

## PROVISIONAL ANSWER KEY

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Exam:	Assistant Professor in Pharmacy
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Department	Medical Education

Question1:-The principal cinchona alkaloid used therapeutically as an antiprotozoal drug \_\_\_\_\_.

A:-Chloroquine

B:-Amodiaquine

C:-Quinine

D:-Quinidine

Correct Answer:- Option-C

Question2:-Which among the following opium compounds lacks narcotic properties?

A:-Thebaine

B:-Codeine

C:-Hydrocodone

D:-Narcotine

Correct Answer:- Option-D

Question3:-Which among the following is an example of a colorful tetraterpene compound?

A:-Ambergris

B:-Beta-carotene

C:-Chlorophyll

D:-Azadirachtin

Correct Answer:- Option-B

Question4:-The reagent used to liberate alkaloids as salts from plant components is \_\_\_\_\_.

- A:-Potassium nitrate
- B:-Sodium bicarbonate
- C:-Methanol
- D:-Sodium carbonate

Correct Answer:- Option-D

Question5:-Raymond's test is a chemical test for:

- A:-Cardiac glycosides
- B:-Flavanoids
- C:-Lignin
- D:-Hydroxy anthraquinones

Correct Answer:- Option-A

Question6:-The plant growth regulator used in the brewing industry to speed up the malting process is \_\_\_\_\_.

- A:-Ethylene
- B:-Auxin
- C:-Gibberellic acid
- D:-Abscisic acid

Correct Answer:- Option-C

Question7:-Which among the following contains both alkaloid and glycoside as its constituents?

- A:-Digitalis
- B:-Senna
- C:-Nuxvomica
- D:-Aloe

Correct Answer:- Option-C

Question8:-The marine derived compound which has anti parasitic action and also used in epilepsy modelling is \_\_\_\_\_.

A:-Acanthofolicin

B:-Bryostatin

C:-Kainic acid

D:-Bengamide F

Correct Answer:- Option-C

Question9:-The colour of fluorescence observed during Schoenteten's test is \_\_\_\_\_.

A:-Green

B:-Orange

C:-Yellow

D:-Red

Correct Answer:- Option-A

Question10:-When a transverse section of Clove is treated with a strong solution of potassium hydroxide \_\_\_\_\_ shaped crystals are formed.

A:-Cluster

B:-Acicular

C:-Rosette

D:-All of the above

Correct Answer:- Option-B

Question11:-Some drugs are placed under orphan drugs due to the following factors except

A:-Enormous cost of production

B:-Non patentability of the drug

C:-Their limited demand

D:-Poor Quality

Correct Answer:- Option-D

Question12:- $T_{1/2}$  of Paracetamol is

A:-1 hour

B:-2 hours

C:-3 hours

D:-4 hours

Correct Answer:- Option-B

Question13:-Tachyphylaxis is

A:-Acute tolerance to drugs

B:-Chronic tolerance to drugs

C:-Drug dependance

D:-None of the above

Correct Answer:- Option-A

Question14:-Cytokinesis begins in

A:-Prophase

B:-Late anaphase

C:-Early metaphase

D:-Telophase

Correct Answer:- Option-B

Question15:-Simple Cuboidal epithelium is found in

A:-Small Intestine

B:-Retina of eye

C:-Gall Bladder

D:-Uterine tube

Correct Answer:- Option-B

Question16:-The drug which undergoes Hoffman elimination

A:-Phenobarbitone

B:-Warfarin

C:-Atracurium

D:-Omeprazole

Correct Answer:- Option-C

Question17:-During embryonic development, the percentage of cardiac muscle fibers that become autorhythmic fibers are:

A:-About 1%

B:-About 5%

C:-About 7%

D:-About 10%

Correct Answer:- Option-A

Question18:-Inspiration follows

A:-Amonton's law

B:-Pascal's law

C:-Boyle's law

D:-None of the above

Correct Answer:- Option-C

Question19:-Different stages of anaesthesia are except

A:-Stage of Delirium

B:-Medullary Paralysis

C:-Stage of Analgesia

D:-Stage of Depression

Correct Answer:- Option-D

Question20:-Knee cap is otherwise termed as

A:-Patella

B:-Labra

C:-Barsae

D:-Symphyses

Correct Answer:- Option-A

Question21:-An organism that cause haemolytic uraemic syndrome, leads to acute renal failure in children

A:-Escherichia coli

B:-Enterobacter cloacae

C:-Enterobacter agglomerans

D:-Citrobacter freundii

Correct Answer:- Option-A

Question22:-Which food additive-containing preparation should be used with caution in children with Phenylketonuria?

