PSG College of Pharmacy, Coimbatore-641004

PSGCP HD Academy

GPAT Coaching Classes (2021-2022) - Time table Monthly Schedule

July & August 2022

IV B. Pharm / VII Semester (2018 Batch)

Dear Faculty Members,

This is to inform you that the GPAT coaching classes are scheduled for the academic year 2021 -2022 to IV B.Pharm Students (2018 Batch) as given below.

S. No	Date	Time	Subject	Faculty Name	Signature
1.	25.07.2022	10 am - 11 am	Pharmacology	Dr.M.Ramanathan	
2.	28.07.2022	10 am - 11 am	Pharmaceutics	Dr.V.Sankar	
3.	16.08.2022	10 am - 11 am	Pharmaceutical Chemistry	Dr.K.Umaa	
4.	19.08.2022	10 am - 11 am	Pharmaceutical Chemistry	Dr S.E. Maida Engels	
5.	23.08.2022	10 am - 11 am	Pharmaceutics	Mrs S.Vijayalakshmi	

Dr.M.Ramanathan
Principal

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PSGCP HD Academy

GPAT Coaching Classes (2021-2022) - September 2022

IV B. Pharm / VII Semester (2018 Batch)

Dear Faculty Members,

This is to inform you that the GPAT coaching classes are scheduled for the month of Sep-2022 in the academic year 2021 -2022 to IV B.Pharm Students (2018 Batch) as given below.

S. No	Date	Time	Subject	Faculty Name	Signature
1.	02.09.2022	10 am - 11 am	Pharmaceutical Chemistry	Dr S.E. Maida Engels	
2.	07.09.2022	10 am - 11 am	Pharmaceutics	Dr.V.Sankar	
3.	09.09.2022	09 am - 10 am	Pharmacology	Dr.M.Ramanathan	
4.	12.09.2022	10 am - 11 am	Pharmaceutical Chemistry	Mr D.Sivakumar	
5.	15.09.2022	10 am - 11 am	Pharmaceutics	Dr.V.Sankar	
6.	16.09.2022	10 am - 11 am	Pharmaceutics	Dr.V.Sankar	
7.	19.09.2022	10 am - 11 am	Pharmaceutical Chemistry	Dr S.E. Maida Engels	
8.	22.09.2022	10 am - 11 am	Pharmacology	Dr.M.Ramanathan	
9.	23.09.2022	09 am - 10 am	Pharmacology	Dr.M.Ramanathan	
10.	26.09.2022	10 am - 11 am	Pharmaceutics	Mrs S.Vijayalakshmi	
11.	29.09.2022	10 am - 11 am	Pharmaceutical Chemistry	Mr D.Sivakumar	
12.	30.09.2022	09 am - 10 am	Pharmacology	Dr.M.Ramanathan	

Dr.M.Ramanathan
Principal

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GPAT Coaching Classes (2021-2022) - November 2022

IV B. Pharm / VII Semester (2018 Batch)

Dear Faculty Members,

This is to inform you that the GPAT coaching classes are scheduled for the month of Nov-2022 in the academic year 2021 -2022 to IV B.Pharm Students (2018 Batch) as given below.

S. No	Date	Time	Subject	Faculty Name	Signature
1.	15.11.2022	09 am - 10 am	Pharmacology	Dr.M.Ramanathan	
2.	16.11.2022	03 pm - 04 pm	Pharmaceutical Chemistry	Mr D.Sivakumar	
3.	18.11.2022	03 pm - 04 pm	Pharmaceutics	Mrs S.Vijayalakshmi	
4.	22.11.2022	09 am - 10 am	Pharmacology	Dr.M.Ramanathan	
5.	23.11.2022	03 pm - 04 pm	Pharmaceutics	Mrs S.Vijayalakshmi	
6.	28.11.2022	03 pm - 04 pm	Pharmaceutical Chemistry	Dr S.E. Maida Engels	
7.	30.11.2022	09 am - 10 am	Pharmacology	Dr.M.Ramanathan	

Dr.M.Ramanathan
Principal

PSG College of Pharmacy, Coimbatore-641004

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GPAT Coaching Classes (2021-2022)

IV B. Pharm / VII Semester (2018 Batch)

Attendance sheet - September 2022, NOVEMBER-2022.

S.No	Name of The Student	09/09/2022	15/09/2022	16/09/2022	19/09/2022	15/11/2022	18/11/2022	23/11/2022	28/11/22
1.	Abinaya .R	-A-	-A-	-A-	P Abinaya	P Abinaya	P Abinaya	P Abinaya	P Abinaya
2.	Akash .R	R.Akash	-A-	-A-	P.Akash	R.Akash	R.Akash	R Akash	R.Akash
3.	Anbarasu .V	V.	V	-A-					
4.	Anushma .P	-A-	Asha	Asha	Asha	Asha	Asha	Asha	Asha
5.	Balaji .A	Bhuvi	Bhuvi	-A-	Bhuvi	Bhuvi	Bhuvi	Bhuvi	Bhuvi
6.	Christina Grace .A	-A-	-A-						
7.	Dhanashri .S	-A-	-A-	-A-	S Dhanashri	S Dhanashri	S Dhanashri	S Dhanashri	S Dhanashri
8.	Divyasrita .V.S	-A-	V.S.Divya	V.S.Divya	V.S.Divya	V.S.Divya	V.S.Divya	V.S.Divya	V.S.Divya
9.	Gowri Shankar .G	G.Gowrishankar	G.Gowrishankar	G.Gowrishankar	G.Gowrishankar	G.Gowrishankar	G.Gowrishankar	G.Gowrishankar	G.Gowrishankar
10.	Kandhaprakash .R	R.kandhaprakash	R.kandhaprakash	-A-	R.Kandhaprakash	R.Kandhaprakash	R.Kandhaprakash	R.Kandhaprakash	R.Kandhaprakash
11.	Kanimozhi .P	-A-	P.	P.	P.	P.	P.	P.	P.
12.	Keerthana .G	-A-	-A-	-A-	G.	G.	G.	G.	G.
13.	Komaleeshwari .R	-A-	R.	R.	R.	R.	R.	R.	R.
14.	Manoj Prabhakar .S	S.	S.	-A-	S.	S.	S.	S.	S.
15.	Mohan Raj .R			-A-					
16.	Moniga .R	-A-							
17.	Poobesh .M	-A-	-A-	M					
18.	Priya Varshini .K	K.Priya Varshini	K.Priya Varshini	K.Priya Varshini	K.Priya Varshini	K.Priya Varshini	K.Priya Varshini	K.Priya Varshini	K.Priya Varshini
19.	Priyadharshini .N	N	-A-	-A-	N	N	N	N	N
20.	Punitha .V	-A-	V.	-A-	V.	V.	V.	V.	V.
21.	Ragavi .A	A.Ragavi	A.Ragavi	A.Ragavi	A.Ragavi	A.Ragavi	A.Ragavi	A.Ragavi	A.Ragavi
22.	Ramaswamy .A	-A-	T.Ramaswamy	-A-	T.Ramaswamy				
23.	Ramya .T	-A-	-A-	T.	T.	T.	T.	T.	T.
24.	Rishi G N	-A-	G.N.Rishi	-A-	G.N.Rishi	G.N.Rishi			
25.	Sabari .A.E	-A-		-A-					
26.	Santhiya .P	-A-	P.	P.	P.	P.	P.	P.	P.

