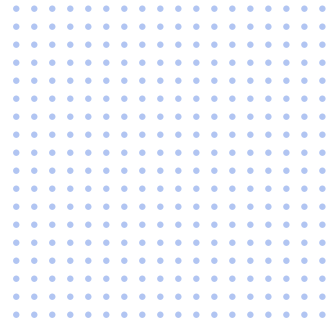




FOR KUET EXAM PREPARATION

# KUET 2024 Question Paper · M.Pharm

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| EXAM | YEAR | TYPE           | SUBJECT |
|------|------|----------------|---------|
| KUET | 2024 | Question Paper | M.Pharm |

Sr. No. **15081****ENTRANCE TEST-2024****2-Year M Pharm Programme**

Total Questions : 60  
Time Allowed : 70 Minutes

Roll No.

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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
- Miosis
  - Increased heart rate
  - Relaxation of GIT smooth muscle
  - Mental aberration
- Q.2. Which of the following drug inhibits the acetylcholine synthesis?
- Neomycin
  - Vasamicol
  - Botulinum toxin
  - 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
- P and Q
  - Q and R
  - Q and S
  - P and S
- Q.4. Clonidine is
- Centrally acting Antihypertensive
  - Diuretic
  - Calcium channel blocker
  - None of the above
- Q.5. A subunit of gonadotropins commonly contains
- Serine-linked carbohydrate moiety
  - Asparagine-linked oligosaccharide chain
  - Glycogen-linked polysaccharide chain
  - None of the above
- Q6. Carbidopa is useful in the treatment of Parkinson's disease because it
- Is a precursor of L-dopa
  - Prevents the breakdown of dopamine
  - Blocks conversion of levodopa to dopamine outside of CNS
  - 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 glucosin 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)  $25 \pm 1$  rpm
- (b)  $50 \pm 1$  rpm
- (c)  $75 \pm 1$  rpm
- (d)  $100 \pm 1$  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)  $\text{TiO}_2$
- (b)  $\text{MgO}$
- (c) Avicel
- (d) Silicates

Q.36. What is the vapour pressure at  $70^\circ\text{F}$  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  $70^\circ\text{F}$  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
- 12 seconds
  - 12 hours
  - 12 minutes
  - 12 days
- Q.41. During capsule shell manufacture, after dipping, the pins are withdrawn and rotated
- 2.5 times until they face upward
  - 2.5 times until they face downward
  - 6.5 times until they face upward
  - 6.5 times until they face upward
- Q.42. According to biopharmaceutical classification system "Class II drug" is the one which has:
- High permeability and high solubility
  - Low solubility and low permeability
  - High permeability and low solubility
  - High solubility and low permeability
- Q.43. Pilot plant studies are done before taking full scale validation batches in order to
- Optimize the manufacturing process conditions
  - Confirm the suitability of equipment used for manufacturing
  - Confirm the consistency of quality of product
  - Optimize the manufacturing process conditions, confirm suitability of equipment and consistency of quality of products manufactured at plant level
- Q.44. One Minim equals
- 0.616L
  - 0.0616L
  - 0.616mL
  - 0.0616mL
- Q.45. Which of the following equation is used to calculate Base adsorption (BA) factor
- $BA = \frac{\text{Weight of base}}{\text{weight of solid}}$
  - $BA = \frac{\text{Weight of solid}}{\text{Weight of base}}$
  - $BA = \frac{\text{Weight of base}}{\text{Weight of base+grams of solid}}$
  - $BA = \frac{\text{Weight of base+grams of solid}}{\text{weight of mixture per cubic centimeter}}$
  - 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

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