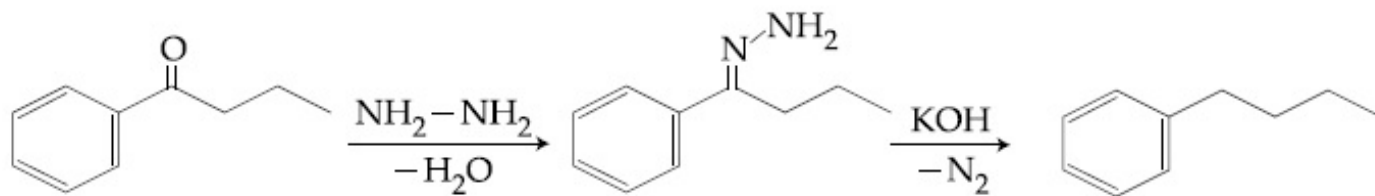
2. Malic acid

3. Fumaric acid

4. Glutaric acid

Question Number : 41 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1



Identify the named reaction;

Options :

1. Clemmensen reduction
2. Wolf-Kishner reduction
3. Curtius Rearrangement
4. Wolf-Rearrangement

Question Number : 42 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

One of the following is a most commonly used protecting group for amines :

Options :

1. t-Butyloxy carbonyl (t-BOC)
2. Tetra hydro pyranyl oxy (THP)
3. Methoxy methylene (MOM)
4. Para Methyl benzyl (PMB)

Question Number : 43 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

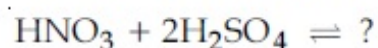
Conversion of a carbonyl functionality directly to its hydrocarbon in basic media can be achieved by :

Options :

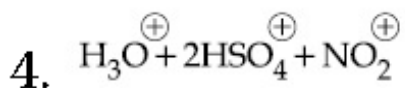
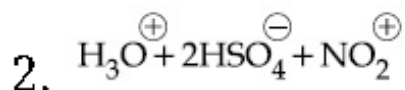
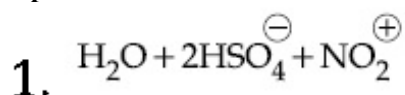
1. Sodium borohydride reduction
2. Lithium aluminium hydride reduction
3. Clemmensen reduction
4. Wolf Kishner reduction

Question Number : 44 Question Type : MCQ Option Shuffling : Yes  
Correct Marks : 4 Wrong Marks : 1

Choose the correct product of the following reaction :



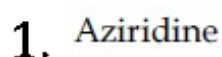
Options :



Question Number : 45 Question Type : MCQ Option Shuffling : Yes  
Correct Marks : 4 Wrong Marks : 1

Gabriel ring closure method is employed for the synthesis of :

Options :



2. Oxirane
3. Oxaziridine
4. 1, 4-oxazine

Question Number : 46 Question Type : MCQ Option Shuffling : Yes  
Correct Marks : 4 Wrong Marks : 1

Anti addition of bromine to trans-2-butene yields :

Options :

1. Only enantiomers
2. Only racemic mixture
3. Enantiomer and racemic mixture
4. Only meso compounds

Question Number : 47 Question Type : MCQ Option Shuffling : Yes  
Correct Marks : 4 Wrong Marks : 1

Reaction of an  $\alpha$ -halo ester with an aldehyde or ketone in the presence of a base like  $\text{NaNH}_2$  gives  $\alpha, \beta$ -epoxy carboxylic ester. This reaction is referred as :

Options :

1. Bamford steven reaction
2. Bayer villiger rearrangement
3. Darzen's glycidic synthesis

#### 4. Willgerodt rearrangement

Question Number : 48 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

The chief product obtained by the reaction of neo-pentyl bromide under  $E_1$  reaction conditions :

Options :

1. neo pentyl alcohol
2. 2-methyl-2-butene
3. 2-methyl butene
4. 2-methyl-1,3-butadiene

Question Number : 49 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

Oxazole is prepared by the condensation of  $\alpha$ -amino carbonyl compound with :

Options :

1. Iminoester
2. Aminoether
3. Amino acid
4. Isocyanide

## Pharmaceutics

<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>Sub-Section Number:</b>	1
<b>Sub-Section Id:</b>	416529345
<b>Question Shuffling Allowed :</b>	Yes