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27.	Sarulatha .M.S	M.S.S	-A-	M.S.S	M.S.S	M.S.S	M.S.S	M.S.S	M.S.S
28.	Sheik Syed Abutahir .K.M		-A-	-A-					
29.	Shobika .V	V.Shobika	V.Shobika	V.Shobika	V.Shobika	V.Shobika	V.Shobika	V.Shobika	V.Shobika
30.	Sowmini .S	-A-							
31.	Srivignesh .K.S								
32.	Vaithyalingam .K	-A-	-A-	-A-					
33.	Viji .M	-A-	M.	M.	M.	M.	M.	M.	M.
34.	Shanjuvigashini		-A-	-A-					
35.	Hannah Thomas		-A-	-A-					
36.	Yaswanth K		-A-						

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GPAT Coaching Classes (2021-2022)

IV B. Pharm / VII Semester (2018 Batch)

Attendance sheet - July- August 2022

S.No	Name of the student	25.07.2022	28.07.2022	16.08.2022	19.08.2022	23.08.2022
1.	ABINAYA .R	P	– A –	P	P	P
2.	AKASH .R	P	P	P	– A –	– A –
3.	ANBARASU .V	– A –			– A –	– A –
4.	ANUSHMA .P	– A –				
5.	BALAJI .A				– A –	
6.	CHRISTINA GRACE .A	– A –				
7.	DHANASHRI .S	– A –	– A –			
8.	DIVYASRITA .V.S					
9.	GOWRI SHANKAR .G					
10.	KANDHAPRAKASH .R					
11.	KANIMOZHI .P		– A –			
12.	KEERTHANA .G	– A –			– A –	– A –
13.	KOMALEESHWARI .R	– A –				– A –
14.	MANOJ PRABHAKAR .S					
15.	MOHAN RAJ .R		A–			
16.	MONIGA .R				– A –	
17.	POOBESH .M				– A –	
18.	PRIYA VARSHINI .K					
19.	PRIYADHARSHINI .N				– A –	– A –
20.	PUNITHA .V					
21.	RAGAVI .A					
22.	RAMASWAMY .A					
23.	RAMYA .T					
24.	RISHI G N		– A –			
25.	SABARI .A.E					
26.	SANTHIYA .P					
27.	SARULATHA .M.S					
28.	SHEIK SYED ABUTAHIR .K.M					
29.	SHOBIKA .V					
30.	SOWMINI .S					
31.	SRIVIGNESH .K.S		– A –			
32.	VAITHYALINGAM .K					
33.	VIJI .M					
34.	SHANJUVIGASHINI					
35.	Yaswanth. K	K	K	K	K	K
36.	Hannah Thomas					

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KOMALEESHWARI.R

B.Pharm - IV Year.

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Model Question paper-1

1. A technique of using very small metal particles coated with desired DNA in the gene transfer is called:-
(a) Microinjection (b) Biolistic (c) Liposome mediated (d) Electroporation

2. Arrange the following steps in sequence of their order for production of recombinant Insulin:-
A. Fusion of A and B chains for disulphide bond.
B. Cynogen bromide treatment to remove methi onine and â galactosidase.
C. Introduction of A and B chain in the plasmid containing â galactosidase g ene.
D. Synthesis of A and B chain in E coli. C-D-B-A.

3. Motif is represented by:-
(a) Commas repeated on the lattice (b) 3D translational periodic arrangement of points
(c) Geometric shapes of lattice (d) Centre of symmetry in lattice

4. Statement 1 : Vortex formation can be minimized by push pull mechanism.
Statement 2 : Vortex formation reduces the mixing intensity by increasing the velocity of impeller.
(a) True, False (b) True, True (c) False, False (d) False, True

5. Which of the following fluid can be considered as an ideal fluid?
(a) Viscous fluid (b) Non-viscous fluid (c) Compressible fluid (d) All of these

6. Which of the following agencies is not classified as an 'executive agency' for administration of the act under the provision of Drugs and Cosmetics Act 1940?
(a) Licensing authority
(b) Drug inspectors
(c) Drugs Consultative Committee
(d) Customs collectors

7. As per Factories Act 1948, in CHAPTER VI dealing with working hours of adults, no adult worker shall be required or allowed to work in a factory for more than _____ hours in a week.
(a) 30 (b) 40 (c) 48 (d) 56

8. Henri Fayol's principle "Espirit de corps" means:-
(a) Corporate objective (b) Group objective (c) Team activity (d) Team spirit

9. How customer's bias about the product will influence the marketing communication?

(a) Positive effect (b) Negative effect (c) No effect (d) Both positive and Negative

10. Which of the following is not patentable in India as per The Patents Act 1970?

(a) New product
(b) New process
(c) New use of existing drug
(d) New process for existing drug

11. Match the following enzymes in Column I with their respective functions under Column II

Column I & Column II

i. DNA ligase	(p) Synthesize a DNA copy of RNA
ii. Alkaline phosphatase	(q) Forms a bond between 3′ –OH and 5′-PO_4
iii. Reverse transcriptase	(r) Removes terminal PO_4 from 3′ or 5′end of DNA
iv. Polynucleotide kinase	(s) Adds phosphate to 5′ –OH end

(a) i-r, ii-s, iii-p, iv-q (b) i-p, ii-q, iii-r, iv-s (c) i-q, ii-r, iii-p, iv-s (d) i-s, ii-p, iii-q, iv-r

12. Which of the following replacement of amino acid in a protein may produce greatest change in its conformation?

(a) Ser ------->Thr (b) Glu ------->Val (c) Gln ------->Tyr (d) Phe -------> Ile

13. The hexose monophosphate pathway produces distinctively two useful products. Identify these products with the ratio in which they are produced.