A:-Saccharin

B:-Aspartame

C:-Tartrazine

D:-Allura red

Correct Answer:- Option-B

Question23:-Schwartz equation, used to calculate creatinine clearance

A:-Creatinine clearance (mL/mn/1.73 m<sup>2</sup>) = 42 × height (cm)/serum creatinine (mmol/L)

B:-Creatinine clearance (mL/mn/1.73 m<sup>2</sup>) = 38 × height (cm)/serum creatinine (mmol/L)

C:-Creatinine clearance (mL/mn/1.73 m<sup>2</sup>) = k × height (cm)/serum creatinine (mmol/L)

D:-Creatinine clearance (mL/mn/1.73 m<sup>2</sup>) = height (cm)/serum creatinine (mmol/L) × weight (kg)

Correct Answer:- Option-C

Question24:-Recombinant portion of human parathyroid hormone used to reduce vertebral and non vertebral fractures in post menopausal woman

A:-Teriparatide

B:-Tirzepatide

C:-Triptolide

D:-Targretin

Correct Answer:- Option-A

Question25:-A drug that induce idiosyncratic (Type B) hepatotoxicity

A:-Paracetamol

B:-Methotrexate

C:-Isoniazid

D:-Iron

Correct Answer:- Option-C

Question26:-Secretary of Pharmacy and Therapeutic committee

A:-Pharmacist

B:-Physician

C:-Nurse

D:-Administrator

Correct Answer:- Option-A

Question27:-Specific antibody test used to detect Rheumatoid Arthritis even before symptoms become severe

A:-Rheumatoid factor test (IgMRF)

B:-Antinuclear antibody (ANA)

C:-Anti cyclic citrullinated peptide antibody (Anti CCP antibody)

D:-Extractable nuclear antigens (ENA)

Correct Answer:- Option-C

Question28:-Kaposi's sarcoma in people with HIV infection may be triggered by infection with

A:-Human herpes virus (8)

B:-Helicobacter pylori

C:-Human papilloma virus

D:-Human herpes virus (4)

Correct Answer:- Option-A

Question29:-Left ventricular dysfunction can result from

A:-Hypertension

B:-Myocardial infarction

C:-Defects in systolic contraction and Diastolic relaxation

D:-All above

Correct Answer:- Option-D

Question30:-Only anti TB drug that is bactericidal against all three population (Extra cellular, intermittent and intracellular Mycobacterium tubercle bacilli (MTB))

A:-Pyrazinamide

B:-Rifampicin

C:-Streptomycin

D:-Isoniazid

Correct Answer:- Option-B

Question31:-Which of the following are examples for reversible anticholinesterases?

A:-Physostigmine and Paraoxon

B:-Neostigmine and Donzepil

C:-Neostigmine and DFP

D:-Physostigmine and Diazinon

Correct Answer:- Option-B

Question32:-Cyproheptadine primarily blocks

A:-5-HT<sub>2A</sub> receptor

B:-5-HT<sub>3</sub> receptor

C:-5-HT<sub>1B/1D</sub> receptor

D:-5-HT<sub>2C</sub> receptor

Correct Answer:- Option-A

Question33:-Clinical use of 1, 3, 7 Trimethylxanthine is

A:-Bronchial asthma

B:-COPD

C:-Apnoea in premature infants

D:-Nocturnal asthma

Correct Answer:- Option-C

Question34:-Insulin aspart is an insulin analogue produced from human insulin by

A:-replacing aspartic acid with proline at B28

B:-replacing proline with aspartic acid at B28

C:-replacing aspartic acid with proline at B29

D:-replacing proline with aspartic acid at B29

Correct Answer:- Option-B

Question35:-Which of the following statement is incorrect

A:-Zidovudine is a thymidine analogue

B:-Abacavir is a guanosine analogue

C:-Lamivudine is deoxycytidine analogue

D:-Stavudine is fluorinated cytidine analogue

Correct Answer:- Option-D

Question36:-Drug of choice for treatment of *Clostridium difficile* superinfection is