**Question Number : 50 Question Type : MCQ Option Shuffling : Yes  
Correct Marks : 4 Wrong Marks : 1**

**Microcrystalline cellulose is also called as :**

**Options :**

- 1. Sugar tab**
- 2. Nutab**
- 3. Emdex**
- 4. Avicel**

**Question Number : 51 Question Type : MCQ Option Shuffling : Yes  
Correct Marks : 4 Wrong Marks : 1**

**“Shake well” label must be placed on the containers of :**

**Options :**

- 1. Ophthalmic solution**
- 2. Ophthalmic gels**
- 3. Ophthalmic suspension**
- 4. Occuserts**

**Question Number : 52 Question Type : MCQ Option Shuffling : Yes**

Correct Marks : 4 Wrong Marks : 1

Which one of the following is the property of micro-emulsion ?

Options :

1. They have particle size more than 1 micron.
2. They have milky yellow colour
3. They exhibit a viscoelastic gel phase, when internal phase is added in excess.
4. They have poor stability.

Question Number : 53 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

In tablet, hydroxy propyl methyl cellulose is used as :

Options :

1. Disintegrant
2. Binder
3. Diluent
4. Film former

Question Number : 54 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

In case of suppositories base, SFI stands for :

Options :

1. Solid Fluid Indices
2. Solid Fat Index



3. Solidified Fatty acid Incline

4. Solidified Fatty acid Indices

Question Number : 55 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

21 CFR part 211 of USFDA describes :

Options :

1. Current good manufacturing practice

2. Current good clinical practice

3. Current good laboratory practice

4. Current good packaging practice

Question Number : 56 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

Which polymorphic form of a drug candidate has highest melting point :

Options :

1. Stable

2. Metastable

3. Unstable

4. Hydrates

Question Number : 57 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

Leaching by immersion of crude material in a solvent is also known as :

Options :

1. Evaporation
2. Maceration
3. Precipitation
4. Crystallization

Question Number : 58 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

In preformulation study polymorphs can be detected by :

Options :

1. Retractometry
2. High performance liquid chromatography
3. Differential scanning calorimetry
4. Counter - current chromatography

Question Number : 59 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

MEDLINE, EMBASE, EBM AND IDIs are :

Options :

1. Source for drug patents
2. Drug databases

3. Chronicles of drug standards

4. New compendial specification of drugs

Question Number : 60 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

Soda ash is also known as :

Options :

1. Lime stone

2. Sodium carbonate

3. Pure silica

4. Calcium carbonate

Question Number : 61 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

Which of the following is NOT a mechanism for achieving gastroretention ?

Options :

1. Mucoadhesion

2. Floating

3. Swelling

4. Osmosis

Question Number : 62 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

Containers may be rendered free from pyrogens by adequate cleaning and by :

Options :

1. Autoclaving at 121°C for 15 minutes.
2. Autoclaving at 121°C for 1 hour
3. Heating at 100°C for 3-4 hours
4. Heating at 210°C for 3-4 hours

Question Number : 63 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

In case of Aerosol testing, valve delivering acceptance criteria for a volume of 54  $\mu$ L or less is :

Options :

1.  $\pm 15\%$
2.  $\pm 10\%$
3.  $\pm 5\%$
4.  $\pm 75\%$

Question Number : 64 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

Which of the following oxide is not used for achieving Amber color to glass ?

Options :

1. Iron
2. Manganese

3. Carbon

4. Cobalt

Question Number : 65 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

GMP regulation are pertaining to minimum requirements to be met by industry when :

Options :

1. Manufacture of human drugs and veterinary drugs.
2. Manufacture and packaging of human drugs and veterinary drugs.
3. Manufacture and holding of human drugs and veterinary drugs
4. Manufacturing, packaging and holding of human drugs and veterinary drugs.

Question Number : 66 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

For drug substances with highly variable pharmacokinetic characteristics the following Bioequivalence study design is used :

Options :

1. Parallel Design
2. Replicate Design
3. Non-Replicate Design
4. Non-Parallel Design

Question Number : 67 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

When two brands of a drug product gives same clinical results, it is termed as :

Options :

1. Clinical equivalence
2. Bio equivalence
3. Therapeutic equivalence
4. Pharmaceutical equivalence

Question Number : 68 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

Volume of blood that flows per unit time per unit volume of the tissue is :

Options :

1. Gastric emptying rate
2. Elimination rate
3. Residence time
4. Perfusion rate

Question Number : 69 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

The co-administration of erythromycin with cyclosporine :

Options :