(a) One NADPH to two ribose-6-phosphate (b) Two NADPH to one ribose-5-phosphate
(c) Two NADPH to one ribulose-5-phosphate (d) Two NADPH to one fructose-6-phosphate

14. The correct statement about Vitamin D is:-

(a) The oral administration of 1, 25-dihydoxycholecalciferol is required in chronic renal failure
(b) 25-Hydroxycholecalciferol is the active form of the vitamin
(c) Vitamin D antagonizes the effects of parathyroid hormone
(d) A deficiency of vitamin D causes an increase in calcitonin secretion

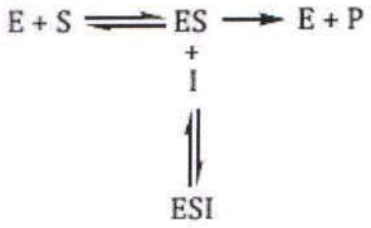
15. All of the following enzymes are used in ELISA except:-

(a) Glucose oxidase (b) Alkaline phosphatase (c) Coagulase (d) β-galactosidase

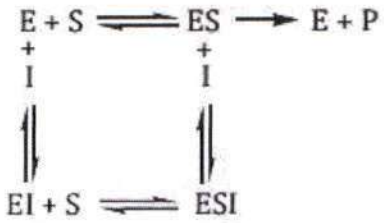
16. Which of the following equilibrium suggests noncompetitive inhibition of enzyme E for conversion of substrate S to product P with inhibitor I?

Komaleeshwari. R.

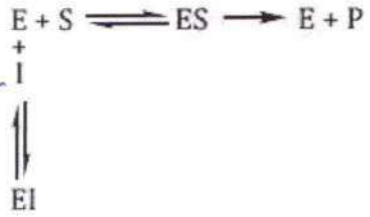
(a)



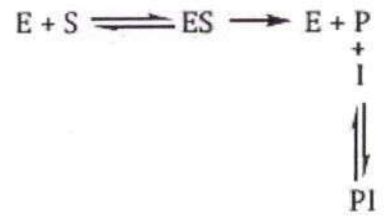
(b)



(c)



(d)



17. Which method is used for the Limit test for arsenic?

(a) Gutzeit method
(b) Oswald method
(c) Arrhenius method
(d) Karl-Fischer method

18. The agent used to prevent the dental carries is:-

(a) Sodium fluoride (b) Strontium chloride (c) Zinc chloride (d) Dicalcium phosphate

19. Which of the following definitions of an asymmetric reaction is the most accurate?

(a) A reaction that creates a new chiral centre in the product
(b) A reaction that involves a chiral reagent
(c) A reaction which creates a new chiral centre with selectivity for one enantiomer/
diasatereoisomer over another
(d) A reaction that is carried out on an asymmetric starting material

20. What software programme is used to determine the Verloop steric parameter in QSAR?

(a) Alchemy (b) Chem3D (c) Sterimol (d) Chem-Draw

21. The oral oligosaccharide hypoglycemic agent, which is administered at the start of the meal is:-

(a) Pioglitazone (b) Miglitol (c) Acarbose (d) Glimepride

22. Which functional group is crucial for anti-malarial activity of artemisinin?

(a) Aldehydic functional group
(b) Ethylene bridge
(c) Ketonic functional group
(d) Peroxide bridge

23. Select the drug which exhibits dual alpha and beta adrenergic receptor agonists activity.
(a) Terbutaline (b) Clonidine (c) Metaproterenol (d) Dobutamine

24. Appropriate hybridization schemes for the C atoms in molecule CH3CO2H are:-
(a) sp^3 and sp (b) sp^3 and sp^2 (c) sp^2 and sp (d) sp^3 and sp^3

25. In Universal indicators, a pH of 7 is shown with:-
(a) Yellow color (b) Green color (c) Blue color (d) Pink color

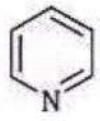
26. Which statement regarding Hückel's rule is FALSE?
(a) There must be (4n + 2) pi (π) electrons
(b) The molecule must be planar
(c) The molecule must be cyclic
(d) Each of the pi (π) electrons must be associated with a conjugated double bon

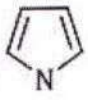
27. Anthracene is isomeric with:-
(a) Phenanthrene (b) Naphthalene (c) Benzene (d) Azulene

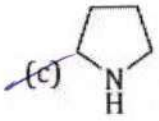
28. The molecular formula of phenanthrene is:-
(a) C14 H10 (b) C12 H10 (c) C14 H14 (d) C14 H8

29. In electrophilic substitution of pyridine, reaction of pyridine with H2O2 in acetic acid leads to formation of:-
(a) 1,4-Dihydropyridine (b) 2-Hydroxypyridine (c) 2-Pyridone (d) Pyridine-N-oxide

30. Which compound is most basic?

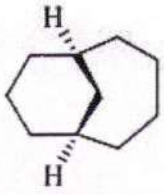
(a) 

(b) 

(c) 

(d)

31. Correct Nomenclature for the following bridged bicyclic ring system is:-



(a) bicyclo[4.4.0]decane
(b) bicyclo[4.3.0]decane
(c) bicyclo[4.3.1]decane
(d) bicyclo[4.4.1]decane

Komaleeshwari. R

32. Which among the following correctly defines Diastereomer?
(a) These have same magnitude but different signs of optical rotation
(b) Nonsuperimposable object mirror relationship
(c) These differ in all physical properties
(d) Separation is very difficult

33. Galactose and Glucose are:-
(a) Epimers (b) Anomers (c) Isomers (d) Ketose-Aldose isomers

34. Which among the following is a non-essential amino acid?
(a) Lysine (b) Threonine (c) Serine (d) Histidine

35. Which of the following is a 3,3-sigmatropic reaction which converts a 1,5-diene to an isomeric 1,5 diene?
(a) Cope rearrangement
(b) Claisen rearrangement
(c) Photochemical [2+2] reaction
(d) Diels-Alder reaction

36. What quantity of an indicator solution shall be added when quantity is not mentioned in an assay or test?
(a) 0.1 ml (b) 0.05 ml (c) 0.2 ml (d) 0.5 ml

37. In Kjeldahl method, sample containing nitrogen is digested with _____.
(a) Concentrated sodium hydroxide
(b) Fuming nitric acid
(c) Concentrated sulphuric acid
(d) Strong ammonia solution

