

MAHARAJA RANJIT SINGH PUNJAB TECHNICAL UNIVERSITY

Phd. Entrance exam (Pharmacy)

Q1. The correct statement about the Theobroma oil or cacao butter:

- A. It melts over narrow temperature range (32-36°C)
- B. The stable form of Theobroma oil is gamma form which melts at 18°C
- C. It is a polymorphous natural fat which exists in three polymorphic forms
- D. The stable form of Theobroma oil is beta form which melts at 34.5°C

Q2. Plastic flow is:

- A. Associated with the presence of flocculated particles in dilute suspension
- B. Not exhibit by the Bingham bodies
- C. Associated with the yield value
- D. A type of Newtonian system

Q3. 'Creaming', an instability of pharmaceutical emulsion, is:

- A. Related to Stoke's Law
- B. Called 'upward creaming' when dispersed phase is less dense than the continuous phase
- C. Both A and B are true for the 'Creaming' phenomenon
- D. Independent to the density difference between dispersed phase and continuous phase

Q4. According to Indian standards, the over proof spirit and under proof spirit denotes:

- A. The greater and lesser amount of ethyl alcohol, respectively, from 57.1%v/v
- B. The lesser and greater amount of ethyl alcohol, respectively, from 50.0%v/v
- C. The greater and lesser amount of ethyl alcohol, respectively, from 42.49% by weight
- D. The greater and lesser amount of ethyl alcohol, respectively, from 57.1% by weight

Q5. Identify the correct matchings of the Latin term and their meaning used in prescription:

Latin Term	Meaning
(i) Unguentum	A suppository
(ii) Semel in die	Twice a day
(iii) Jentaculum	Breakfast
(iv) Anti cibos	Before meal
(v) Sterno	To the eyes

- A. (i), (ii) and (v)
- B. (iii) and (iv)
- C. (ii), (iii) and (v)
- D. (iii), (iv) and (v)

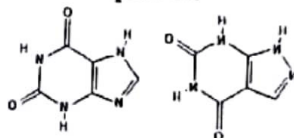
Q6. Identify the correct statement(s) about suppository base:

- A. Polyethylene glycol is an example of emulsifying base
- B. Witepsol is a fatty base
- C. Pharmagel A is a gelatin which is used as suppository base
- D. Both A and C are correct

Q7. Which of the following isotonic vehicle is used to maintain the tonicity of the ophthalmic products:

- A. Polyvinyl alcohol (1-4%)
- B. 1.9% boric acid
- C. Carboxy methyl cellulose
- D. Polyethylene glycol

- Q8. The capsule number 000 is having approximate capacity in mg:**
 A. 100
 B. 650
 C. 300
 D. 950
- Q9. The first syrup coat in the process of Syrup coating of tablets is called:**
 A. Gelling syrups
 B. First layer syrups
 C. Protective cover syrups
 D. Blooming syrups
- Q10. The BCS class II drugs are having:**
 A. High solubility and low permeability
 B. Low solubility and low permeability
 C. Low solubility and high permeability
 D. High solubility and high permeability
- Q11. Zeroth Law of Thermodynamics is:**
 A. Stated that the systems that are in thermal equilibrium exist at the same temperature
 B. Law of Conservation of Energy
 C. Law of Increased Entropy
 D. Stated that the entropy of a perfect crystal at a temperature of zero Kelvin is equal to zero
- Q12. The hybridization of the central atom and shape of NH_3 is:**
 A. SP^3 and Tetrahedral
 B. SP^2 and Pyramidal
 C. SP^3 and Pyramidal
 D. SP^2 and Tetrahedral
- Q13. The chiral reactant when undergoes to SN_2 substitution reaction gives:**
 A. Only invert product
 B. Invert + retention products in equal amount
 C. Only retention product
 D. Invert product + racemic mixture
- Q14. Beckmann rearrangement is:**
 A. Acid catalysed conversion of ketoxime to N-substituted amide
 B. Acid catalysed conversion of ketone to N-substituted amide
 C. Base catalysed conversion of ketoxime to N-substituted amide
 D. Acid catalysed conversion of ketoxime to N-substituted amine
- Q15. Which of the following disease occurred due to deficiency of Vitamin B_1 (Thiamine):**
 A. Pellagra
 B. Beriberi
 C. Pernicious anaemia
 D. Megaloblastic anaemia
- Q16. The following compounds are examples of:**



- A. Classical Bioisostere
- B. Non-classical Bioisostere
- C. Position isomers
- D. None is correct

Q17. The example of Nitrogen Mustard class of drug is:

- A. Floxuridine
- B. Melphalan
- C. Cisplatin
- D. 5-Fluorouracil

Q18. Which of the following is the correct pair of detectors used in infrared spectroscopy?