A:-Clindamycin

B:-Metronidazole

C:-Clarithromycin

D:-Daptomycin

Correct Answer:- Option-B

Question37:-Mechanism of action of dutasteride in treatment of male pattern baldness is

A:-5  $\alpha$ -reductase inhibition

B:-Phosphodiesterase-5 inhibition

C:-Suppress testosterone secretion

D:-Suppress luteinizing hormone secretion

Correct Answer:- Option-A

Question38:-Which among the following drugs causes greater cochlear damage?

A:-Amikacin and Kanamycin

B:-Streptomycin and Gentamicin

C:-Clarithromycin and Erythromycin

D:-Streptomycin and Tobramycin

Correct Answer:- Option-A

Question39:-Hypertrichosis occurs in patients receiving Minoxidil is probably a consequence of

A:-Opening of Na<sup>+</sup> channel

B:-Opening of K<sup>+</sup> channel

C:-Opening of Ca<sup>2+</sup> channel

D:-Blocking of Na<sup>+</sup> channel

Correct Answer:- Option-B

Question40:-Quinine used for treatment of malaria is

A:-Levo rotatory

B:-Dextro rotatory

C:-Racemic mixture

D:-Diastereomer

Correct Answer:- Option-A

Question41:-In Karl Fischer method, one mole of water reacts with how many moles of iodine?

A:-0.25

B:-0.5

C:-1

D:-1.5

Correct Answer:- Option-C

Question42:-In reversed-phase chromatography,

A:-The least polar component is eluted first

B:-The most polar component is eluted first

C:-Increasing the mobile phase polarity decreases the elution time

D:-Decreasing the mobile phase polarity increases the elution time

Correct Answer:- Option-B

Question43:-In Flame Ionisation Detectors, the sample is pyrolysed using:

A:-Oxygen and Helium

B:-Hydrogen and Air

C:-Hydrogen and Helium

D:-Methane and Oxygen

Correct Answer:- Option-B

Question44:-Thermogravimetric analysis is a useful technique in detecting:

A:-Phase transitions

B:-Levels of crystallinity

C:-Thermal stability

D:-Volatile components

Correct Answer:- Option-D

Question45:-Horseradish peroxidase is a commonly used reagent in which of the following analytical techniques?

A:-ELISA

B:-RIA

C:-LC-MS

D:-Nephelometry

Correct Answer:- Option-A

Question46:-Deviations in Beer-Lambert Law occur when:

A:-Concentration changes cause refractive index variation

B:-The analyte has no interaction with the solvent

C:-The solution is dilute

D:-Monochromatic radiation is used

Correct Answer:- Option-A

Question47:-Tetramethylsilane is used as internal standard in NMR spectroscopy because:

A:-Its protons are less shielded

B:-It is water soluble

C:-It gives a single sharp peak

D:-All the above statements are true

Correct Answer:- Option-C

Question48:-Which type of formulation interactions can be detected by X-ray Diffraction?

A:-Gas-phase reactions

B:-Solid-state interactions

C:-Liquid-liquid interactions

D:-Electrochemical reactions

Correct Answer:- Option-B

Question49:-Choose the correct logical sequence of instrument qualification in Quality Assurance:

A:-DQ, IQ, OQ, PQ

B:-DQ, IQ, PQ, OQ

C:-DQ, PQ, IQ, OQ

D:-DQ, OQ, PQ, IQ

Correct Answer:- Option-A

Question50:-Which among the following ICH Quality Guidelines relate to stability testing of pharmaceuticals?

A:-ICH Q1

B:-ICH Q2

C:-ICH Q7

D:-ICH Q9

Correct Answer:- Option-A

Question51:-The number of peptide groups in oxytocin

A:-7

B:-9

C:-8

D:-10

Correct Answer:- Option-C

Question52:-Which buffer maintains blood pH (~7.4)?

