

## PROVISIONAL ANSWER KEY

Question 34/2023/OL  
Paper Code:

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Category 561/2017  
Code:

Exam: Assistant Professor in Pharmacy

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Department Medical Education

Question1:-Modified Brontrager's test in Aloe is performed due to the presence of

A:-O-glycoside

B:-C-glycoside

C:-N-glycoside

D:-S-glycoside

Correct Answer:- Option-B

Question2:-The crude drug used as an anti hypertensive

A:-Opium

B:-Belladonna

C:-Ephedra

D:-Catechu

Correct Answer:- Option-D

Question3:-The parameter of growth for assessing the relative contribution of cell aggregates and free cells to growth in culture medium is

A:-Cell viability

B:-Packed cell volume

C:-Mitotic index

D:-None of the above

Correct Answer:- Option-C

Question4:-Indian liquorice is the other name of

A:-Glycyrrhiza glabra

B:-Abrus precatorius

C:-Glycyrrhiza violacea

D:-Ononis spinosa

Correct Answer:- Option-B

Question5:-The gene transfer method which is not suitable for protoplasts

A:-Biolistic method

B:-Electroporation

C:-Chemical agents [Visit - pharmacyindia.co.in](http://pharmacyindia.co.in)

D:-Microinjection methods

Correct Answer:- Option-A

Question6:-Cycloeuodesmol an antibiotic substance is isolated from

A:-Marine bacterium

B:-Brown algae

C:-Sponge

D:-Red algae

Correct Answer:- Option-D

Question7:-Ash value is used to detect the following except

A:-Low grade products

B:-Exhausted drugs

C:-Decomposed products

D:-Excess earthy matter

Correct Answer:- Option-C

Question8:-Forskolin, used in treatment of cardiomyopathy is a

A:-Diterpene

B:-Sesquiterpene

C:-Triterpene

D:-Monoterpene

Correct Answer:- Option-A

Question9:-Formation of lignin compounds is by

A:-Acetate malonate pathway

B:-Amino acid pathway

C:-Shikimic acid pathway

D:-Acetate mevalonate pathway

Correct Answer:- Option-C

Question10:-The plant growth regulator which act as selective weedicide or herbicide in high concentrations

A:-Giberallins

B:-Auxins

C:-Absciscic acid

D:-Ethylene

Correct Answer:- Option-B

Question11:-Who is proved existence of receptors ?

A:-Paul Earlich

B:-James Langly

C:-Carl Wilheem Vageli

D:-Robert Hook

Correct Answer:- Option-B

Question12:-Lysosomes are unit membrane bound organelles that contain

A:-Carbonic anhydrase

B:-Lipase

C:-Acid hydrolase

D:-Catalase

Correct Answer:- Option-C

Question13:-The most primitive cell in erythropoiesis

A:-Pluripotent stem cell

B:-Progenitor cells

C:-Blast cells

D:-Matured cells

Correct Answer:- Option-A

Question14:-Which vitamin is needed for synthesis of collagen, the main bone protein ?

A:-Vitamin C

B:-Vitamin A

C:-Vitamin D

D:-Thiamine

Correct Answer:- Option-A

Question15:-Which of the following is inhibitory neuro transmitter ?

A:-Dopamine

B:-Nor epinephrine

C:-Acetyl choline

D:-Glycine

Correct Answer:- Option-D

Question16:-At the point where the trachea divides in to right and left primary bronchi, an internal ridge called

A:-Conchae

B:-Carina

C:-Gobels cells

D:-Mediastinum

Correct Answer:- Option-B

Question17:-Oestrogen act on [Visit - pharmacyindia.co.in](http://pharmacyindia.co.in)

A:-Inotropic receptor

B:-Metabotropic receptor

C:-Nuclear receptor

D:-Kinase linked receptor

Correct Answer:- Option-C

Question18:-Type I anaphylactic reactions, anaphylaxis is mediated by

A:-IgG and IgM antibodies

B:-IgG antibodies

C:-IgE antibodies

D:-Macrophages

Correct Answer:- Option-C

Question19:-The position of Dose response curve, on the dose axis is the index of

A:-Drug efficacy

B:-Drug selectivity

C:-Drug specificity

D:-Drug potency

Correct Answer:- Option-D

Question20:-Drug which undergoes enterohepatic cycling

A:-Cardiac glycosides

B:-Nitrates

C:-Oral contraceptives

D:-Macrolide antibiotics

Correct Answer:- Option-C

Question21:-Name the  $\alpha_4\beta_2$  partial agonist effective for smoking cessation.

