

Sr. No. **15081**.....

ENTRANCE TEST-2024

2-Year M Pharm Programme

Total Questions : 60
Time Allowed : 70 Minutes

Roll No.

--	--	--	--	--	--

1. Write your roll number in the space provided at the top of this page of question booklet and fill up the necessary information in the spaces provided on OMR Answer sheet.
2. OMR Answer sheet has an original copy and a candidate's copy glued beneath it at the top. While making entries in the original copy, candidate should ensure that the two copies are aligned properly so that the entries made in the original copy against each item are exactly copied in the candidate's copy.
3. All entries in the OMR answers sheet including answers to questions are to be recorded in the original/Carbon copy.
4. Use only blue/ black ball point pen to darken the circle of correct / most appropriate response. In no case gel/ ink pen or pencil should be used.
5. **Do not darken more the one circle of option for any question. A question with more than one darkened response shall be considered wrong.**
6. **There will be negative marking for wrong answers. Each wrong answer will lead to the deduction of 0.25 marks from the total score of the candidate.**
7. Only those candidates who would obtain positive score in entrance test examination shall be eligible for admission.
8. Do not make any stray mark on the OMR sheet.
9. Calculators and mobiles shall not be permitted inside the examination hall.
10. Rough work, if any, should be done on the blank sheets provided with the question booklet.
11. OMR answer sheet must be handled carefully and it should not be folded or mutilated in such case it will not be evaluated.
12. Ensure that your OMR Answer sheet has been signed by the invigilator and the candidate himself/herself.
13. At the end of the examination hand over the OMR answer sheet to the invigilator who will first tear off the original OMR sheet in presence of the candidate and hand over the candidate's copy to the candidate.
14. If any of the information in the response Sheet/Question Paper has been found missing or not mentioned as stated above the candidate is solely responsible for that lapse.

SEAL

Q.1. Atropine over dosage may causes all of the following except

- (a) Miosis
- (b) Increased heart rate
- (c) Relaxation of GIT smooth muscle
- (d) Mental aberration

Q.2. Which of the following drug inhibits the acetylcholine synthesis?

- (a) Neomycin
- (b) Vasamicol
- (c) Botulinum toxin
- (d) Atropine

Q.3. Which of the Following statements are true

[P] Synergism means if two or more drugs when taken simultaneously produce greater effect than the sum of their individual effects

[Q] Addition means in which total effect of two drugs is just equal to the sum of their individual effects

[R] Potentiation means one drug produces own effect and decreases the effect of other drug

[S] Synergism means one drug does not produce any effect but increases the effect of other drug

- (a) P and Q
- (b) Q and R
- (c) Q and S
- (d) P and S

Q.4. Clonidine is

- a) Centrally acting Antihypertensive
- b) Diuretic
- c) Calcium channel blocker
- d) None of the above

Q.5. A subunit of gonadotropins commonly contains

- (a) Serine-linked carbohydrate moiety
- (b) Asparagine-linked oligosaccharide chain
- (c) Glycogen-linked polysaccharide chain
- (d) None of the above

Q.6. Carbidopa is useful in the treatment of Parkinson's disease because it

- (a) Is a precursor of L-dopa
- (b) Prevents the breakdown of dopamine
- (c) Blocks conversion of levodopa to dopamine outside of CNS
- (d) Can readily penetrate the CNS

Q.7. Correct statement regarding morphine includes all except

- (a) Overdose of morphine produce coma and respiratory depression
- (b) Acts as emetic by stimulating CTZ
- (c) Pinpoints pupil
- (d) It decreases pain threshold

Q.8. Halothane is used as

- (a) Intravenous anesthesia
- (b) Inhalation anesthesia
- (c) Local anesthesia
- (d) None of the above

Q.9. Avicel is

- (a) Mannitol
- (b) Calcium phosphate dibasic
- (c) Spray dried lactose
- (d) Microcrystalline cellulose

Q.10. Which of the following is an ACE inhibitor

- a) Captopril
- b) Enalapril
- c) Both a and b
- d) None

Q.11. Which of the following is a semisynthetic opioid

- a) Morphine
- b) Hydromorphone
- c) Codeine
- d) Pentazocine

Q.12. An anticoagulant glycosaminoglycan is

- (a) Heparin
- (b) Vitamin K
- (c) Aspirin
- (d) Warfarin

Q.13. An antineoplastic agent methotrexate inhibits the enzyme dihydrofolate reductase. They bind so tightly that their inhibition has been termed "Pseudo irreversible" – basis of this binding is due to

- (a) Free carboxylic group
- (b) N-methyl p- amino benzyl group
- (c) Diamino pyrimidine
- (d) Glutamic acid

Q.14. Which of the following is both alpha as well as beta blocker

- a) Labetalol
- b) Propranolol
- c) Metoprolol
- d) Atenolol

Q.15. One of the following is faecal softener

- (a) Bisacodyl
- (b) Docusate sodium
- (c) Ispaghula husk
- (d) Cisapride

Q.16. The number of peaks shown by diethyl ether in an NMR spectrum are

- (a) One
- (b) Two
- (c) Four
- (d) Five

Q.17. Guggulipid, a resin, is

- (a) A hypolipidemic agent obtained from cotton plants containing multifunctional compound ($\pm$) gossypol
- (b) A lipid obtained from *Arctium lappa*, Asteraceae and traditionally used for the treatment of dermatoses.
- (c) Cathartic glucoside obtained from *Ipomoea orizabensis* and used since ancient time
- (d) A hypolipidemic agent obtained from *Commiphora mukul* consisting of a mixture of sterols including Z-pregna-(20)-diene-3, 16-dione.