1. Decrease bioavailability, due to induction of hepatic metabolism

2. Increase bioavailability, due to inhibition of microflora in intestine
3. Increase bioavailability, due to inhibition of hepatic metabolism
4. Decrease bioavailability due to complex formation

Question Number : 70 Question Type : MCQ Option Shuffling : Yes  
Correct Marks : 4 Wrong Marks : 1

In case of one-compartment open model intravenous infusion,  $C_{ss}$  (steady state plasma concentration) is equal to :

Options :

1.  $\frac{\text{Infusion rate}}{\text{Clearance}}$
2.  $\frac{[t_{\max}][\text{Infusion rate}]}{\text{Clearance}}$
3.  $\frac{[\text{Plasma concentration}][\text{Infusion rate}]}{\text{Clearance}}$
4.  $\frac{[C_{\max}][\text{Infusion rate}]}{\text{Clearance}}$

Question Number : 71 Question Type : MCQ Option Shuffling : Yes  
Correct Marks : 4 Wrong Marks : 1

Which mechanism of metabolism of drug is not affected by weight change of patient ?

Options :

1. Oxidative metabolism
2. Conjugative metabolism

3. Hydrolytic metabolism

4. Acetylation metabolism

Question Number : 72 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

As per US FDA, NDA's for new chemical entitles are classified as either :

Options :

1. 'P' for priority review or 'S' for safety review.
2. 'P' for priority review or 'S' for standard review
3. 'P' for product review or 'S' for safety review
4. 'P' for product review or 'S' for standard review

Question Number : 73 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

Movement of a charged particle through a liquid under the influence of an applied potential difference is known as :

Options :

1. Electroosmosis
2. Sedimentation Potential
3. Streaming Potential
4. Electrophoresis

Question Number : 74 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1



The rheological and functional properties of synovial fluid are impaired due to :

Options :

1. Increase in the content of hyaluronic acid
2. Decrease in the content of hyaluronic acid
3. Increase in the content of mucus
4. Decrease in the content of mucus

Question Number : 75 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

Which one of the following viscometers can be used for characterizing non-Newtonian system ?

Options :

1. Capillary viscometer
2. Falling sphere viscometer
3. Cup and Bob viscometer
4. Hoesppler viscometer

Question Number : 76 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

Theories of emulsification are characterized by one of the following EXCEPT :

Options :

1. Monomolecular adsorption

2. Film formation
3. Phase inversion
4. Solid particle adsorption

Question Number : 77 Question Type : MCQ Option Shuffling : Yes  
Correct Marks : 4 Wrong Marks : 1

The following technique/s is/are used to determine the amount of drug bound to a protein :

Options :

1. Equilibrium dialysis
2. pH titration
3. Solubility
4. Distribution method

Question Number : 78 Question Type : MCQ Option Shuffling : Yes  
Correct Marks : 4 Wrong Marks : 1

Which of the following statement is NOT true regarding bulkiness ?

Options :

1. The reciprocal of bulk density is bulkiness
2. Bulkiest substance will require container larger than required for less bulky substance
3. Bulkiness increases with decrease in particle size
4. Smaller particles shift between larger ones and increases bulkiness

Question Number : 79 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

If mean volume – number diameter of a powdered sample is  $2.41 \mu\text{m}$ , density is  $3 \text{ gm/cm}^3$ , the number of particles/gm will be :

Options :

1.  $4.55 \times 10^{10}$

2.  $5.38 \times 10^{10}$

3.  $4.70 \times 10^{10}$

4.  $3.68 \times 10^{10}$

Question Number : 80 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

For bitter drugs in paediatric formulations, excellent flavouring agent will be :

Options :

1. Orange syrup

2. Lemon syrup

3. Raspberry syrup

4. Black current syrup

Question Number : 81 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

A mixture of emulsifier A and emulsifier B with H.L.B. values of 4 and 14 respectively are to be mixed in a proportion to get a mixture with required HLB 12. What is the weight of individual emulsifier that is to be taken to have a total weight of 7 gm ?