38. What is the concentration of paracetamol in a 0.1 N sodium hydroxide solution, whose absorption in a 1 cm cell at its λmax, 257 nm, was found to be 0.825? The A (1%, 1 cm) in the IP monograph of paracetamol is given as 715 at 257 nm

(a) 1.1 g/100 ml (b) 0.0011 mg/100 ml (c) 0.0011 g/100 ml (d) 0.0011 µg/100 ml

39. The unit for specific absorbance A (1%, 1cm) is:-
(a)µg/mL (b) mg/L (c) liter $mole^{-1}$ cm^{-1} (d) dl g^{-1} cm^{-1}

40. What is the nuclear magnetic resonance frequency of 1H in a 7.05 Tesla magnetic field strength?
(a) 300.0 MHz (b) 200.0 MHz (c) 60.0 MHz (d) 100 MHz

41. What is Hydrogen Deficiency Index (HDI) value for toluene?
(a) 1 (b) 2 (c) 3 (d) 4

42. In NMR, the aromatic proton resonate in a characteristic narrow range at:-
(a) δ 6.5 – δ 8.0 (b) δ 11.0 – δ 12.0 (c) δ 2.0 – δ 4.0 (d) δ 0.7 – δ 1.3

43. The difficulties of long elution time and poor resolution of complex mixtures are observed in elution analysis. These difficulties can be overcome by modification of elution analysis, known as:-

(a) Isocratic-elution analysis
(b) Gradient-elution analysis
(c) Displacement analysis
(d) Frontal analysis

44. Materials whose consistency depends on the duration of shear, as well as on the rate of shear, exhibit:-

(a) Rheopexy (b) Thixotropy (c) Viscoelasticity (d) Plasticity

45. Which of the following solutions are more likely to have the same osmotic pressure? Solutions of:

(a) Diluted nonelectrolytes with the same molal concentration
(b) Concentrated nonelectrolytes with the same molal concentration
(c) Diluted electrolytes with the same molal concentration
(d) Concentrated electrolytes with the same molal concentration

46. Which statements are correct for the micelle formation?

(P) Micelles are dynamic structures that are continually formed and broken down in solution.
(Q) The typical micelle diameter is about 2–3 μm and so they are visible under the light micro scope.
(R) Micelle formation is a spontaneous process.
(S) When the surfactant concentration is increased above the CMC, the number of micelles
increases and the free surfactant concentration decreases below CMC.
(a) P and Q (b) P and R (c) P and S (d) R and S

47. Which equation is used to predict the stability of a drug product at room temperature from experiments at accelerated temperature?

(a) Higuchi equation (b) The Arrhenius' equation
(c) Hildebrand equation (d) The Hixson-Crowell equation

48. Which statement correctly describes Hess's Law?

(a) The enthalpy of all reactants in their standard states is defined as zero
(b) Enthalpy changes can be calculated only if one or more of the reactants is/are element
(c) The enthalpy change of a reaction can be calculated only at 1 atm pressure and 25 °C
(d) The enthalpy change of a reaction is independent of the route of reaction

49. Identify the starting material A and B in the synthesis of Clomifene.

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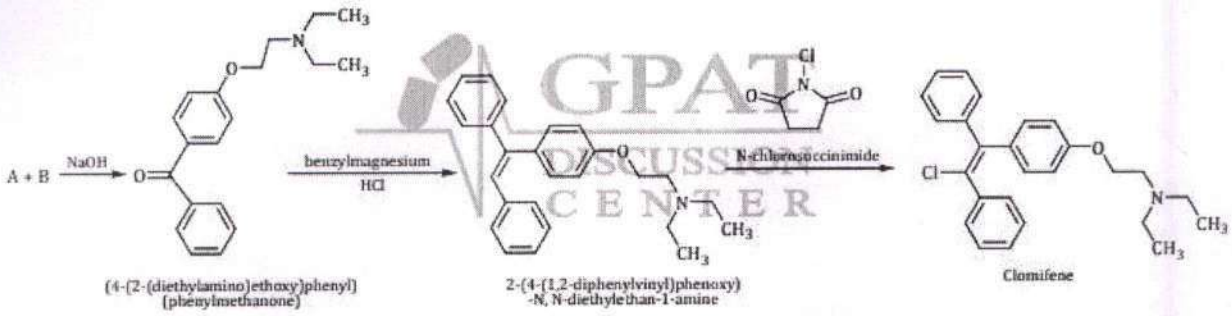

(a) Where A 4-hydroxy-benzophenone and B 2-diethylamino-ethyl chloride
(b) Where A 4-hydroxy benzaldehyde and B 4-methoxy aniline
(c) Where A 4-hydroxy-benzophenone and B 4-methoxy aniline
(d) Where A 4-hydroxy-benzophenone and B benzaldehyde

50. The role of glutathione in tissues includes all except:-
(a) Participate in decomposition of hydrogen peroxide
(b) Participate in activation of methionine
(c) Participate in detoxification reactions
(d) Biologically active in oxidized form

51. When Ke is constant and Ka is larger:-
(a) C_{max} is more and t_{max} is longer
(b) C_{max} is lesser and t_{max} is longer
(c) C_{max} is lesser and t_{max} is short
(d) C_{max} is more and t_{max} is short

52. When considering drug delivery to the brain which of the following is false?
(a) The cells in the blood vessels that supply the brain are tightly connected which restricts drug absorption
(b) Only relatively small lipophilic molecules readily, passively diffuse in to the brain
(c) Drugs with a low log P value show improved passive diffusion into the brain (P: oil / water
partition coefficient)
(d) Polar molecules can be taken up into the brain through active transport

53. IVIVC utilizes the principles of statistical moment analysis:-
(a) Level A (b) Level B (c) Level C (d) Level D

54. The systems that follows, Weibull Mathematical Model used to describe drug release kinetics are:-
(a) Swellable polymeric devices
(b) Diffusion matrix formulation
(c) Erodible matrix formulation
(d) Transdermal system

55. Which method is used by pharmacists for complete blending of potent powders with large quantities of diluents?
(a) Spatulation (b) Levigation (c) Trituration (d) Geometric dilution

56. Substance used to reduce friction during tablet compression and facilitate ejection of tablets from the die cavity is called as:-
(a) Lubricant (b) Glidant (c) Anti-adherent (d) Humectant