A:-Carvedilol

B:-Pindolol

C:-Varenicline

D:-Triorthocresyl phosphate

Correct Answer:- Option-C

Question22:-Benzodiazepine antagonist

A:-Zolpidem

B:-Eszopiclone

C:-Zaleplon

D:-Flumazenil

Correct Answer:- Option-D

Question23:-Teicoplanin belongs to [Visit - pharmacyindia.co.in](http://pharmacyindia.co.in)

A:-Aminoglycoside antibiotics

B:-Oxazolodinedione

C:-Lincosamides

D:-Glycopeptides

Correct Answer:- Option-D

Question24:-Name one luminal amoebicide

A:-Diloxanide furoate

B:-Metronidazole

C:-Emetine

D:-Chloroquine

Correct Answer:- Option-A

Question25:-Azole antifungal agent active against *Mucor* mycosis

A:-Voriconazole

B:-Posaconazole

C:-Itraconazole

D:-Fluconazole

Correct Answer:- Option-B

Question26:-Selective  $\alpha_{1A}$  adrenoceptor antagonists

A:-Aripiprazole

B:-Labetalol

C:-Entecavir

D:-Tamsulosin

Correct Answer:- Option-D

Question27:-A macrolide antibiotic with significant activity against *Mycobacterium leprae*

A:-Erythromycin

B:-Roxithromycin

C:-Clarithromycin

D:-Spiramycin

Correct Answer:- Option-C

Question28:-Purine antimetabolite with cytotoxic and immunosuppressant action

A:-Azathioprine

B:-Flurouracil

C:-Cytarabine

D:-Carboplatin



Correct Answer:- Option-A [Visit - pharmacyindia.co.in](http://pharmacyindia.co.in)

Question29:-Aminoglycoside antibiotic having resistance to bacterial aminoglycoside modifying enzyme

A:-Kanamycin

B:-Netilmicin

C:-Sisomicin

D:-Amikacin

Correct Answer:- Option-D

Question30:-Raltegravir is

A:-Protease inhibitor

B:-Integrase inhibitor

C:-CCR5 receptor inhibitor

D:-Nucleotide reverse transcriptase inhibitor

Correct Answer:- Option-B

Question31:-In XYZ classification for inventory control the drugs are categorized on their

A:-High, low and intermediate inventory values

B:-Fast moving, slow moving and non-moving nature

C:-Heavy weight, light weight and medium weight

D:-Government, ordinary and foreign categorization

Correct Answer:- Option-A

Question32:-Which method is a useful tool in overall analysis of cost volume relationship in charging policy ?

A:-ABC analysis

B:-Unit dose dispensing system

C:-Break-even point pricing

D:-FIFO

Correct Answer:- Option-C

Question33:-LDH3 the enzyme mainly concentrated in which tissue ?

A:-WBC

B:-Lungs

C:-Heart muscle

D:-Skeletal muscle

Correct Answer:- Option-B

Question34:-Pramlintide belongs to which class of drug ?

A:-Amylin analogue

B:-Bile acid sequestrant

C:-Dipeptidyl Peptidase - 4 inhibitors

D:-Phenylalanine analogue

Correct Answer:- Option-A

Question35:-Trachoma is caused by which organism ?

A:-Salmonella typhi

B:-Clostridium enteritidis

C:-Staphylococcus aureus

D:-Chlamydia trachomatis

Correct Answer:- Option-D

Question36:-One step dry chemistry method can be used to measure

A:-Concentration of drugs in the body

B:-Antigen-antibody reaction

C:-Hypothermia condition

D:-Pharmacogenetic variability

Correct Answer:- Option-A

Question37:-Name the place where the first drug information centre is established.

A:-CMC Vellore, Tamil Nadu

B:-University of Kentucky

C:-Govt. Medical College, Thiruvananthapuram, India

D:-AIIMS, New Delhi, India

Correct Answer:- Option-B

Question38:-What does Urea breath test for ?