Options :

1. A = 1.4 gm and B = 5.6 gm

2. A = 5.6 gm and B = 1.4 gm

3. A = 1.2 gm and B = 5.8 gm

4. A = 5.8 gm and B = 1.2 gm

Question Number : 82 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

Essentially Hospital Formulary system provide mechanism to :

Options :

1. Avoid brand and therapeutic duplication

2. Streamline prescription writing

3. Improve surgical procedures

4. Improve quality and hygenicity of food

Question Number : 83 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

Dakin's solution is a synonym for :

Options :

1. Chloroxylenol solution

2. Aluminium Acetate solution

3. Chlorinated soda solution

4. Ammonium Acetate solution

Question Number : 84 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

The protein toxins that have been modified to reduce the toxicity without significantly altering the immunogenicity are known as :

Options :

1. Toxoids

2. Vaccines

3. Antisera

4. Sera

Question Number : 85 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

Roll-tube technique is the modification of :

Options :

1. The streak - plate technique

2. Pour plate technique

3. Spread plate technique

4. Micromanipulator technique

Question Number : 86 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

The phase contrast microscopy is valuable in studying living cells which are :

Options :

1. Unstained

2. Stained
3. Treated with fluorescent dye
4. Treated with fluorescent antibody

Question Number : 87 Question Type : MCQ Option Shuffling : Yes  
Correct Marks : 4 Wrong Marks : 1

In treating immunodeficiency disease the goal is to maintain IgG levels at about :

Options :

1. 100 mg/dL
2. 200 mg/dL
3. 300 mg/dL
4. 400 mg/dL

## Pharmacognosy

Section Id :	416529222
Section Number :	4
Section type :	Online
Mandatory or Optional:	Mandatory
Number of Questions:	10
Number of Questions to be attempted:	10
Section Marks:	40

Sub-Section Number:	1
Sub-Section Id:	416529346
Question Shuffling Allowed :	Yes

Question Number : 88 Question Type : MCQ Option Shuffling : Yes  
Correct Marks : 4 Wrong Marks : 1

In *Cassia angustifolia* short-term drought :

Options :

1. causes death of the plant
2. causes loss of leaf biomass
3. increases the concentration of sennosides A + B
4. decreases the concentration of sennosides A + B

Question Number : 89 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

**Antiviral action of Neem is due to :**

Options :

1. Nimbin
2. Nelanin
3. Azadirachtin
4. Kaemferol

Question Number : 90 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

**All members of this order are trees or shrubs; mostly evergreen with needle - like leaves ; monoecious or dioecious - sporophylls usually in cones. Resin ducts occur in all parts :**

Options :

1. Taxales
2. Cycadales

3. Ginkgoales

4. Coniferae

Question Number : 91 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

Shellac is a resinous substance prepared from a secretion that encrusts the bodies of a scale insect :

Options :

1. Acipenser huso

2. Karria lacca

3. Alverites moschiferus

4. Viverra civet

Question Number : 92 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

The principal cultivation areas of pyrethrum flowers are in -

Options :

1. Sri Lanka

2. India

3. Malaysia

4. Kenya

Question Number : 93 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1



The size of Lycopodium spores is :

Options :

1. 15  $\mu\text{m}$
2. 25  $\mu\text{m}$
3. 35  $\mu\text{m}$
4. 45  $\mu\text{m}$

Question Number : 94 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

In Gambir - fluorescin test the petroleum spirit layer shows a strong :

Options :

1. yellow fluorescence
2. red fluorescence
3. blue fluorescence
4. green fluorescence

Question Number : 95 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

Pungency of Zingiber officinale rhizome is due to the presence of :

Options :

1. Gingerol
2. Citral

3. Gingerol

4. Commiphoric acid

Question Number : 96 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

**Regholarrhenines A-F have been isolated from :**

Options :

1. Veratrums

2. Kurchi

3. Aconite

4. Areca

Question Number : 97 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

**The Glycoside Scilliroside in red squill acts as :**

Options :

1. Insecticide

2. Molluscide

3. Acaricide

4. Rodenticide

<b>Section Id :</b>	416529223
<b>Section Number :</b>	5
<b>Section type :</b>	Online
<b>Mandatory or Optional:</b>	Mandatory
<b>Number of Questions:</b>	28
<b>Number of Questions to be attempted:</b>	28
<b>Section Marks:</b>	112

<b>Sub-Section Number:</b>	1
<b>Sub-Section Id:</b>	416529347
<b>Question Shuffling Allowed :</b>	Yes

**Question Number : 98 Question Type : MCQ Option Shuffling : Yes  
Correct Marks : 4 Wrong Marks : 1**

**Glucocorticoids have following effects - EXCEPT :**

**Options :**

- 1. Protein breakdown and glucose formation**
- 2. Lipolysis**
- 3. Resistance to stress**
- 4. Stimulation of immune responses**