57. What quantities of 95% v/v and 45% v/v alcohols are to be mixed to make 800 mL of 65% v/v alcohol?
(a) 480 mL of 95% and 320 mL of 45% alcohol
(b) 320 mL of 95% and 480 mL of 45% alcohol
(c) 440 mL of 95% and 360 mL of 45% alcohol
(d) 360 mL of 95% and 440 mL of 45% alcohol

58. The proportion of NaCl liquid to give 1.5% solution of drug isotonic with blood plasma is:- (The freezing point of 1% w/v solution of drug is -0.122 and NaCl is -0.576 °C)
(a) 0.79% (b) 0.585% (c) 0.9% (d) 0.5%

59. Which of the following statement is NOT TRUE about prokaryotes?
(a) Nucleus is not bounded by nuclear membrane
(b) Cell wall contains peptidoglycan
(c) 80S ribosomes are distributed in cytoplasm
(d) It is Haploid in nature

60. Match the following diseases under column I with the respective causative organisms under Column II.

Column I Column II
i. Creutzfeldt-Jacob disease p. Yersinia pestis
ii. Typhus q. Prions
iii. Syphilis r. Rickettsia prowazekii
iv. Plague s. Treponema palladium
(a) i-r, ii-s, iii-p, iv-q (b) i-p, ii-q, iii-r, iv-s (c) i-q, ii-r, iii-s, iv-p (d) i-s, ii-p, iii-q, iv-r

61. As the dielectric constant values increases, the polarity of the solvents _____.
(a) Decreases
(b) Increases
(c) Remains constant
(d) Decreases and then remains constant

62. The angle of repose is calculated by _____.
(a) tan α = Radius/Height
(b) tan α = 1+ Radius/Height
(c) tan α = 1- Radius/Height
(d) tan α = Height/Radius

63. Spray drying / spray congealing method is generally used to prepare _____.
(a) Tablets (b) Microcapsules (c) Capsules (d) Ointments

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64. HLB value of tragacanth is:-
(a) 4.7 (b) 8.7 (c) 13.2 (d) 14.3

65. Vials and bottles are regularly not subjected to following test:-
(a) Sterility test (b) Clarity test (c) Leaker (chamber) test (d) Pyrogen test

66. As per USP, test limit for treated soda lime glass with container size of 200 ml is:-
(a) 0.70ml of 0.02N Acid
(b) 1.0ml of 0.2N Acid
(c) 0.20ml of 0.02N Acid
(d) 0.70ml of 0.2N Acid

67. In plasma, phenobarbital is present as ionized and unionized forms in equal amount because:-
(a) It is weakly acidic drug
(b) It is weakly basic drug
(c) pH of plasma is 6.8
(d) pKa of the phenobarbital is 7.4

68. A material which is insoluble and inert and used in matrix tablet formulation is:-
(a) Polyethylene (b) Stearyl alcohol (c) Polyethylene glycol (d) Triglycerides

69. Which test is done for USP Type-I glass containers for injections?
(a) Water attack test
(b) Powdered glass test
(c) Powdered glass followed by water attack test
(d) Water attack followed powdered glass test

70. Isoelectric point of Type A gelatin is _____.
(a) pH 7.0 (b) pH 4.7 (c) pH 9.0 (d) pH 7.4

71. What is the effective ratio of methyl paraben and propyl paraben for anti-microbial activity?
(a) 1:1 (b) 5:1 (c) 2.5:1 (d) 10:1

72. Which of the following formula is used to determine shelf life as per first order reaction?
(a) t90 0.693/k (b) t90 0.104/k (c) t1/2 0.693/k (d) t1/2 0.105/k

73. Following are endogenous carriers use for targeted drug delivery except:-
(a) Lipoprotein (b) Serum Albumin (c) Erythrocyte (d) Microparticulates

74. The friability issue of the tablet can be solved by different ways except:-
(a) Increasing the upper punch pressure of tablet machine
(b) Addition of more tablet binder to granules
(c) Increasing the moisture content of granules
(d) Adjusting the lower punch pressure of tablet machine

75. What are the specific surface per unit volume Sv of spherical particles with density of 3 gm/cm3 and volume surface diameter, dvs of 2.57μm?
(a) 7.78 x 103 cm2/cm3
(b) 2.33 x 103 cm2/cm3
(c) 1.55 x 103 cm2/cm3
(d) 1.00 x 103 cm2/cm3

76. In a free-flowing powder, the bulk density and tapped density would be close in value, therefore, the Carr index would be :-
(a) Small (b) Medium (c) Large (d) None

77. Buffer capacity is also referred to as :-
(a) Buffer index (b) Buffer value (c) Buffer efficiency (d) All of these

78. Keesom interactions has a force of :-
(a) 0.5- 1 kcal/mol (b) 1-7 kcal/mol (c) 1-3 kcal/mol (d) None of these

79. Dipole - induced dipoles are also known as :-
(a) London forces (b) Keesom forces (c) Debye forces (d) Hydrogen bonding

80. The interfacial tension of Oleic acid against water at 20°C is:-
(a) 15.6 (b) 52.3 (c) 428 (d) 8.51

81. Suspensions of starch in water exhibit:-
(a) Plastic flow (b) Psudoplastic flow (c) Dilatant flow (d) None of these

82. Very weak bases having pKa < 5:-
(a) Are ionized in the entire pH range of GIT
(b) Absorbed only in stomach
(c) Are unionized at all pH values
(d) None of these

83. During determination of absorption rate constant by method of residual, flip-flop phenomenon occurs when (Ka absorption rate constant and KE overall elimination rate constant).
(a) K_E /Ka≥3 (b) Ka/K_E≥3 (c) K_E/Ka≤3 (d) Ka/K_E≤3

84. Which of the following disinfectant effectively destroys vegetative bacterial cells including Gram positive and Gram negative bacteria, bacterial endospores, fungi, and viruses?
(a) 8% formaldehyde + 70% alcohol (b) 70% Alcohol
(c) 0.1% Phenol aqueous (d) 0.1% Iodine aqueous

85. Which of the following are obligatory intracellular parasites?
(P) Virus (Q) Fungus (R) Mycoba cterium (S) Rickettsia
(a) all (b) (P), (Q) and (R) (c) (R) and (S) (d) (P) and (S)

86. Select the correct statement.
(a) Acids salt corresponding to an insoluble salt will be more water soluble than original salt
(b) Hydroxides and oxides of compounds other than alkali metal cations and the common ions