A:-To examine the Lung function

B:-To determine the level of Diastase enzyme level

C:-To find out deafness

D:-To examine the presence of H. Pylori

Correct Answer:- Option-D

Question39:-Anti-CCP is the biological Marker for which disease ?

A:-Brucellosis

B:-Cellulitis

C:-Left Ventricular hypertrophy

D:-Rheumatoid Arthritis

Correct Answer:- Option-D

Question40:-Which is the method used for sterilization of thermo labile powders ?

A:-Gaseous sterilization

B:-Dry heat sterilization

C:-Moist heat sterilization [Visit - pharmacyindia.co.in](http://pharmacyindia.co.in)

D:-Sterilization by UV radiation

Correct Answer:- Option-A

Question41:-In gradient elution technique

A:-Solvent composition is not changed during column development

B:-Two solvents that are completely miscible in each other and with different dielectric constant is used

C:-A large volume of sample mixture is continuously passed through the column

D:-None of the above

Correct Answer:- Option-B

Question42:-The absorption maxima of 1, 4-dimethylcyclohex-1, 3-diene using Woodward-Fieser rule is

A:-273 nm

B:-265 nm

C:-253 nm

D:-275 nm

Correct Answer:- Option-A

Question43:-Ferroin indicator is

A:-Orthophenanthroline-ferric complex

B:-Orthophenanthroline-ferrous complex

C:-Metaphenanthroline-ferrous complex

D:-Metaphenanthroline-ferric complex

Correct Answer:- Option-B

Question44:-In infrared spectroscopy, for preparing solid samples, the solid sample is mixed with Nujol to a thick paste in

A:-Pressed pellet technique

B:-Mull technique

C:-Solid films

D:-Solids run in solution

Correct Answer:- Option-B

Question45:-Which of the following statement is false about Mohr's method of titration ?

A:-The solution to be titrated should be neutral

B:-The solution to be titrated should be acidic

C:-Potassium chromate is used as indicator

D:-Used for the estimation of sodium chloride



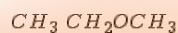
Correct Answer:- Option-B [Visit - pharmacyindia.co.in](http://pharmacyindia.co.in)

Question46:-Ilkovic equation gives the relationship between

- A:-Migration current vs drop time
- B:-Diffusion current vs concentration
- C:-Migration current vs concentration
- D:-Applied voltage vs current

Correct Answer:- Option-B

Question47:-Give the relative areas of multiplets of methylene protons in the proton NMR spectra of



- A:-1 : 2 : 1
- B:-1 : 3 : 3 : 1
- C:-1 : 2 : 2 : 1
- D:-1 : 3 : 1

Correct Answer:- Option-B

Question48:-The molecular ion peak of methylene chloride in the mass spectrum will be at the m/z value

- A:-84
- B:-50
- C:-64
- D:-119

Correct Answer:- Option-A

Question49:-Fourier transform NMR instruments records

- A:-Field sweep generator signal
- B:-Free induction decay signal
- C:-Continuous wave radio frequency
- D:-Frequency sweep generator signals

Correct Answer:- Option-B

Question50:-If the organic samples are contaminated with water and oxides of nitrogen and sulphur, the detector of choice in gas chromatography is

- A:-Flame ionization detector
- B:-Thermal conductivity detector
- C:-Katherometer
- D:-Thermionic detector

Correct Answer:- Option-A

Question51:-The co-enzyme not involved in hydrogen transfer

- A:-FMN
- B:-FAD

C:- $NADP^+$

D:-FH4

Correct Answer:- Option-D

Question52:-Recombinant enzyme used for the treatment of Pompe disease is

A:- $\alpha$ -glucosidase

B:- $\beta$ -glucosidase

C:- $\alpha$ -galactosidase

D:-Aldolase

Correct Answer:- Option-A

Question53:-Example of Amino acid containing thioether group

A:-Cysteine

B:-Methionine

C:-Cystine

D:-Serine

Correct Answer:- Option-B

Question54:-Isomerism exhibited by unsaturated fatty acids

A:-Geometric isomerism

B:-Optical isomerism

C:-Both 1 and 2

D:-None of the above

Correct Answer:- Option-A

Question55:-As per induced fit theory for enzyme substrate complex formation

A:-The active site is not rigid and pre-shaped

B:-The active site is rigid and pre-shaped

C:-The enzyme induces a strain to the substrate

D:-All the above

Correct Answer:- Option-A

Question56:-Measurement of lowering of vapour pressure can be done by

A:-Barometric method

B:-Manometric method

C:-Ostwald and Walker's dynamic method

D:-All the above

Correct Answer:- Option-D

Question57:-Pick out the correct order of stability of carbocation relative to the substrate from which it is formed.