**Question Number : 99 Question Type : MCQ Option Shuffling : Yes  
Correct Marks : 4 Wrong Marks : 1**

**Several different chemicals released by microbes and inflamed tissues attract phagocytes, this phenomenon is called as \_\_\_\_\_.**

**Options :**

- 1. Phagocytosis**
- 2. Chemotaxis**
- 3. Emigration**

## 4. Integrins

Question Number : 100 Question Type : MCQ Option Shuffling : Yes  
Correct Marks : 4 Wrong Marks : 1

**What are sutures ?**

Options :

1. Fibrous joints of the skull
2. Cartilaginous joints
3. Synovial joints
4. Non fibrous joints

Question Number : 101 Question Type : MCQ Option Shuffling : Yes  
Correct Marks : 4 Wrong Marks : 1

**Cardiac output is :**

Options :

1. Volume of blood ejected by the auricles per beat
2. Volume of the blood ejected by the left ventricle per beat
3. Volume of blood ejected by the auricle per minute
4. Volume of the blood ejected by the left ventricle per minute

Question Number : 102 Question Type : MCQ Option Shuffling : Yes  
Correct Marks : 4 Wrong Marks : 1

**Hematocrit 65% to 70% indicates :**

Options :

1. Anaemia
2. Polycythemia
3. Hypoxia
4. Hemophilia

Question Number : 103 Question Type : MCQ Option Shuffling : Yes  
Correct Marks : 4 Wrong Marks : 1

The adverse reaction associated with  $\beta$ -2 agonists administered by inhalation or nebulisation in the management of asthma does not include \_\_\_\_\_.

Options :

1. Hypertension
2. Fine tremor
3. Peripheral vasodilation
4. Tachycardia

Question Number : 104 Question Type : MCQ Option Shuffling : Yes  
Correct Marks : 4 Wrong Marks : 1

The antiemetic activity of glycopyrronium is related to potent inhibition of \_\_\_\_\_ receptor both peripherally and centrally.

Options :

1.  $H_1$
2.  $M_1$

3. D<sub>2</sub>

4. 5HT<sub>3</sub>

Question Number : 105 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

Production of an abnormal IgG immunoglobulin in Grave's disease causes :

Options :

1. Thyrotoxicosis

2. Rheumatoid arthritis

3. Hypothyroidism

4. Multinodular goitre

Question Number : 106 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

Match the following liver abnormalities with consequences :

- |                 |   |
|-----------------|---|
| (a) Steatosis   | (M) Raised bilirubin level                          |
| (b) Cholestasis | (N) Slight rise in serum transaminase level         |
| (c) Hepatitis   | (O) Accumulation of fat droplets within liver cells |
| (d) Fibrosis    | (P) Elevated liver function test (LFT's)            |

Options :

(a) - (P)

(b) - (O)

(c) - (N)

1. (d) - (M)

(a) - (N)

(b) - (P)

(c) - (M)

2. (d) - (O)

(a) - (N)

(b) - (O)

(c) - (P)

3. (d) - (M)

(a) - (O)

(b) - (M)

(c) - (P)

4. (d) - (N)

Question Number : 107 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

Disturbances of oestrogen/progesterone balance could cause a relative deficiency of \_\_\_\_\_ leading to disturbances in production of dopamine and serotonin. This contributes for emotional disturbances and depression.

Options :

1. Tyrosine

2. Co-factor A

3. Pyridoxine phosphate

4. Enzyme decarboxylase

Question Number : 108 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

Which of the following is 5-alpha reductase inhibitor ?

Options :

1. Finasteride

2. Polythiazide

3. Gliclazide

## 4. Sildenafil

Question Number : 109 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

Identify the false statement about benzodiazepines from the following :

Options :

1. Benzodiazepines cause reduction of anxiety
2. Benzodiazepines are useful in insomnia
3. Benzodiazepines cause convulsions
4. Benzodiazepines produce muscle relaxation and loss of motor co-ordination

Question Number : 110 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

Identify the drug which is not useful in the treatment of tuberculosis :

Options :

1. Ciprofloxacin
2. Streptomycin
3. Gentamicin
4. Pyrazinamide

Question Number : 111 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

Which of the following is NOT a cardioselective  $\beta$  blocker ?