A:-Phosphate buffer

B:-Bicarbonate buffer

C:-Acetate buffer

D:-Ammonia buffer

Correct Answer:- Option-B

Question53:-Okazaki fragments are joined together by

A:-DNA ligase

B:-Helicase

C:-Primase

D:-Polymerase

Correct Answer:- Option-A

Question54:-Which of the following compounds yields a yellow precipitate when warmed with a mixture of iodine in aqueous sodium hydroxide?

A:-Benzophenone

B:-Benzaldehyde

C:-Propanal

D:-Acetophenone

Correct Answer:- Option-D

Question55:-Where is the transition state found in a free energy diagram?

A:-With the intermediates

B:-With the products

C:-At the highest energy point on the curve

D:-At the lowest energy point on the curve

Correct Answer:- Option-C

Question56:-Which statement is correct about Simmons smith reaction

A:-Reaction proceeds via carbocation

B:-Reaction is stereospecific

C:-Reaction gives rearranged products

D:-Reaction occurs in alkanes

Correct Answer:- Option-B

Question57:-Which one of the following is a mono carboxylic acid?

A:-Malonic acid

B:-Adipic acid

C:-Arachidic acid

D:-Maleic acid

Correct Answer:- Option-C

Question58:-What is the systematic name of isoprene?

A:-2 methyl 1, 3 - butadiene

B:-3 methyl 1, 2 - butadiene

C:-3 methyl 1, 3 - butadiene

D:-2 methyl 1, 2 - butadiene

Correct Answer:- Option-A

Question59:-The nitrogenous base that is never found in the genetic code

A:-Adenine

B:-Guanine

C:-Thymine

D:-Cytosine

Correct Answer:- Option-C

Question60:-Iron in the mucosal cells binds with the protein

A:-Transferrin

B:-Ferritin

C:-Ceruloplasmin

D:-Hemosiderin

Correct Answer:- Option-B

Question61:-A drug that increases insulin sensitivity via PPAR -  $\gamma$  activation is

A:-Repaglinide

B:-Glipizide

C:-Pioglitazone

D:-Sitagliptin

Correct Answer:- Option-C

Question62:-The structural modification that improves selectivity of  $\beta_2$  agonists?

A:-Addition of carboxylic group

B:-Bulky substituent on amino group

C:-Small alkyl group

D:-Removal of hydroxyl group

Correct Answer:- Option-B

Question63:-The unique Local Anaesthetic that does not contain a tertiary amine

A:-Lidocaine

B:-Procaine

C:-Tetracaine

D:-Benzocaine

Correct Answer:- Option-D

Question64:-One of the primary precursors for the synthesis of Diazepam is

A:-2-amino-5-chloro benzophenone

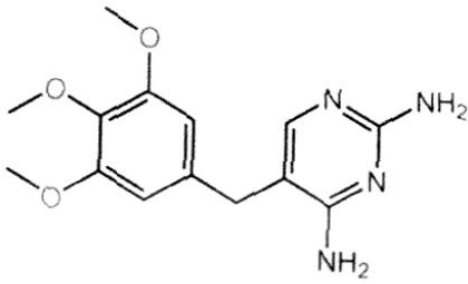
B:-2-acetyl-5-chloro benzoic acid

C:-2-amino-5-nitro benzoic acid

D:-2-acetyl-5-chloro-2'-fluorobenzophenone

Correct Answer:- Option-A

Question65:-The following is the chemical structure of



A:-Pyrimethamine

B:-Methadone

C:-Trimethoprim

D:-Amiloride

Correct Answer:- Option-C

Question66:-The anti-HIV drug that inhibits protease enzyme

A:-Acyclovir

B:-Ritonavir

C:-Oseltamivir

D:-Remdesivir

Correct Answer:- Option-B

Question67:-One of the primary antidotes for non-depolarizing neuromuscular blocking drugs

A:-Dantrolene

B:-Succinylcholine

C:-Rocuronium

D:-Neostigmine

Correct Answer:- Option-D

Question68:-The drug of choice to treat edema resulting from liver cirrhosis

A:-Triamterene

B:-Tripamide

C:-Spironolactone

D:-Amiloride

Correct Answer:- Option-C

Question69:-Substitution at position 2 of Phenothiazine nucleus with chlorine results in

A:-Increased activity

B:-Decreased activity

C:-Loss of activity

D:-No effect on activity

Correct Answer:- Option-A

Question70:-Which standard parameter is crucial in evaluating docking accuracy?