Q.18. The activity of one of the following drugs is dependent on Phenyl -N- alkyl Piperidine moiety

- (a) Diazepam
- (b) Imipramine
- (c) Meperidine
- (d) Chlorpromazine

Q.19. Chemical shift value is

- (a) Proportional to field strength
- (b) Ratio of number of protons in each group
- (c) Proportional to the total number of protons
- (d) None of the above

Q.20. In UV spectrophotometric analysis the wavelength of UV light used is

- (a) 200-400 Å
- (b) 20-40 Å
- (c) 2000-4000 Å
- (d) 400-800 Å

- Q.21. The schedule in drugs and cosmetics act that deals with the requirements and guidelines for clinical trials, import and manufacture of new drugs is
- (a) Schedule O
 - (b) Schedule F
 - (c) Schedule M
 - (d) Schedule Y
- Q.22 To avoid lithium toxicity, a patient using lithium carbonate for mood disorders should not be prescribed
- (a) Mannitol
 - (b) Propranolol
 - (c) Hydrochlorthiazide
 - (d) Acetazolamide
- Q.23. The quantitative values determined for the identification of leaf drugs remain constant throughout the age of the plant except
- (a) Stomatal number
 - (b) Stomatal index
 - (c) Veinlet
 - (d) Veinlet termination number
- Q.24. The characteristic odour of onion bulbs is attributed to
- (a) Quercetin glycosides
 - (b) Furostanol glycosides
 - (c) Heterogeneous sulphated polysaccharides
 - (d) Alkyl or alkenyl disulphides
- Q.25. A technician is attempting to sterilize a plug of cotton in hermetically sealed condition in a glass bottle by autoclaving. Which of the following statements is correct?
- (a) It should be sterilized at 115°C- 118°C for 30 minutes
 - (b) It should be sterilized at 121°C -124°C for 15 minutes at 15 lbs/sq.inch pressure
 - (c) Sterilization cannot be achieved
 - (d) It should be autoclaved at 126°C -129°C with saturated steam for 10 minutes.
- Q.26. Gradient elution involves
- (a) Changing the column length
 - (b) Changing the mobile phase composition
 - (c) Using the mobile phase unchanged
 - (d) Successive injection of sample

Q.27. Which of the following receptors demonstrates the fastest onset of response when stimulated

- (a) Ionotropic receptors
- (b) G-protein coupled receptors
- (c) Insulin receptor
- (d) Nuclear receptors

Q.28. Clove buds are usually adulterated by clove stalks and anthophylli. Clove stalks and anthophylli can be identified by the presence of

- (a) Lignified sclereids and starch grains respectively
- (b) Starch grains and lignified sclereids respectively
- (c) Cystoliths and acicular crystals of calcium oxalate respectively
- (d) Acicular crystals of calcium oxalate and Cystoliths respectively

Q.29. Citrus Flavonoids are rich in

- (a) Hesperidin
- (b) Fraxin
- (c) Aesculetin
- (d) Scopoletin

Q.30. Colour and flavor of Saffron are due to

[P] Crocin [Q] Crocetin [R] Safranal [S] Crepenylic acid

- (a) R, S
- (b) P, R
- (c) Q, S
- (d) Q, P

Q.31. Which of the following definitions is most appropriately describing controlled drug delivery system

- (a) Dosage forms which have only spatial control over drug release
- (b) Dosage forms which release drug immediately
- (c) Dosage forms which have spatial and/or temporal control over drug release
- (d) Dosage forms which deliver drug over an extended period of time

Q.32. Which of the following is the most appropriate cause for Orange-Peel effect

- (a) Inadequate/uneven spreading of coating solution before drying
- (b) Over wetting or excessive film tackiness causing piece of the film to remain adhered to coating pan
- (c) Overwetting whereby two or more tablet cores are stuck together
- (d) None of the above

Q.33. Friability test is performed in Friability Test apparatus at

- (a) 25 ± 1 rpm
- (b) 50 ± 1 rpm
- (c) 75 ± 1 rpm
- (d) 100 ± 1 rpm

Q.34. Mottling is

- (a) Picking of tablet's surface material by punch
- (b) Uneven distribution of colour on a tablet surface
- (c) Separation of tablet into one or more distinct layers
- (d) Separation of top or bottom crowns of a tablet

Q.35. Which of the following is most commonly used opacifier

- (a) TiO_2
- (b) MgO
- (c) Avicel
- (d) Silicates

Q.36. What is the vapour pressure at 70°F of a propellant blend consisting of propellant 11/12 (in the ratio of 30:70); given that molecular weight of 11 and 12 is 137.38 and 120.93 respectively; & Vapour pressure at 70°F is 13.4 & 84.9 respectively?

- (a) 36.81psig
- (b) 9.01psia
- (c) 27.80psia
- (d) 36.81psia

Q.37. For the metered aerosol valves delivering 54 microliters or less, the limits for specified valve delivery is

- (a) $\pm 15\%$
- (b) $\pm 10\%$
- (c) $\pm 7.5\%$
- (d) None of the above

Q.38. Bloom strength (which measures the cohesive strength of cross links between gelatine) requirement for hard gelatine capsules is normally in the range of

- (a) 5-50g
- (b) 50-100g
- (c) 150-250g
- (d) 500-1000g

Q.39. What is the isoelectric point of type A gelatin?

- (a) 9-11
- (b) 4.8-5
- (c) 3.8-4
- (d) 7-9

Q.40. Time required to cast the films on the pins in case of hard gelatine capsules is reported to be approximately

- (a) 12 seconds
- (b) 12 hours
- (c) 12 minutes
- (d) 12 days

Q.41. During capsule shell manufacture, after dipping, the pins are withdrawn and rotated

- (a) 2.5 times until they face upward
- (b) 2.5 times until they face downward
- (c) 6.5 times until they face upward
- (d) 6.5 times until they face upward

Q.42. According to biopharmaceutical classification system "Class II drug" is the one which has:

- (a) High permeability and high solubility
- (b) Low solubility and low permeability
- (c) High permeability and low solubility
- (d) High solubility and low permeability

Q.43. Pilot plant studies are done before taking full scale validation batches in order to

- (a) Optimize the manufacturing process conditions
- (b) Confirm the suitability of equipment used for manufacturing
- (c) Confirm the consistency of quality of product
- (d) Optimize the manufacturing process conditions, confirm suitability of equipment and consistency of quality of products manufactured at plant level

Q.44. One Minim equals

- (a) 0.616L
- (b) 0.0616L
- (c) 0.616mL
- (d) 0.0616mL

Q.45. Which of the following equation is used to calculate Base adsorption (BA) factor

- (a) $BA = \frac{\text{Weight of base}}{\text{weight of solid}}$
- (b) $BA = \frac{\text{Weight of solid}}{\text{Weight of base}}$
- (c) $BA = \frac{\text{Weight of base} + \text{grams of solid}}{\text{weight of mixture per cubic centimeter}}$
- (d) None of the above

Q.46. What should be the pH of liquids that can be filled in soft gelatine capsules?