Options :



1. Bisoprolol
2. Acebutolol
3. Pindolol
4. Nebivolol

Question Number : 112 Question Type : MCQ Option Shuffling : Yes  
Correct Marks : 4 Wrong Marks : 1

Select the ulcer protective drug from the following :

Options :

1. Sucralfate
2. Metronidazole
3. Misoprostol
4. Oxyphenonium

Question Number : 113 Question Type : MCQ Option Shuffling : Yes  
Correct Marks : 4 Wrong Marks : 1

Testing of chemicals by OECD guideline No. 420 refers to which of the following :

Options :

1. Acute oral toxicity by acute toxic class method
2. Acute oral toxicity by fixed dose procedure
3. Acute oral toxicity by up and Down procedure

**4. Repeated dose 28-day toxicity study in rodents**

**Question Number : 114 Question Type : MCQ Option Shuffling : Yes**

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

**Numerous isomers of human liver P450 enzymes have been identified. It is not worthy that \_\_\_\_\_ alone is responsible for the metabolism of over 50% of the prescription drugs metabolized by liver.**

**Options :**

**1. CYP1A2**

**2. CYP2B6**

**3. CYP3A4**

**4. CYP1A11**

**Question Number : 115 Question Type : MCQ Option Shuffling : Yes**

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

**Which one of the following is NOT the role of Nitric oxide ?**

**Options :**

**1. Serving as neurotransmitter in CNS**

**2. Relaxing vascular smooth muscle**

**3. Inducing platelet aggregation**

**4. Mediating microbicidal action of macrophages**

**Question Number : 116 Question Type : MCQ Option Shuffling : Yes**

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

**Which of the following directly inhibits Factor Xa ?**

**Options :**

1. Rivaroxaban
2. Dabigatran
3. Warfarin
4. Bivalirudin

Question Number : 117 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

Following are the facts regarding clinical applications of muscarinic receptor blocking drugs. Identify the false statement :

Options :

1. Marked reflex vagal discharge may stimulate sinoatrial or atrioventricular node to improve cardiac output.
2. Used in the treatment of parkinson's disease is often an exercise in polypharmacy, since no single agent is fully effective.
3. Scopolamine is one among the old remedies used to treat sea-sickness
4. Mydriasis produced greatly facilitates ophthalmoscopic examination of the retina and measurement of refractive error in uncooperative patient.

Question Number : 118 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

Which of the following anticonvulsants have both inhibition of excitatory glutamatergic synapse and facilitation of GABA mediated  $\text{Cl}^-$  channel opening action ?

Options :

1. Phenytoin
2. Valproate

3. Topiramate

4. Ethosuximide

Question Number : 119 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

Which is NOT true about calcitriol ?

Options :

1. It enhances reabsorption of calcium and phosphate from bone
2. Enhances absorption of calcium and phosphate from intestine
3. It is active form of Vit D<sub>3</sub>
4. It prevents tubular reabsorption of calcium and phosphate

Question Number : 120 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

The term 'aneurysm' refers to :

Options :

1. Permanent blockage of blood vessels
2. Permanent abnormal dilatation of blood vessel
3. Abnormal connections in blood vessels
4. Abnormal growth of neurones near blood vessels

Question Number : 121 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

Which of the following is true ?

Excessive use of diuretics can lead to :

Options :

1. Neurogenic shock
2. Hypervolemic shock
3. Cardiogenic shock
4. Hypovolemic shock

Question Number : 122 Question Type : MCQ Option Shuffling : Yes  
Correct Marks : 4 Wrong Marks : 1

Which of the following cells are called scavenger cells ?

Options :

1. Macrophages
2. Neutrophils
3. Natural killer cells
4. Mast cells

Question Number : 123 Question Type : MCQ Option Shuffling : Yes  
Correct Marks : 4 Wrong Marks : 1

Characteristic microscopic features observed in Alzheimer's disease is :

Options :

1. Depigmentation of substantia nigra
2. Demyelination of neurons in spinal cord

3. Presence of neuritic plaques containing A $\beta$ -amyloid

4. Epidural haemoregic patches

Question Number : 124 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

**Metabolic acidosis does NOT occur during :**

Options :

1. Starvation

2. Chronic renal failure

3. Uncontrolled diabetes mellitus

4. Wound healing

Question Number : 125 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

**What is anaplasia ?**

Options :

1. Morphological and functional resemblance to normal cells

2. Lack of growth of cells

3. Increase in size of cell

4. Morphological and functional alterations/changes, that are different from normal cells