A:- $CH_3^+ > 1^\circ > 2^\circ > 3^\circ$

B:  $-3^\circ > 2^\circ > 1^\circ > \text{CH}_3^+$

C:  $-\text{CH}_3^+ > 2^\circ > 3^\circ > 1^\circ$

D: None of the above

Correct Answer:- Option-B

Question58:-Cobalt labelled cyanocobalamin is used in the

A:-Diagnosis of pernicious anemia

B:-Determination of glomerular filtration rate

C:-Both 1 and 2

D:-None of the above

Correct Answer:- Option-C

Question59:-Which of the following statement is true about amines ?

A:-Primary amines undergo carbylamine reaction

B:-Secondary amines undergo carbylamine reaction

C:-Tertiary amines undergo carbylamine reaction

D:-All the above

Correct Answer:- Option-A

Question60:-Pyridine is less basic than aliphatic amines because the lone pair of electrons on N-atom in pyridine is in

A:-sp hybrid orbital

B:- $sp^2$  hybrid orbital

C:- $sp^3$  hybrid orbital

D:-p orbital

Correct Answer:- Option-B

Question61:-Colterol is a

A:-Selective  $\beta_2$ -agonist

B:-Nonselective  $\beta$  agonist

C:-Selective  $\alpha_2$ -agonist

D:-Nonselective  $\alpha$  agonist

Correct Answer:- Option-A

Question62:-What happens when the substitution on the amino nitrogen in adrenergic agonists increase in size from hydrogen to methyl to isopropyl ?

A:- $\alpha$  receptor agonist activity increases and  $\beta$ -receptor agonist activity decreases

B:- $\alpha$  receptor agonist activity decreases and  $\beta$ -receptor agonist activity increases

C:-both  $\alpha$  and  $\beta$ -receptor agonist activity increases

D:-Adrenergic agonistic activity remains the same at both  $\alpha$  and  $\beta$  receptors

Correct Answer:- Option-B Visit - [pharmacyindia.co.in](http://pharmacyindia.co.in)

Question63:-Give an example of imidazopyridine derivative used as a hypnotic.

A:-Zopiclone

B:-Triazolam

C:-Zolpidem

D:-Zaleplon

Correct Answer:- Option-C

Question64:-The drug Meperidine should not be administered to patients receiving

A:-Monoamine oxidase (MAO) inhibitor

B:- $\alpha$  -Glucosidase inhibitors

C:-Protease inhibitors

D:-Proton pump inhibitors

Correct Answer:- Option-A

Question65:-Which of the following is an  $\alpha$  -Glucosidase inhibitor used as hypoglycemic agent ?

A:-Acarbose and Voglibose

B:-Miglitol

C:-Both 1 and 2

D:-None of the above

Correct Answer:- Option-C

Question66:-Hammett substituent constant

A:-is a measure of the electron-withdrawing or electron-donating ability of a substituent on an aromatic ring

B:-is dependent on the relative position of the substituent on the ring

C:-value takes into account both inductive and resonance effects

D:-All the above

Correct Answer:- Option-D

Question67:-Which of the following is the pro-drug of pralidoxime ?