- (a) 1-2.5
- (b) 7.5-9.5
- (c) 2.5-7.5
- (d) 9.5-11.5

Q.47. Coacervation-phase separation- (a microencapsulation process) can be used for encapsulation of

- (a) Solid(s) core material(s) only
- (b) Liquid(s) core material(s) only
- (c) Both the above
- (d) Gaseous substances only

Q.48. Enteric coated tablets are meant to release drug/ disintegrate in

- (a) Mouth
- (b) Stomach
- (c) Liver
- (d) Intestine

Q.49. The reversible movement of drug from one compartment to other compartment or from one location to other location in the body is referred as

- (a) Bioavailability
- (b) Drug Distribution
- (c) Drug Disposition
- (d) Absorption

Q.50. Rate of reaction halves on doubling the initial concentration of reactants, the order of reaction is

- (a) Second order
- (b) Zero order
- (c) Negative order
- (d) None

Q.51. Half-life of a substance degrading by zero order mechanism is equal to

- (a) $0.5 A_0/k_0$
- (b) $2A_0/k_0$
- (c) $1.5 A_0/k_0$
- (d) $0.693 A_0/k_0$

Q.52. "Flow through cell" dissolution apparatus is

- (a) USP type 1
- (b) USP type 2
- (c) USP type 3
- (d) USP type 4

Q.53. Which of the following is used to form molecular inclusion complex for solubility enhancement of drugs

- (a) Sodium Lauryl sulphate
- (b) Cyclodextrins
- (c) CMC
- (d) HPMC

Q.54. Lecithin is

- (a) Anionic surfactant
- (b) Cationic surfactant
- (c) Nonionic surfactant
- (d) Ampholytic surfactant

Q.55. Which of the following is most appropriate to generally describe the rate of drug dissolution from tablet dosage form:

- (a) Noyes & Whitney equation
- (b) Ficks First Law
- (c) Henderson Haselbatch equation
- (d) Higuchi equation

Q. 56 Suspension & oily injection are better to administer through:

- (a) Intramuscular
- (b) Intraarterial
- (c) Intravenous
- (d) Intraspinal

Q.57. International Council for Harmonisation of Technical Requirements for Pharmaceuticals for Human Use (ICH) was launched by

- (a) USA, Europe, Japan
- (b) USA, Europe, India
- (c) USA, Australia, Japan
- (d) USA, Japan, New Zealand

Q.58. 1000 mg of a drug is administered to a patient and the subsequent plasma concentration is 10 microgram/mL, the apparent volume of distribution is

- (a) 1000L
- (b) 100L
- (c) 1000mL
- (d) 100mL

Q.59. Which layer poses a significant resistance for permeation of topically administered hydrophilic drugs across the cornea?

- (a) Corneal epithelium
- (b) Corneal Stroma
- (c) None of the above
- (d) Both A and B

Q.60. USP type 1 dissolution apparatus should have the *baskets* preferably *with* mesh size

- A. 10
- B. 20
- C. 30
- D. 40

2012

2012

1. Pseudoplastic flow is typically exhibited by
 - A) Emulsion
 - B) Suspension
 - C) Polymers in solution
 - D) Ointment
2. Which of the following electromagnetic radiation has maximum energy?
 - A) Gamma rays
 - B) X-rays
 - C) IR radiation
 - D) Radio waves
3. Dewar flasks are used in
 - A) Rotary drying
 - B) Microwave drying
 - C) Freeze drying
 - D) Vacuum drying
4. An unequal distribution of colour on the surface of the tablet is called
 - A) Peeling
 - B) Picking
 - C) Mottling
 - D) Moulding
5. Cold place as per IP indicates storage at
 - A) 0 degree Celsius
 - B) 2-8 degree Celsius
 - C) 8-25 degree Celsius
 - D) 25 degree Celsius
6. Particle size of 1-30 microns may be obtained using

SEAL

- A) Fluid energy mill
 - B) Cutter mill
 - C) Hammer mill
 - D) Roller mill
7. The biological half-life of procaine in a patient was 30 min and its V_d was estimated to be 60 litres. The total clearance rate of procaine is
- A) 1.88 litres/min
 - B) 1.38 litres/min
 - C) 11.58 litres/min
 - D) 5.88 litres/min
8. Post marketing surveillance comes under _____ of clinical trials.
- A) Phase I
 - B) Phase II
 - C) Phase III
 - D) Phase IV
9. The Drug and Magic Remedies (Objectionable Advertisement) Act was enacted in
- A) 1948
 - B) 1954
 - C) 1919
 - D) 1985
10. The numerical designation of propellant butane is
- A) A-108
 - B) A-17
 - C) A-31
 - D) A-11
11. Creaming in emulsion is governed by
- A) Newton's law
 - B) Gay-Lussac's law
 - C) Stoke's law

D) Charle's law

12. The causative organism for syphilis is

A) *Treponema palladium*

B) *Vibrio cholera*

C) *Clostridium titanum*

D) *Bacillus pertussis*

13. Covaxin is a _____ vaccine.

A) Inactivated whole virus type

B) Protein sub-unit type

C) Viral vector type

D) Nucleic acid type

14. Bloom strength for hard gelatin capsules ranges from

A) 30 to 50 g

B) 50 to 100 g

C) 100 to 150 g

D) 200 to 250 g

15. DOP test (dioctyl phthalate test) is usually used to determine

A) Filter type

B) Filter efficiency

C) Filter integrity

D) Filter compatibility

16. Meaning of Class 100 area is

A) Particle count in air is not more than 100 per cubic foot of 0.5 micron size or larger size

B) Particle count in air is not more than 100 per cubic foot of 5 micron size or larger size

C) Particle count in air is not more than 100 per cubic cm of 0.5 micron size or larger size