A:-Ligand efficiency

B:-Root Mean Square Deviation

C:-Log P value

D:-Number of hydrogen bonds

Correct Answer:- Option-B

Question71:-A preparation containing Diamorphine will be classified as an opium derivative only if:

A:-It exceeds 0.2%

B:-It exceeds 0.1%

C:-It exceeds 0.01%

D:-No minimum limit

Correct Answer:- Option-D

Question72:-Which among the following is a spurious drug?

A:-Drugs not labelled in the prescribed manner

B:-Drugs labelled with the name of false manufacturer

C:-Drugs labelled with false claims

D:-Drugs containing colour other than those prescribed

Correct Answer:- Option-B

Question73:-Proof spirit contains

A:-48.3% w/w ethyl alcohol

B:-57.5% v/v ethyl alcohol

C:-57.1% v/v ethyl alcohol

D:-58.5% v/v ethyl alcohol

Correct Answer:- Option-C

Question74:-Why is line clearance performed before starting a new batch?

A:-To ensure no remains of the previous product or documentation are present

B:-To confirm that the equipment has undergone preventive maintenance

C:-To confirm that the HVAC system is working properly

D:-To validate that the previous batch's yield reconciliation was within the acceptable limit

Correct Answer:- Option-A

Question75:-Non-obviousness is a concept specifically used to determine which of the following requirements for a patent grant?

A:-Novelty

B:-Inventive step

C:-Industrial applicability

D:-All of the above

Correct Answer:- Option-B

Question76:-According to the ICH Q1A (R2) guideline, a "**significant change**" for drug product is defined as meeting any of the following criteria **EXCEPT**:

A:-A 5% change in assay from its initial value

B:-Failure to meet the acceptance criterion for pH

C:-Softening of a suppository or melting of a cream

D:-Failure to meet the acceptance criteria for dissolution for 12 dosage units

Correct Answer:- Option-C

Question77:-Stokes' law applies to a suspension, only when the Reynolds number is

A:-Below 0.22

B:-Between 1 and 0.1

C:-Below 0.25

D:-Below 0.2

Correct Answer:- Option-D

Question78:-Which among the following is a hydrophilic colloid?

A:-Insulin

B:-Tween 80 in water

C:-Both 1 and 2 are correct

D:-Sulphur sol

Correct Answer:- Option-A

Question79:-Reciprocal of mobility refers to

A:-Kinematic viscosity

B:-Apparent viscosity

C:-Absolute viscosity

D:-Plastic viscosity

Correct Answer:- Option-D

Question80:-Spreading coefficient is positive when :

A:-Surface tension (S T) of sub layer liquid is greater than the sum of S T of spreading liquid and interfacial tension between spreading and sub layer liquid.

B:-The sum of ST of spreading liquid and interfacial tension between spreading and sub layer liquid is greater than the ST of sub layer liquid.

C:-Interfacial tension between spreading and sub layer liquid is greater than the ST of sub layer liquid.

D:-Interfacial tension between spreading and sub layer liquid is less than the ST of sub layer liquid.

Correct Answer:- Option-A

Question81:-The immunoglobulin with a secretory component at the mucous membrane and prevents infection by inhibiting adherence of microorganisms to the host cells.

A:-IgE

B:-IgA

C:-IgD

D:-IgM

Correct Answer:- Option-B

Question82:-The cell which is made by fusing an antibody-producing B cell with a cancerous cell.

A:-Plasmocytoma

B:-Monoclonal Antibody

C:-Monomer

D:-Hybridoma

Correct Answer:- Option-D

Question83:-In absorption kinetics, a plot of the amount of drug remaining to be absorbed against time yields a straight line, such kinetics is

A:-Zero Order Kinetics

B:-Second-Order Kinetics

C:-Mixed Order Kinetics

D:-First Order Kinetics

Correct Answer:- Option-A

Question84:-The test organism used for the microbiological assay of Gentamicin

A:-Bacillus pumilus 14884

B:-Klebsiella pneumoniae 10031

C:-Staphylococcus epidermis 12228

D:-Staphylococcus aureus 29737

Correct Answer:- Option-C

Question85:-The fraction of drug removed from the plasma in a single passage through the organ is known as