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are generally water soluble
(c) Sulphides are water soluble except for their alkali metal salts
(d) Ammonium and Quaternary ammonium salts are water insoluble

=1.0 cP) with the 200mL of liquid B (η=3.4 cP)?η87. What is the viscosity of resulting liquid after mixing 300mL of liquid A (
(a) 2.2 cP (b) 1.4 cP (c) 1.6 cP (d) 1.8 cP

88. A compound now increasingly used as standard practice for enhancing the flow of rubber latex by spraying on to the scraped bark of the rubber tree increasing the latex yields from 36% to 130% is:-
(a) Brassinosteroids (b) Abscisic acid (c) Ethephon (d) Kinetin

89. The constituent of Cochineal is:-
(a) Cantharidin (b) Hirudin (c) Tannic acid (d) Carminic acid

90. The sweet taste and odour of fennel is due to:-
(a) Anethole (b) Fenchone (c) Eugenol (d) Phellandrene

91. Catechu is used in medicine as an:-
(a) Antidiabetic (b) Anti cancer (c) Antipyretic (d) Astringent

92. Tropane alkaloids are biosynthesized from _____ amino acid.
(a) Phenylalanine (b) Tyrosine (c) Ornithine (d) Leucine

93. One mg of Lycopodium contains an average of:-
(a) 97000 spores (b) 96000 spores (c) 95000 spores (d) 94000 spores

94. Charaka, a physician belonged to which system of medicine?
(a) Ayurveda (b) Unani (c) Siddha (d) Homeopathy

95. The CCCN code indicating the botanical drugs is:-
(a) 2211 (b) 1122 (c) 1211 (d) 1311

96. Uncaria gambir belongs to the family:-
(a) Rubiaceae (b) Combretaceae (c) Punicaceae (d) Rosaceae

97. Alkanna tinctoria (Boraginaceae) roots are used in:-
(a) Dandruff
(b) Tooth paste
(c) Facial cleansing wash
(d) Lipstick formulations and hair dyes

98. Identify the clotting factor which is known as Stuart factor or thrombokinase.
(a) Clotting factor - IV
(b) Clotting factor - VIII
(c) Clotting factor - X
(d) Clotting factor - XII

99. Which part of the eye is light sensitive (photosensitive)?
(a) Iris (b) Sclera (c) Lens (d) Retina

100. Identify the specific site where maturation of sperm takes place.
(a) Spermatic cord (b) Epididymis (c) Testis (d) Vas deference

101. Identify the hormone that stimulates sperm production in testes and ovulation in females.
(a) Prolactin
(b) Luteinising hormone
(c) Follicle stimulating hormone
(d) Adrenocorticotropic hormone

102. Identify the correct pair from the following:-
(a) Sympathetic stimulation: Bronchoconstriction
(b) Parasympathetic stimulation: Secretion of gastric juice
(c) Sympathetic stimulation: Contraction of pupil
(d) Parasympathetic stimulation: Dilatation of pupil

103. The number of subjects required in a phase 1 clinical trial is:-
(a) 20 to 100
(b) Upto several hundred
(c) 300 to 3,000
(d) Several thousands

104. To obtain a more effective bronchodilation, the drugs that are combined along with beta-adrenoceptor agonists are:-
(a) Cholinergic antagonists
(b) Cholinergic agonists
(c) Beta-adrenoceptor antagonists
(d) Alpha-adrenoceptor antagonists

105. Which of the following antipsychotic drugs, at low doses, is combined with antidepressants in treatmentresistant depression?
(a) Chlorpromazine (b) Haloperidol (c) Risperidone (d) Fluphenazine

106. The management of Type-B adverse drug reaction is:-
(a) To reduce the dose (b) To withhold the dose and avoid in future
(c) To increase the dose (d) To reintroduce and withdraw slowly

107. Abatacept, a fusion protein, and a co-stimulation blocker used in the treatment of Rheumatoid arthritis blocks the:-
(a) Activation of T-cells
(b) Inhibition of T-cells
(c) Activation of B-cells
(d) Inhibition of B-cells

108. Hemophilia A is a disease characterized by deficiency of:-
(a) Factor VIII (b) Factor II (c) Factor VII (d) Factor V

109. The enzyme HMG-CoA reductase is involved in the pathogenesis of:-
(a) Atherosclerosis

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(b) Renal failure
(c) Alzheimer disease
(d) Parkinson disease

110. Rheumatic heart disease is caused by:-
(a) Streptococcal infection
(b) Excessive lipid consumption
(c) Abnormal lipid metabolism
(d) Atherosclerosis

111. Which of the following is NOT a gene associated with breast cancer?
(a) BRCA1 (b) HER2 (c) BRCA2 (d) CHRM1

112. Which of the following is NOT true about the Ebola Virus Disease (EVD)?
(a) Spreads through human-to-human transmission via direct contact
(b) Antiviral drugs are approved by FDA to mitigate the infection
(c) Diagnostic tests include ELISA
(d) The virus is named after a river

113. Hypodermoclysis refers to which route of drug administration?
(a) Sublingual (b) Intradermal (c) Subcutaneous (d) Intravenous

114. Which of the following is a shortest acting cholinersterase inhibitors enlisted below?
(a) Neostigmine (b) Pyridostigmine (c) Edrophonium (d) Physostigmine

115. Which of the following is a suitable antidote for mercury poisoning?
(a) Atropine (b) Dimercaprol (c) Naloxone (d) Nalorphine

116. Histamine concentration is highest in:-
(a) Beta cells (b) Mast cells (c) Lymphocytes (d) Adipocytes

117. Select the â-lactamase inhibitor.
(a) Griseofulvin (b) Clavulanic acid (c) Sulfamethoxazole (d) Tetracycline

118. The mechanism of action of ciprofloxacin is:-
(a) Inhibition of protein synthesis by interacting with 30s ribosome
(b) Inhibition of protein synthesis by interacting with 50s ribosomes
(c) Inhibition of DNA synthesis by interacting with topoisomerase
(d) Inhibition of cell wall synthesis

119. Which of the following is NOT CORRECT for myasthenia gravis?
(a) Down regulation of nicotinic receptors (Nm) leads to myasthenia gravis
(b) Tubocurarine is used to treat myasthenia gravis
(c) It is an autoimmune disorder
(d) Thymectomy is treatment option for myasthenia gravis

120. Which of the following describes the effect of Sodium cromoglycate?
(a) Mast cell degranulation

(b) Mast cell stabilization
(c) Leukotriene antagonism
(d) Glucocorticoid receptor agonism