- D) Particle count in air is not more than 100 per cubic metre of 0.5 micron size or larger size
17. Acetylcholine and physostigmine are examples of _____ type of interaction.
- A) Synergism
 - B) Addition
 - C) Antagonism
 - D) Potentiation
18. Myasthenic crisis is differentiated from the cholinergic crisis in myasthenia gravis through the use of
- A) Physostigmine
 - B) Edrophonium
 - C) Neostigmine
 - D) Pyridostigmine
19. Neostigmine effectively antagonizes muscular relaxation produced by
- A) Tubocurarine
 - B) Gallamine
 - C) Pancuronium
 - D) All of the above
20. Antidote of atropine is
- A) Pralidoxime
 - B) Neostigmine
 - C) Physostigmine
 - D) None of above
21. Timolol reduces the intraocular pressure by which mechanism of action?
- A) Muscarinic agonist
 - B) Anticholinesterase
 - C) Carbonic anhydrase inhibitor
 - D) Beta-adrenoceptor antagonist

22. Oxytocin is a
- A) Pentapeptide
 - B) Heptapeptide
 - C) Octapeptide
 - D) Decapeptide
23. Which of the following acts as mucolytic?
- A) Bromhexine
 - B) Ephedrine
 - C) Guaiphenesin
 - D) Noscapine
24. Which of the following is highly selective COX-1 antagonist?
- A) Diclofenac
 - B) Ketorolac
 - C) Rofecoxib
 - D) Salicylate
25. Drug of choice in epilepsy with pregnancy
- *A) Phenytoin
 - B) Lamotrigine
 - C) Ethosuximide
 - D) Phenobarbiton
26. Drug of choice in bacteroides infection is
- A) Penicillin G
 - B) Niridazole
 - C) Metronidazole
 - D) Tetracyclin
27. Which of the following is a vitamin D analogue used in psoriasis?
- A) Calcitriol
 - B) Ergocalciferol
 - C) Resorcinol

D) Cholecalciferol

28. In *Haemophilus influenzae* infection, which of the following antibiotics is preferred

A) Amoxicillin

B) Cefixime

C) Cefuroxime

D) Tetracycline

29. Phosphodiesterase inhibitors are used as

A) Vasoconstrictors

B) Vasodilators

C) Anti-arthritis

D) Antacids

30. Butoxamine is

A) Selective β_1 agonist

B) Selective β_2 agonist

C) Selective β_1 antagonist

D) Selective β_2 antagonist

31. Lactulose is a

A) Bulk laxative

B) Faecal softener

C) Osmotic laxative

D) Stimulant purgative

32. Magnesium aluminium silicate is used as

A) Oral rehydration salt

B) Absorbent

C) Antimotility agent

D) Anti-emetic agent

33. 45 g of glucose (molar mass is 180 g/mol) is dissolved in 500 g of water, the molality of the solution is
- A) 0.2
 - B) 0.4
 - C) 0.5
 - D) 0.8
34. The molecule that has zero dipole moment is
- A) NH_3
 - B) H_2O
 - C) BCl_3
 - D) SO_2
35. If an elimination reaction produces more highly substituted alkene, the reaction is said to follow
- A) Markonikov's rule
 - B) Saytzeff's rule
 - C) Micheal's rule
 - D) Hoffmann's rule
36. Which conformational form is more stable for cyclohexane?
- A) Chair
 - D) Boat
 - C) Twist boat
 - D) Half chair
37. Each member of the alkene series differs from the preceding member by one additional carbon atom and
- A) 1 hydrogen atom
 - B) 2 hydrogen atoms
 - C) 3 hydrogen atoms
 - D) 4 hydrogen atoms
38. The radiation sources for far-infrared region is

- A) Incandescent lamp
- B) Nernst glower
- C) Globar sources
- D) Mercury lamp

39. Which transition requires the highest energy?

- A) $n \rightarrow n^*$
- B) $\pi \rightarrow \mu^*$
- C) $\sigma \rightarrow \sigma^*$
- D) $n \rightarrow \sigma^*$

40. In normal phase column chromatography, which class of compound is eluted first

- A) Carbohydrate
- B) Hydrocarbon
- C) Primary alcohol
- D) Primary amine

41. Crystalline solids are _____ in nature.

- A) Orthotropic
- B) Anisotropic
- C) Isotropic
- D) None of these

42. Invert sugar is

- A) Galactose
- B) Mannose
- C) Fructose
- D) Hydrolytic product of sucrose

43. Metabolic syndrome caused by impaired transport of tryptophan and other neutral amino acid in kidneys and intestines is known as

- A) Hodgkin's disease
- B) Wilson's disease
- C) Hartnup's disease
- D) Wolman's disease

44. Carr-Price reaction is used to detect

- A) Vitamin E
- B) Vitamin B₁₂
- C) Aspartic acid
- D) Vitamin A

45. Hexokinase is classified as a

- A) Oxidoreductase enzyme
- B) Transferase enzyme
- C) Hydrolase enzyme
- D) Lyase enzyme

46. Cholesterol contains which of the following?

- A) 1 double bond and 1 OH group
- B) 2 double bond and 1 OH group
- C) 2 double bond and 2 OH groups
- D) 1 double bond and 2 OH groups

47. Chemical name of hydralazine is

- A) 4-Hydrazinophthalazine
- B) 1-Hydrazinophthalazine
- C) N, N-Diaminothalazine
- D) Phthalic hydrazine

48. The basic ring present in amiodarone is

- A) Benzothiazole
- B) Benzopyrole
- C) Benzofuran
- D) Phenothiazine

49. As recommended by WHO, the ORS should contain ____ NaCl per litre of water.

- A) 3.5 g
- B) 1.2 g

C) 2.5 g

D) 4.5 g

50. Stratified cork is characteristic of

A) Ergot

B) Senna

C) Cinchona

D) Rauwolfia

51. Which of the alkaloid is liquid in nature?

A) Quinine

B) Caffeine

C) Nicotine

D) Berberine

52. Kedde's test is used for the identification of

A) Isothiocyanide glycoside

B) Cardiac glycoside

C) Flavonoid glycoside

D) Anthraquinone glycoside

53. Rutin is an example of

A) Triterpenoid glycoside

B) Steroid glycoside

C) Flavonoid glycoside

D) Diterpene glycoside

54. The main terpenoid present in eucalyptus is

A) Cineol

B) Eugenol

C) Geraniol

D) Terpeniol

55. Indian gum is obtained from

- A) *Astragalus gummifer*
- B) *Acacia arabica*
- C) *Gelidium amansi*
- D) *Solanum tuberosum*