A:-Clearance

B:-Extraction ratio

C:-Volume of distribution

D:-Elimination

Correct Answer:- Option-B

Question86:-Low molecular weight compounds from the environment, or a drug that act as immunogens by chemically complexing to a larger molecule or on the cell surface and stimulates the immune system of the host

A:-Tolerogens

B:-Antigens

C:-Haptens

D:-Antibodies

Correct Answer:- Option-C

Question87:-A clean room in which the particle count in the air is not more than 100 per cubic foot, of 0.5 micrometre

A:-Class 100 clean room

B:-Class 50 clean room

C:-Class 1000 clean room

D:-Class 10000 clean room

Correct Answer:- Option-A

Question88:-The following method of sterilization is not used for catgut

A:-Dry heat sterilization

B:-Ionising radiation

C:-Sterilization using chemicals

D:-Heat sterilization in the presence of moisture

Correct Answer:- Option-D

Question89:-Which among the following is not a characteristic feature of nonlinear pharmacokinetics?

A:-Elimination half-life increases at high dose

B:-Area under the curve is proportional to the dose

C:-Do not follow first order kinetics at high dose

D:-Dose dependent

Correct Answer:- Option-B

Question90:-Insulin immobilized using degradable calcium phosphate nanocrystals on a self-assembling nanocrystalline ceramic core coated with a glassy pyridoxal 5 phosphate and the resulting product comes under the category of

A:-Aquasome

B:-Chelate

C:-Three-dimensional gel

D:-Liposome

Correct Answer:- Option-A

Question91:-The antimicrobial preservative used in ophthalmic preparation is all except:

A:-Benzalkonium chloride

B:-Phenylmercuric nitrate

C:-Benzyl alcohol

D:-Methylparaben

Correct Answer:- Option-C

Question92:-Which excipient is commonly involved in Maillard reactions in pharmaceuticals?

A:-Starch

B:-Lactose

C:-Talc

D:-Magnesium stearate

Correct Answer:- Option-B

Question93:-Which of the following statements about triethanolamine soap is incorrect?

A:-It is formed by neutralization of fatty acid

B:-It acts as an anionic emulsifying agent

C:-It is suitable for preparing O/W emulsion

D:-It is stable in strongly acidic conditions

Correct Answer:- Option-D

Question94:-Which of the following materials is least suitable for fluidized bed drying?

A:-Free-flowing granules

B:-Cohesive fine particles

C:-Dense particles

D:-Crystalline solids

Correct Answer:- Option-B

Question95:-What is the permissible limit of bacterial endotoxins in sterile water for injection?

A:-Not more than 0.25 units per mL

B:-Not more than 0.025 units per mL

C:-Not more than 0.15 units per mL

D:-Not more than 0.015 units per mL

Correct Answer:- Option-A

Question96:-What is the flow pattern produced in a paddle mixer during liquid mixing?

A:-Axial and tangential

B:-Axial or tangential

C:-Radial and tangential

D:-Radial or tangential

Correct Answer:- Option-C

Question97:-What is the approximate particle size obtained in microencapsulation by the air suspension method?

A:-35 to 5000  $\mu\text{m}$

B:-2 to 5000  $\mu\text{m}$

C:-60 to 5000  $\mu\text{m}$

D:-5 to 5000  $\mu\text{m}$

Correct Answer:- Option-A

Question98:-What is the chemical nature of pyrogens?

A:-Carbohydrates

B:-Lipoproteins

C:-Proteins

D:-Lipopolysaccharides

Correct Answer:- Option-D

Question99:-Identify the propellant used in the preparation of topical pharmaceutical aerosols.

A:-Propane

B:-Trichloromonofluoromethane

C:-Dichlorodifluoromethane

D:-Dichlorotetrafluoroethane

Correct Answer:- Option-A

Question100:-How does oleic acid act as a permeation enhancer in transdermal drug delivery system?

A:-It enhances skin hydration

B:-It forms microchannels in the stratum corneum

C:-It binds to drug molecules in the blood stream

D:-It decreases drug solubility

Correct Answer:- Option-B