121. Which of the following side effect of ACE inhibitors result from inhibition of bradykinin breakdown?
(a) Analgesia (b) Hyperglycaemia (c) Productive cough (d) Dry cough

122. Identify antihistamine drug with additional serotonin receptor blocking activity and good appetite stimulant property.
(a) Cyproheptadine (b) Cimetidine (c) Ranitidine (d) Chlorpheniramine

123. Which of the following are the mechanisms of action of digitalis glycosides?
i. Inhibition of Na^+-K^+ ATPase enzyme.
ii. Reduction in the auriculo-ventricular conduction rate.
iii. Increase in the cardiac output.
iv. Acceleration of auriculo-ventric ular conduction rate.
(a) Only iii (b) i, ii and iii (c) ii, iii and iv (d) Only i

124. The following is NOT true for Furosemide:-
(a) Causes hypokalemia (b) Causes hypouricemia
(c) Causes hypomagnesemia (d) Acts by inhibiting sodium reabsorption

125. Which of the following about the Varicella-Zoster Virus (VZV) is NOT true?
(a) Varicella develops after an individual is exposed to VZV for the first time
(b) Herpes zoster develops from reactivation of the virus later in life
(c) There are no vaccines for this virus
(d) The infection results in post-herpetic neuralgia

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Model Question paper-1

1. A technique of using very small metal particles coated with desired DNA in the gene transfer is called:-
(a) Microinjection (b) Biolistic (c) Liposome mediated (d) Electroporation

2. Arrange the following steps in sequence of their order for production of recombinant Insulin:-
A. Fusion of A and B chains for disulphide bond.
B. Cynogen bromide treatment to remove methi onine and â galactosidase.
C. Introduction of A and B chain in the plasmid containing â galactosidase g ene.
D. Synthesis of A and B chain in E coli. c - d - b - a

3. Motif is represented by:-
(a) Commas repeated on the lattice (b) 3D translational periodic arrangement of points
(c) Geometric shapes of lattice (d) Centre of symmetry in lattice

4. Statement 1 : Vortex formation can be minimized by push pull mechanism.
Statement 2 : Vortex formation reduces the mixing intensity by increasing the velocity of impeller.
(a) True, False (b) True, True (c) False, False (d) False, True

5. Which of the following fluid can be considered as an ideal fluid?
(a) Viscous fluid (b) Non-viscous fluid (c) Compressible fluid (d) All of these

6. Which of the following agencies is not classified as an 'executive agency' for administration of the act under the provision of Drugs and Cosmetics Act 1940?
(a) Licensing authority
(b) Drug inspectors
(c) Drugs Consultative Committee
(d) Customs collectors

7. As per Factories Act 1948, in CHAPTER VI dealing with working hours of adults, no adult worker shall be required or allowed to work in a factory for more than _____ hours in a week.
(a) 30 (b) 40 (c) 48 (d) 56

8. Henri Fayol's principle "Espirit de corps" means:-
(a) Corporate objective (b) Group objective (c) Team activity (d) Team spirit

9. How customer's bias about the product will influence the marketing communication?

(a) Positive effect (b) Negative effect (c) No effect (d) Both positive and Negative

10. Which of the following is not patentable in India as per The Patents Act 1970?

(a) New product
(b) New process
(c) New use of existing drug
(d) New process for existing drug

11. Match the following enzymes in Column I with their respective functions under Column II

Column I & Column II

i. DNA ligase	(p) Synthesize a DNA copy of RNA
ii. Alkaline phosphatase	(q) Forms a bond between 3′ –OH and 5′-PO_4
iii. Reverse transcriptase	(r) Removes terminal PO_4 from 3′ or 5′end of DNA
iv. Polynucleotide kinase	(s) Adds phosphate to 5′ –OH end

(a) i-r, ii-s, iii-p, iv-q (b) i-p, ii-q, iii-r, iv-s (c) i-q, ii-r, iii-p, iv-s (d) i-s, ii-p, iii-q, iv-r

12. Which of the following replacement of amino acid in a protein may produce greatest change in its conformation?

(a) Ser ------->Thr (b) Glu ------->Val (c) Gln ------->Tyr (d) Phe -------> Ile

13. The hexose monophosphate pathway produces distinctively two useful products. Identify these products with the ratio in which they are produced.

(a) One NADPH to two ribose-6-phosphate (b) Two NADPH to one ribose-5-phosphate
(c) Two NADPH to one ribulose-5-phosphate (d) Two NADPH to one fructose-6-phosphate

14. The correct statement about Vitamin D is:-

(a) The oral administration of 1, 25-dihydoxycholecalciferol is required in chronic renal failure
(b) 25-Hydroxycholecalciferol is the active form of the vitamin
(c) Vitamin D antagonizes the effects of parathyroid hormone
(d) A deficiency of vitamin D causes an increase in calcitonin secretion

15. All of the following enzymes are used in ELISA except:-

(a) Glucose oxidase (b) Alkaline phosphatase (c) Coagulase (d) β-galactosidase

16. Which of the following equilibrium suggests noncompetitive inhibition of enzyme E for conversion of substrate S to product P with inhibitor I?

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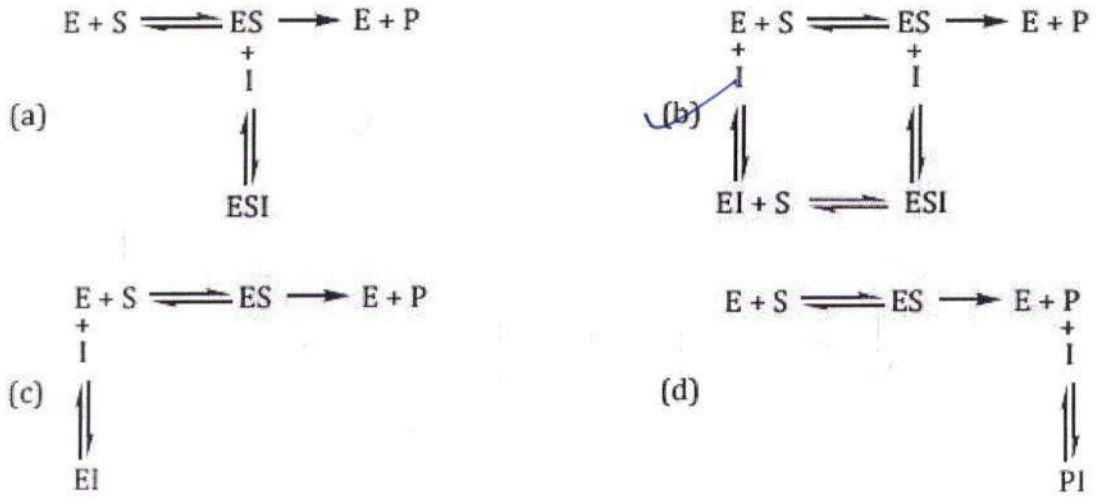