56. Which of the following radioactive isotopes are used in biosynthesis tracing techniques:

- A) H^2 and C^{12}
- B) H^1 and C^{13}
- C) H^3 and C^{14}
- D) H^3 and C^{13}

57. Glycyrrhizic acid is

- A) Steroidal saponin
- B) Triterpenoidal saponin
- C) Triterpenic acid
- D) Sapogenin

58. Good manufacturing practices for ISM drugs as per Drug & Cosmetic Act, 1940 are listed under

- A) Schedule M
- B) Schedule N
- C) Schedule T
- D) Schedule Z

59. $C_{10}H_{14}O$ is the chemical formula for

- A) Citral
- B) Carvone
- C) Menthol
- D) Linalool

60. The solvent used is for the determination of water-soluble extractive value of crude drugs as per IP is

- A) Distilled water

B) Chloroform-water

C) Alcohol-water

D) Sterile water

Q1. Vinblastine and Vincristine act by:

- A. Interfering with synthesis of transfer RNA
- B. Inhibition of fragmentation of DNA
- C. Binding to protein
- D. Incorporating into folic acid metabolism

Q2. Which of the following drug will aggravate bronchial asthma:

- A. Amphetamine
- B. Morphine
- C. Propranolol
- D. Tubocurarine

Q3. All of the following are examples of SSRI except:

- A. Fluoxetine
- B. Fluvoxamine
- C. Doxepin
- D. Paroxetine

Q4. Which of the following ACE inhibitor is not a prodrug:

- A. Quinapril
- B. Ramipril
- C. Banezipril
- D. Lisinopril

Q5. Omalizumab, a drug used for bronchial asthma acts by:

- A. Neutralizing IgE
- B. Preventing release of mediators
- C. Preventing AG:AB reaction
- D. Antagonising released mediators

Q6. The mechanism of action of mebendazole is:

- A. Stimulation of acetyl choline receptors at neuromuscular junction
- B. Selectively inhibiting the microtubule synthesis
- C. Inhibition of dihydrofolate reductase
- D. Blocks Thiamine transport

Q7. Therapeutic effect of a drug can be measured by a formula:

- A. Maximum toxic dose/minimum effective dose
- B. Minimum non-toxic dose/maximum effective dose
- C. Maximum non-toxic dose/minimum effective dose
- D. Maximum non-toxic dose/maximum effective dose

Q8. The antiviral drug, Maraviroc is a:

- A. Integrase inhibitor
- B. Protease inhibitor
- C. Fusion inhibitor
- D. CCR5 inhibitor

Q9. Which of the following imidazole is systemic:

- A. Fluconazole
- B. Miconazole
- C. Ketoconazole
- D. Voriconazole

Q10. Cabergoline, a prolactin inhibitor is potent:

- A. D1 antagonist
- B. D1 agonist
- C. D2 agonist
- D. D2 antagonist

Q11. Second generation Cephalosporins have a higher sensitivity towards:

- A. Gram positive
- B. Gram negative
- C. Both Gram positive and Gram negative
- D. None of these

Q12. Topotecan is a:

- A. Microtubule damaging agent
- B. Topoisomerase-2 Inhibitor
- C. Topoisomerase-1 Inhibitor
- D. Pyrimidine antagonist

Q13. In a new drug development the time required period for preclinical studies is:

- A. 3 - 5 years
- B. 3 - 6 years
- C. 2 - 4 years
- D. 0.5 - 2 years

Q14. Isoniazid consumption induces:

- A. CYP2D6
- B. CYP3A
- C. CYP2E1
- D. CYP1A

Q15. The action of G_o , a G protein receptor, on the effector is:

- A. Adenyl cyclase inhibition
- B. Ca^{2+} Channel Inhibition
- C. Phospholipase C activation
- D. K^+ Channel opening

Q16. lignified trichomes are characteristic of:

- A. *Cannabis*
- B. *Artemisia*
- C. *Belladonna*
- D. *Nux vomica*

Q17. Alexandrian Senna is:

- A. *Cassia angustifolia*
- B. *Cassia obovata*
- C. *Cassia acutifolia*
- D. *Cassia excels*

Q18. Arabin is the principal constituent of:

- A. Gum acacia
- B. Tragacanth
- C. Guar gum
- D. Gum karaya

Q19. Withanolides are steroidal lactones found in:

- A. Kalmegh
- B. Glycyrrhiza
- C. Ashwagandha
- D. Dioscorrea

Q20. Acid, iodine and saponification values are used to determine purity of:

- A. Fixed oils
- B. Essential oils
- C. Both a and b
- D. Neither a nor b

Q21. Rhubarb belongs to the family:

- A. Lamiaceae
- B. Apocynaceae
- C. Polygonaceae
- D. Lauraceae

Q22. Quassia wood is mostly adulterated with:

- A. *Brucea antidysentrica*
- B. *Cassia angustifoila*
- C. *Cinnamomum zeylanicum*
- D. *Cephaelis ipecacuanaha*

Q23. Anisocytic stomata are present in:

- A. *Senna*
- B. *Digitalis*
- C. *Belladonna*
- D. *Coca*

Q24. An example of N-glycoside is:

- A. Adenosine
- B. Sinigrin
- C. Rhein-8-glucoside
- D. Aloin

Q25. Glycyrrhizin is a glycoside in which a sugar molecule is condensed with:

- A. Anthraquinone
- B. Flavone
- C. Triterpene
- D. Sterol

Q26. What are known as balsams:

- A. resins dissolved in volatile oil
- B. a mixture of volatile oils with sesquiterpenes
- C. resins dissolved in water
- D. polysaccharide mixed with volatile oil

Q27. Fruits which are derived from plants belonging to Umbiliferae are all of the type:

- A. Cremocarp
- B. Pericarp
- C. Epicarp
- D. Mesocarp

Q28. The oil cells of clove are of the type:

- A. Schizogenous
- B. Lysigenous
- C. Schizolysigenous
- D. None of the above

Q29. A microscopic examination of a culture isolate revealed spherical bodies with a Smooth outline growing in long chains. Identify the micro organism:

- A. *Staphylococcus aureus*
- B. *Streptococcus pyogenes*
- C. *Rhizopus stolonifer*
- D. *Bacillus subtilis*