A:-Pro-2-PAM

B:-Pralid

C:-Parathion

D:-2-PAM

Correct Answer:- Option-A

Question68:-IUPAC name of Ketamine is

A:-2-(2-Chlorophenyl)-2-(methlamino) cyclohexanone

B:-2-(2-Chlorophenyl)-2-(demethylamino) cyclohexanone



C:-2-(2-Chlorophenyl)-2-(trimethylamino) cyclohexanone

D:-2-(2-dichlorophenyl)-2-(methylamino) cyclohexanone

Correct Answer:- Option-A

Question69:-Synthesis of Phenytoin from benzil takes place via

A:-Schmidt rearrangement

B:-Benzilic acid rearrangement

C:-Curtius rearrangement

D:-Claisen rearrangement

Correct Answer:- Option-B

Question70:-Example of an iminostilbene derivative used as anticonvulsant

A:-Carbamazepine

B:-Gabapentin

C:-Acetazolamide

D:-Clonazepam

Correct Answer:- Option-A

Question71:-For a new drug substance intended for storage in a refrigerator, the long term stability studies as per ICH guidelines are to be conducted at a storage temperature of

A:- $5^{\circ}\text{C} \pm 3^{\circ}\text{C}$

B:- $25^{\circ}\text{C} \pm 2^{\circ}\text{C}$

C:- $-20^{\circ}\text{C} \pm 2^{\circ}\text{C}$

D:- $37^{\circ}\text{C} \pm 1^{\circ}\text{C}$

Correct Answer:- Option-A

Question72:-Pick out the wrong statement.

A:-Process validation establishes scientific evidence that a process is capable of consistently delivering quality product

B:-Process validation of a pharmaceutical product is required by the CGMP regulations

C:-Retrospective process validation is validation based upon existing and/or historical processing data

D:-Different areas within a manufacturing plant requires the same SOP (Standard Operating Procedure) for cleaning

Correct Answer:- Option-D

Question73:-With an increase in temperature, surface tension of water

A:-Increases

B:-Decreases

C:-Increase first and then decreases

D:-Does not change



Correct Answer:- Option-B Visit - [pharmacyindia.co.in](http://pharmacyindia.co.in)

Question74:-Pick out the correct statement

A:-Colloidal particles can pass through a semipermeable membrane

B:-Colloidal particles can pass through a filter paper

C:-Colloidal particles are invisible in electron microscope

D:-As the particles in gold sol increase in size, its colour changes from blue to red

Correct Answer:- Option-B

Question75:-Which among the following has the highest HLB value ?

A:-Oleic acid

B:-Span 80

C:-Sodium lauryl sulphate

D:-Gelatin

Correct Answer:- Option-C

Question76:-Which among the following can be used for the determination of viscosity of a Newtonian liquid ?

A:-Capillary viscometer

B:-Cone and plate viscometer

C:-Cup and Bob viscometer

D:-All the above

Correct Answer:- Option-D

Question77:-The shelf life of a drug (assuming duration of retaining at least 90% of initial strength as shelf life) undergoing first order decomposition can be calculated using the formula

A:-0.693 divided by rate constant for decomposition

B:-0.104 divided by rate constant for decomposition

C:-Half of initial concentration divided by rate constant for decomposition

D:-10 percentage of initial concentration divided by rate constant for decomposition

Correct Answer:- Option-B

Question78:-In a Fisher sub sieve sizer,

A:-Surface area of a powder is determined by adsorption method

B:-Particle volume is measured by conductivity method

C:-Surface area of a powder is determined by air permeability method

D:-Particle size determined by hydrometer sedimentation method

Correct Answer:- Option-C

Question79:-Who among the following is not an ex officio member of the Drugs Technical Advisory Board ?

A:-The Director General of Health Services in India

B:-The Drug Controller, India

C:-The President of the Pharmacy Council of India

D:-Minister of Chemicals and Fertilizers, Govt. of India

Correct Answer:- Option-D

Question80:-The chairman of Drug Enquiry Committee constituted in 1930

A:-Col. R.N. Chopra

B:-Prof. M.L. Schroff

C:-Shri. Jaisukhlal Hathi

D:-Dr. B.D. Tilak

Correct Answer:- Option-A

Question81:-The Bacterial strain used for manufacture of BCG vaccine

A:-Attenuated live strain of Mycobacterium Tuberculosis

B:-Attenuated live strain of Mycobacterium Bovis

C:-Live strain of Mycobacterium Tuberculosis

D:-Attenuated live strain of Mycobacterium Butyricum

Correct Answer:- Option-B

Question82:-The active ingredient present in Dettol solution

A:-Chloroxylenol

B:-Chlorocresol

C:-Cetrimide

D:-Chlorhexidine

Correct Answer:- Option-A

Question83:-The pore size of millipore filter GS grade used for aseptic processing