- A. Golay cell and Thermocouple
- B. Bolometer and Photoconductivity cell
- C. Semiconductor and Barrier layer cell
- D. Both A and B

Q19. HETP in chromatography denotes:

- A. Height equivalent to thermal plate
- B. Height equivalent to TLC plate
- C. Height equivalent to theoretical plate
- D. Height equal to tin plate

Q20. In which of the precipitation titration method, adsorption indicator is used:

- A. Fajan's method
- B. Volhard's method
- C. Mohr's method
- D. Both B and C are correct

Q21. Simvastatin belongs to which of the following class:

- A. HMG CoA reductase inhibitor type of anticoagulant agent
- B. Fibrate type of antilipidemic agent
- C. Fibrate type of anticoagulant agent
- D. HMG CoA reductase inhibitor type of antihyperlipidemic agent

Q22. Which of the following Dopaminergic agonist used in the treatment of Parkinsonism?

- A. Levodopa
- B. Mirtazapine
- C. Carbidopa
- D. Ropinirole

Q23. Which of the following amino acid is present in Captopril?

- A. Proline
- B. Glycine
- B. Cysteine
- D. Para Amino benzoic acid

Q24. What does "pharmacokinetics" include?

- A. Complications of drug therapy
- B. Influence of drugs on genes
- C. Influence of drugs on metabolism processes
- D. Drug biotransformation in the organism

Q25. Which of the following drugs is useful in the treatment of Parkinson's disease?

- A. Edrophonium
- B. Benztropine
- C. Succinylcholine
- D. Hexamethonium

Q26. Which of the following agents is a nonselective beta receptor agonist?

- A. Norepinephrine
- B. Terbutaline
- C. Dobutamine
- D. Isoproterenol

Q27. Which of the following statements is correct?

- A. MAO-A metabolizes norepinephrine and serotonin; MAO-B metabolizes dopamine
- B. MAO-A metabolizes dopamine; MAO-B metabolizes serotonin
- C. MAO-A metabolizes norepinephrine and dopamine; MAO-B metabolizes serotonin
- D. MAO-A metabolizes dopamine; MAO-B metabolizes norepinephrine and serotonin

Q28. Which of the following antienzymes is a xantine oxidase inhibitor?

- A. Physostigmine
- B. Allopurinol
- C. Aminocaproic acid
- D. Acetazolamide

Q29. An anticholinesterase which is useful in Alzheimer's disease:

- A. Donezepil
- B. Arecolin
- C. Isoproterenol
- D. Clioquinol

Q30. If the half-life for decomposition of a drug is 12 hrs, how long will it take for 125 mg of the drug to decompose by 30 %? Assume that the drug follows first order kinetics at constant temperature.

- A. 8.2 hr
- B. 7.9 hr
- C. 5.5 hr
- D. 6.1 hr

Q31. The biological source of Dog senna is

- A. *Cassia auriculata*
- B. *Cassia senna*
- C. *Cassia occidentalis*
- D. *Cassia obovata*

Q32. Rosettes of Calcium oxalate crystals are found in:

- A. Senna
- B. Cinchona
- C. Rhubarb
- D. Liquorice

Q33. Nutmeg obtained from *Myristica fragrans* is a

- A. Seed
- B. Kernel

- C. Arillus
- D. Fruit

Q34. Cardamom is a.....type of fruit which belongs to.....

- A. Capsule, Zingiberaceae
- B. Drupe, Umbelliferae
- C. Follicle, Araceae
- D. Berry, Myrtaceae

Q35. Liquorice extract and glycyrrhetic acid are useful in treatment of.....

- A. Hypertension
- B. Dementia
- C. Rheumatoid arthritis
- D. Skin disease

Q36. Which of the following reactions are specific for alkaloids?

- A. Vitali-reaction
- B. Borntrager-reaction
- C. Kedde-reaction
- D. Liebermann-Burchard-reaction

Q37. The pungent principle present in ginger is:

- A. Zingiberol
- B. Zingiberene
- C. Gingerol
- D. Cineol

Q38. Combined umbelliferone test is positive in case of:

- A. Bdellium
- B. Olibanum
- C. Asafoetida
- D. Myrrh

Q39. Bufadienolides are present in:

- A. Digitalis
- B. Squill
- C. Strophanthus
- D. Thevetia

Q40. Protocrocin is a precursor for taste, odour and colour of the saffron, it is a.....

- A. Diterpene glycoside
- B. Triterpene glycoside
- C. Tetraterpene glycoside
- D. Steroidal glycoside

Course: Pharmacy

Answer Key

Question	Answer	Question	Answer
1	D	21	D
2	C	22	D
3	C	23	A
4	A	24	D
5	B	25	B
6	C	26	D
7	B	27	A
8	D	28	B
9	A	29	A
10	C	30	D
11	A	31	D
12	C	32	C
13	A	33	B
14	A	34	A
15	B	35	C
16	B	36	C
17	B	37	C
18	D	38	C
19	C	39	A
20	A	40	C