Q30. Choose the correct key intermediate for the bio-synthesis of C6-C3 units, which serves as a precursor for the biosynthesis of amino acid:

- A. Shikimic acid
- B. Pyruvic acid
- C. Dehydro quinic acid
- D. Mevalonic acid

Q31. Which of the following are Pharmacodynamic methods for the estimation of bioavailability:

- A. Acute Pharmacological response
- B. Therapeutic response
- C. Both (A) and (B)
- D. None

Q32. In case of topical corticosteroids estimation of bioavailability can be made by:

- A. Skin blanching
- B. EEG reading
- C. ECG reading
- D. Pupil diameter

Q33. Which of the following is a USP dissolution type - I apparatus:

- A. Rotating paddle
- B. Rotating basket
- C. Reciprocating cylinder
- D. Rotating cylinder

Q34. Which of the following is/are official drug compendia:

- A. Pharmacopoeia of India
- B. British pharmacopoeia
- C. Both (A) and (B)
- D. None

Q35. Which of the following is/are used as water proofing material during sugar coating Process:

- A. Shellac
- B. Ethyl cellulose
- C. Silicones
- D. All the above

Q36. For tablets weighing 120 mg or less, the weight variation limit is:

- A. $\pm 10\%$
- B. $\pm 7.5\%$
- C. $\pm 5\%$
- D. $\pm 15\%$

Q37. Weathering process of glass involves:

- A. Extraction of weakly bound alkali from the glass
- B. Formation of white deposit of alkali carbonate
- C. Loss of brilliance
- D. All the above

Q38. Which of the following can be used as absorbants in case of eutectic mixtures:

- A. Magnesium carbonate
- B. Kaolin
- C. Both (A) and (B)
- D. None

Q39. Hard drug is the one which:

- A. Is resistant to biotransformation
- B. Has long biological half life
- C. Is excreted unchanged in urine
- D. Has all the above characteristics

Q40. De-ethylation of phenacetin leads to the formation of:

- A. Paracetamol
- B. P-Phenetidine
- C. Both
- D. None

Q41. Which of the following capsule sizes has smallest capacity:

- A. 0
- B. 5
- C. 1
- D. 000

Q42. Aerosol is the reverse of:

- A. Emulsion
- B. Liquid foam
- C. Smoke
- D. Solid foam

Q43. One grain is equal to:

- A. 30 mg
- B. 60 mg
- C. 90 mg
- D. 1 g

Q44. Which of the following is/are applied with-out rubbing:

- A. Calamine lotion
- B. Camphor liniment
- C. Both (a) and (b)
- D. None

Q45. Wurster process is also known as:

- A. Rotator plate process
- B. Air suspension process
- C. Coacervation process
- D. Pan coating

Q46. Protophilic solvents are:

- A. Acidic in nature
- B. Basic in nature
- C. Neutral
- D. None

Q47. Nernst equation is used to measure:

- A. Current
- B. Conductance
- C. Potential
- D. Resistance

Q48. What is the reagent used for diazotization:

- A. $\text{NaNO}_2 + \text{Dil. HCl}$
- B. $\text{KNO}_2 + \text{Dil. H}_2\text{SO}_4$
- C. $\text{Zn} + \text{Dil. H}_2\text{SO}_4$
- D. None

Q49. How many grams of NaOH are required to prepare 100 ml of 1M solution of NaOH:

- A. 8 g
- B. 4 g
- C. 0.4 g
- D. 40 g

Q50. Which reaction has same units of K as units of rate of reaction:

- A. First order
- B. Second order
- C. Third order
- D. Zero order

Q51. Which of the following are epimeric pairs:

- A. Glucose and fructose
- B. Lactose and maltose
- C. Galactose and mannose
- D. Glucose and mannose

Q52. Cream of tartar is:

- A. Aluminium hydroxide gel
- B. Sodium potassium tartrate
- C. Pot. Bitartrate
- D. Pot. Citrate

Q53. Which of the following antibiotics inhibit nucleic acid synthesis:

- A. Rifampicin
- B. Penicillin
- C. Tetracycline
- D. Chloramphenicol

Q54. Pyridine - 3- carboxylic acid is:

- A. Vit. B1
- B. Vit. B2
- C. Vit B3
- D. Vit B7

Q55. The chemical name of penicillin G is:

- A. Benzyl penicillin
- B. Phenoxymethyl penicillin
- C. Phenoxy ethyl penicillin
- D. None

Q56. If initial conc. of reactants is doubled, the half life period of the reaction also doubles, the order of reaction is:

- A. First order
- B. Zero order
- C. Second order
- D. None

Q57. A plot of $\log K$ v/s $1/T$ helps to calculate:

- A. Order of reaction
- B. Rate constant of the reaction
- C. Energy of activation and frequency factor
- D. None

Q58. For adsorption of a gas on solid, the plot of x/m verses $\log P$ is linear with slope equal to:

- A. n
- B. $1/n$
- C. $\log K$
- D. K

Q59. Which of the following is a stronger acid:

- A. Oxalic acid
- B. Malonic acid
- C. Succinic acid
- D. Glutaric acid

Q60. On prolonged heating with HI, glucose forms:

- A. n-hexane
- B. Gluconic acid
- C. Saccharic acid
- D. None

M. PHARM ENTRANCE TEST-2016

Total Questions: 60

Time Allowed: 70 Minutes

Roll No:

--	--	--	--	--	--

INSTRUCTIONS FOR CANDIDATES

1. Write your Roll Number in the space provided at the top of this page of Question Booklet and fill up the necessary information in the space provided on the OMR Answer Sheet.
2. OMR Answer Sheet has an Original Copy and Candidate's Copy glued beneath it at the top. While making entries in the Original Copy, candidate should ensure that the two copies are aligned properly so that the entries made in the Original Copy against each item are exactly copied in the Candidate's Copy.
3. All entries in the OMR Answer Sheet, including answers to questions, are to be recorded in the Original Copy only.
4. Choose the most appropriate response for each question among the options A, B, C and D and darken the circle for the appropriate response completely. The incomplete darkened circle is not correctly read by the OMR Scanner and no complaint to this effect shall be entertained.
5. Use only blue/black ball point pen to darken the circle of correct/most appropriate response. In no case gel/ink pen or pencil should be used.
6. Do not darken more than one circle of options for any question. A question with more than one darkened response shall be considered wrong.
7. There will be 'Negative Marking' for wrong answers. Each wrong answer will lead to the deduction of 0.25 marks from the total score for the candidate.
8. Do not make any stray mark on the OMR sheet.
9. Calculators and mobiles shall not be permitted inside the examination hall.
10. Rough work, if any, should be done on the blank sheets provided with the question booklet at last.
11. OMR Answer sheet must be handled carefully and it should not be folded or mutilated in which case it will not be evaluated.
12. Ensure that your OMR Answer sheet has been signed by the Invigilator and the candidate himself/herself.
13. At the end of the examination, hand over the OMR Answer Sheet to the invigilator who will first tear off the original OMR sheet in presence of the Candidate and hand over the Candidate's Copy to the candidate.