A:- $0.22 \pm 0.02 \mu\text{m}$

B:- $0.45 \pm 0.02 \mu\text{m}$

C:- $0.22 \pm 0.1 \mu\text{m}$

D:- $0.45 \pm 0.1 \mu\text{m}$

Correct Answer:- Option-A

Question84:-During sterility testing, the inactivating agent used for inhibiting agents like phenol and alcohol is

A:-Tween

B:-Dilution

C:-SH Compounds

D:-Lecithin

Correct Answer:- Option-B

Question85:-The solvent used inside the boilable catgut tube is

A:-Ethanol

B:-Normal saline

C:-Toluene

D:-Isopropyl alcohol

Correct Answer:- Option-C

Question86:-The first FDA approved monoclonal antibody used to treat organ transplant rejection

A:-Abciximab

B:-Cetuximab

C:-Muromonab-CD3

D:-Rituximab

Correct Answer:- Option-C

Question87:-Which of the following route of drug administration cannot be considered as extravascular ?

A:-Intramuscular

B:-Subcutaneous

C:-Intraarterial

D:-Sublingual

Correct Answer:- Option-C

Question88:-Which among the following class of drugs is having the highest apparent volume of distribution ?

A:-Sulfonamides

B:-Penicillins

C:-Anticoagulants

D:-Amphetamines

Correct Answer:- Option-D

Question89:-Which of the following options is showing the rate of metabolism as defined by Michaelis-Menten equation ?

A:-  $\frac{V_{max} + C_p}{K_m + C_p}$

B:-  $\frac{V_{max} C_p}{K_m + C_p}$

C:-  $\frac{K_m + C_p}{V_{max} + C_p}$

D:-  $\frac{K_m - C_p}{V_{max} C_p}$

Correct Answer:- Option-B

Question90:-For drugs that are not systematically absorbed like antacids, bioequivalence studies is carried out by

A:-A surrogate marker with pharmacodynamic effect

B:- $C_{max}$  and AUC is measured in plasma

C:-Using urinary excretion data

D:-Using invitro dissolution profile comparison with innovator product

Correct Answer:- Option-A

Question91:-Which one of the following dryer is known as lyophilizer ?

A:-Fluidized bed dryer

B:-Freeze dryer

C:-Spray dryer

D:-Vacuum dryer

Correct Answer:- Option-B

Question92:-What are the modes observed in a ball mill for size reduction ?

A:-Impact and attrition

B:-Cutting and compression

C:-Attrition and cutting

D:-Compression and impact

Correct Answer:- Option-A

Question93:-Which one of the distillation method is used to get sharp separation between component of the mixtures containing miscible volatile liquid having different but close boiling point ?

A:-Rectification

B:-Evaporation

C:-Distillation

D:-Condensation

Correct Answer:- Option-A

Question94:-Which one of the mixing equipment used for two immiscible liquids ?

A:-Double cone blender

B:-Ribbon blender

C:-Silverson mixer emulsifier

D:-Twin shell blender

Correct Answer:- Option-C

Question95:-During compression, air entrapment may lead to

A:-Picking and sticking

B:-Capping and laminating

C:-Binding and sticking

D:-Ejection and sticking

Correct Answer:- Option-B



Question96:-Pyrogens are

- A:-Bacterial Exotoxins
- B:-Bacterial Endotoxins
- C:-Both of these
- D:-None of these

Correct Answer:- Option-B

Question97:-What are the characteristics of the mixed monolithic reservoir devices ?

- A:-Drug has a large therapeutic index
- B:-Drug permeation rate is high
- C:-Drug polymer matrix is layered by rate controlling membrane
- D:-Administration of emulsion

Correct Answer:- Option-C

Question98:-The 00 size capsules can fill the volume of

- A:-1.36 ml
- B:-0.67 ml
- C:-0.78 ml
- D:-0.95 ml

Correct Answer:- Option-D

Question99:-Hepta fluoro propane is

- A:-Propellant 114
- B:-Propellant 112
- C:-Propellant 134
- D:-Propellant 227

Correct Answer:- Option-D

Question100:-Treated soda lime glass is called as

- A:-Type I
- B:-Type III
- C:-Type II
- D:-None of the above

Correct Answer:- Option-C