%%%%%%%%%

M. Pharm Entrance Test - 2016

1. Choose the right combination:
 A) Quinine, antimalarial, isoquinoline alkaloid
 B) Reserpine, antihypertensive, indole alkaloid
 C) Quantitative microscopy, stomatal number, myrrh
 D) Stearic acid, salicylic acid, fatty acid
2. _____ is used as rat poison.
 A) European Squill (B) Red Squill
 C) Indian Squill (D) American Squill
3. Lupinine and Anabasine alkaloid is biosynthesized by
 A) Leucine (B) Lysine
 C) Phenyl alanine (D) Isoleucine
4. In Vasaka which type of stomata are present
 A) Anisocytic (B) Diacytic
 C) Anomocytic (D) Actinocytic
5. Thalleoquin test gives _____
 A) Emerald Green (B) Blue
 C) Yellow (D) Red
6. Sodium picrate solution is used in
 A) Kellarkilliani test (B) Baljet test
 C) Lrgal test (D) Hager's test
7. Amygdalin on hydrolysis gives
 A) Benzoic acid + Glucose + HCN
 B) Benzaldehyde+Glucose+HCN
 C) Benzyl alcohol +Glucose +HCN
 D) None of the above
8. Uva-ursi is the synonyms of
 A) Black berry (B) Bearberry
 C) Vanilla (D) Visnaga
9. A Glycoalkaloid
 P. contains sulphur in addition to nitrogen in its molecule.
 Q. is glycosidic in nature.
 R. can be hydrolysed to an alkaloid.
 S. always contains endocyclic nitrogen in its molecule.
 Choose the correct option.
 A) P & R (B) Q & P
 C) Q & R (D) S & Q
10. Goldbeater's skin test is used to detect the presence of which one of the following classes of compounds?
 A) Tannins (B) Steroids
 C) Glycerides (D) Resins
11. Eugenol is present in
 A) Fennel (B) Coriander
 (C) Tulsi (D) Cardamom
12. Lignified trichomes is identical character of
 A) Ailunthus Glandulosa
 B) Phytolacce Decandra
 C) Phytolacca America
 (D) All
13. Which of the following drugs is a triterpenoid containing root?
 A) Valerian (B) Brahmi
 C) Satavari (D) None of the above
14. Quinoline alkaloids are biosynthesized via which one of the following pathways
 A) Shikimic acid-tyrosine
 B) Shikimic acid-tryptophan
 C) Shikimic acid-cathinone
 D) Shikimic acid-phenylalanine
15. Which of the following ergot alkaloids is water soluble and shows blue fluorescence?
 A) Ergosine (B) Ergotamine
 C) Ergocristne (D) Ergometrine
16. The mechanism of action of Paclitaxel is
 A) Bind to DNA through intercalation between specific bases and block the synthesis of new RNA or DNA, cause DNA strand scission
 B) Mitotic spindle poison through the enhancement of tubulin polymerization
 C) Competitive partial agonist-inhibitor of estrogen and binds to estrogen receptors
 D) S-Phase specific antimetabolite that is converted by deoxykinase to the 5-mononucleotide
17. Which of the following anticancer drug purine analogue?
 A) Pentostatin (B) Methotrexate
 C) Dacarbazine (D) Carboplatin
18. Which of the following drug used in diagnosis of Pheochromocytoma
 A) Propranolol (B) Phenoxybenzamine
 C) Phentolamine (D) Ergometrine
19. Which pair is correct?
 A) GABA-B receptor-Baclofen
 B) Cental $\alpha 2$ adrenergic-chlormezanone
 C) Benzodiazepine-Tizanidine
 D) Both B & C
20. The risk of Digitalis toxicity is significantly increased by concomitant administration of
 A) Triamterene (B) Lidocaine
 C) Captopril (D) Hydrochlorthiazide

21. Select the specific unwanted effect of L-DOPA
 - A) Dementia (B) Hypertension
 - C) Dyskinesia (D) Excitotoxicity
22. Which of the following is true for antineoplastics?
 - A) Selective toxicity to cancer cells
 - B) Kills cells by zero-order kinetics
 - C) Easy access to cancer cells of any region
 - D) Easily develop resistance
23. Cancer-gland is called?
 - A) Sarcoma (B) Tumorous
 - C) Carcinoma (D) Leukemia
24. Defficiency of which of the following causes respiratory distress syndrome?
 - A) Phosphatidylserine (B) Sphingomyelin
 - C) Plasmogens (D) Dipalmitoyl lecithin
25. Simvastatin belongs to
 - A) HMG CoA reductase inhibitor type of antilipidemic agents
 - B) HMG CoA reductase inhibitor type of anticoagulant agents
 - C) Fibrate type of anticoagulant agents
 - D) Fibrate type of antilipidemic agents
26. Mast cell stabilizer used in asthma
 - A) Nedromil (B) Sildenafil
 - C) Roflumilast (D) Cilostazole
27. An agent used in Prinzmetal angina has spasmolytic action which increase coronary blood supply is
 - A) Nitroglycerine (B) Nifedipine
 - C) Timolol (D) Isosorbide mononitrate
28. There are only rare reports of hepatotoxicity with currently marketed thiazolidinediones.
 - A) Ciglitazone (B) Pioglitazone
 - C) Troglitazone (D) None of above
29. An organism which has been implicated as a possible cause of chronic Gastritis and peptic ulcer is
 - A) Campylobacter jejuni (B) Escherichia coli
 - C) Helicobacter Pylori (D) Giardia lamblia
30. Which drug blocks T-as well as L-type calcium channels?
 - A) Nifedipine (B) Amlodipine
 - C) Diltiazem (D) Mibefradil
31. Which is the right frequency (cm⁻¹) order for O-H bond IR specrum?
 - A) Phenols < 1° alcohol < 2° alcohol < 3° alcohol
 - B) 1° alcohol > 2° alcohol > 3° alcohol > Phenols
 - C) Phenols > 1° alcohol > 2° alcohol > 3° alcohol
 - D) 1° alcohol < 2° alcohol < 3° alcohol < Phenols
32. Rod of sintered silicon is present in which of following:
 - A) Incandescent lamp (B) Nernst glower
 - C) Globar source (D) Carbon dioxide laser
33. Which of the following detector of Gas Chromatography is destructive type?
 - A) Kathetormeter
 - B) Argon ionization detector
 - C) Flame ionization detector
 - D) Electron capture detector
34. Which of following HPLC detector is not a Solute property detector
 - A) UV-Visible detector
 - B) Photo diode array detector
 - C) Fluorescence detector
 - D) Refractive index detector
35. Band (peak) separation is:
 - A) Directly proportional to solvent efficiency
 - B) Inversely proportional to solvent efficiency
 - C) Directly proportional to column efficiency
 - D) Inversely proportional to column efficiency
36. Choose the correct semi rigid gel used for exclusion chromatography
 - A) Sephadex (B) Gelatin
 - C) Cellulose (D) Alumina
37. For base line separation value of R (resolution)
 - A) R > 0.5 (B) R ≥ 1.5
 - C) R ≥ 0.5 (D) R ≤ 1.5
38. Which of following source is used in RAMAN spectrometry?
 - A) Hydrogen (B) Deuterium lamp
 - C) Xenon are lamp (D) Helium/neon laser
39. A litre of water-ethanol solution which contains 1.5 microliters of ethanol has concentration of _____ ethanol.
 - A) 1.5 ppb (B) 1.5 ppm
 - C) 1.5 ppt (D) None of these
40. In Polarography, to eliminate migration current which of following is used
 - A) NaC 1 (B) KCl
 - C) NaOH (D) KOH
41. Diclofenac sodium is assayed by
 - A) 0.1 M NaOH (B) 0.1 M TBAH
 - C) 0.1 M NaNO2 (D) 0.1M HClO4

42. Nernst equation is used to measure
 - A) Current
 - (B) Conductance
 - C) Potential
 - (D) Resistance
43. Chemically primaquine is
 - A) 8[(4-amino-1-methylbutyl) amino]-6-methoxyquinoline
 - B) 8[{4-(diethyl amino)-1-methyl butyl} amino]-6-methoxyquinoline
 - C) 8[{4-(diethyl amino)-1-butyl} amino] -6-methoxyquinoline
 - D) 8[(4-amino-1-methyl propyl) amino] -6-methoxyquinoline
44. Karl Fischer reagent used in aquametry is a solution of
 - A) Bromine and potassium permagnate
 - B) Sodium thiosulphate and iodine
 - C) Sodium nitrite and HCl
 - D) Idoine and sulphur dioxide in pyridine and methanol
45. In Meerween-Pondorf-Verly reduction reaction ...
 - A) Carbonyl compounds reduced to respective acid
 - B) Carbonyl compounds reduced to respective alcohol
 - C) Carbonyl compounds reduced to both respective alcohol and acid
 - D) None of the above
46. The disintegration time for sugar tablet is
 - A) 30 min
 - (B) 45 min
 - C) 60 min
 - (D) 15 min
47. Indian Pharmacopoeia is published by the
 - A) Ministry of health and family welfare
 - B) Pharmacy council of indai
 - C) Ministry of human resources and development
 - D) AICTE
48. Select the optimized operating condition for "Autoclave"
 - A) 121 C for 15-20 min at 15 lb/sq inch
 - B) 121 C for 15-20 min at 50 lb/sq inch
 - C) 171 C for 15-20 min at 15 lb/sq inch
 - D) 151 C for 20-40 min 15 lb/sq inch
49. As per IP, the disintegration time for enteric coated tablet is
 - A) 15 min in distilled water
 - B) 60 min in simulated intestinal fluid
 - C) 15 min in simulated gastric fluid
 - D) 120 min in distilled water
50. Cam tracks are used in tablet for
 - A) Feeding the granules
 - B) Fixing the shape
 - C) Compressing the granules
 - D) Guiding the movement of punches
51. Coulter counter is based on determination of
 - A) Particle surface area
 - B) Particle size
 - C) Particle volume
 - D) All of A,B,C
52. The requirements and guidelines for clinical trials, import and manufacture of new drugs as per the Drugs and Cosmetics Rules is given under Schedule
 - A) N
 - (B) Y
 - C) A
 - (D) M
53. Optimum value of BLOOM STRENGTH should be
 - A) 50-100 g
 - (B) 100-150 g
 - C) 150-250 g
 - (D) more than 250 g
54. Carr's index for excellent flow is
 - A) 5-15
 - (B) 12-16
 - C) 18-21
 - (D) > 40
55. Hausner index is:
 - A) Poured density ÷ Tapped density
 - B) Tapped density ÷ Poured density
 - C) (Tapped - poured) ÷ Tapped density
 - D) None of the above
56. Pore size of HEPA filters is
 - A) 3 micron
 - (B) 0.3 micron
 - C) 0.03 micron
 - (D) 0.003 micron
57. Tyndallisation is
 - A) 800C for 3 days (20 min)
 - B) 600C for 3 days (20 min)
 - C) 1200C for 3 days (20 min)
 - D) None of the above
58. Validation of moist heat sterilisation is done using
 - A) Bacillus subtilis
 - (B) Bacillus cogulans
 - C) Bacillus niger
 - (D) Clostridium sporogens
59. The normal creatinine clearance value in humans is _____ ml/min
 - A) 100-110
 - (B) 80-90
 - C) 150-160
 - (D) 120-130
60. Which of the following tests are positive for bile salts?
 - A) Hay's test
 - (B) Patternkofer's test
 - C) Both A & B
 - (D) None of the above