17. Which method is used for the Limit test for arsenic?
(a) Gutzeit method
(b) Oswald method
(c) Arrhenius method
(d) Karl-Fischer method

18. The agent used to prevent the dental carries is:-
(a) Sodium fluoride (b) Strontium chloride (c) Zinc chloride (d) Dicalcium phosphate

19. Which of the following definitions of an asymmetric reaction is the most accurate?
(a) A reaction that creates a new chiral centre in the product
(b) A reaction that involves a chiral reagent
(c) A reaction which creates a new chiral centre with selectivity for one enantiomer/
diasatereoisomer over another
(d) A reaction that is carried out on an asymmetric starting material

20. What software programme is used to determine the Verloop steric parameter in QSAR?
(a) Alchemy (b) Chem3D (c) Sterimol (d) Chem-Draw

21. The oral oligosaccharide hypoglycemic agent, which is administered at the start of the meal is:-
(a) Pioglitazone (b) Miglitol (c) Acarbose (d) Glimepride

22. Which functional group is crucial for anti-malarial activity of artemisinin?
(a) Aldehydic functional group
(b) Ethylene bridge
(c) Ketonic functional group
(d) Peroxide bridge

23. Select the drug which exhibits dual alpha and beta adrenergic receptor agonists activity.
(a) Terbutaline (b) Clonidine (c) Metaproterenol (d) Dobutamine

24. Appropriate hybridization schemes for the C atoms in molecule CH3CO2H are:-
(a) sp^3 and sp (b) sp^3 and sp^2 (c) sp^2 and sp (d) sp^3 and sp^3

25. In Universal indicators, a pH of 7 is shown with:-
(a) Yellow color (b) Green color (c) Blue color (d) Pink color

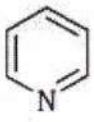
26. Which statement regarding Hückel's rule is FALSE?
(a) There must be (4n + 2) pi (π) electrons
(b) The molecule must be planar
(c) The molecule must be cyclic
(d) Each of the pi (π) electrons must be associated with a conjugated double bon

27. Anthracene is isomeric with:-
(a) Phenanthrene (b) Naphthalene (c) Benzene (d) Azulene

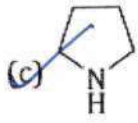
28. The molecular formula of phenanthrene is:-
(a) C14 H10 (b) C12 H10 (c) C14 H14 (d) C14 H8

29. In electrophilic substitution of pyridine, reaction of pyridine with H2O2 in acetic acid leads to formation of:-
(a) 1,4-Dihydropyridine (b) 2-Hydroxypyridine (c) 2-Pyridone (d) Pyridine-N-oxide

30. Which compound is most basic?

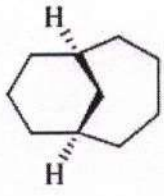
(a) 

(b)

(c) 

(d)

31. Correct Nomenclature for the following bridged bicyclic ring system is:-



(a) bicyclo[4.4.0]decane
(b) bicyclo[4.3.0]decane
(c) bicyclo[4.3.1]decane
(d) bicyclo[4.4.1]decane

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32. Which among the following correctly defines Diastereomer?
(a) These have same magnitude but different signs of optical rotation
(b) Nonsuperimposable object mirror relationship
(c) These differ in all physical properties
(d) Separation is very difficult

33. Galactose and Glucose are:-
(a) Epimers (b) Anomers (c) Isomers (d) Ketose-Aldose isomers

34. Which among the following is a non-essential amino acid?
(a) Lysine (b) Threonine (c) Serine (d) Histidine

35. Which of the following is a 3,3-sigmatropic reaction which converts a 1,5-diene to an isomeric 1,5 diene?
(a) Cope rearrangement
(b) Claisen rearrangement
(c) Photochemical [2+2] reaction
(d) Diels-Alder reaction

36. What quantity of an indicator solution shall be added when quantity is not mentioned in an assay or test?
(a) 0.1 ml (b) 0.05 ml (c) 0.2 ml (d) 0.5 ml

37. In Kjeldahl method, sample containing nitrogen is digested with _____.
(a) Concentrated sodium hydroxide
(b) Fuming nitric acid
(c) Concentrated sulphuric acid
(d) Strong ammonia solution

38. What is the concentration of paracetamol in a 0.1 N sodium hydroxide solution, whose absorption in a 1 cm cell at its λmax, 257 nm, was found to be 0.825? The A (1%, 1 cm) in the IP monograph of paracetamol is given as 715 at 257 nm

(a) 1.1 g/100 ml (b) 0.0011 mg/100 ml (c) 0.0011 g/100 ml (d) 0.0011 µg/100 ml

39. The unit for specific absorbance A (1%, 1cm) is:-
(a)µg/mL (b) mg/L (c) liter $mole^{-1}$ cm^{-1} (d) dl g^{-1} cm^{-1}

40. What is the nuclear magnetic resonance frequency of 1H in a 7.05 Tesla magnetic field strength?
(a) 300.0 MHz (b) 200.0 MHz (c) 60.0 MHz (d) 100 MHz

41. What is Hydrogen Deficiency Index (HDI) value for toluene?
(a) 1 (b) 2 (c) 3 (d) 4

42. In NMR, the aromatic proton resonate in a characteristic narrow range at:-
(a) δ 6.5 – δ 8.0 (b) δ 11.0 – δ 12.0 (c) δ 2.0 – δ 4.0 (d) δ 0.7 – δ 1.3

43. The difficulties of long elution time and poor resolution of complex mixtures are observed in elution analysis. These difficulties can be overcome by modification of elution analysis, known as:-

(a) Isocratic-elution analysis
(b) Gradient-elution analysis
(c) Displacement analysis
(d) Frontal analysis

44. Materials whose consistency depends on the duration of shear, as well as on the rate of shear, exhibit:-

(a) Rheopexy (b) Thixotropy (c) Viscoelasticity (d) Plasticity

45. Which of the following solutions are more likely to have the same osmotic pressure? Solutions of:

(a) Diluted nonelectrolytes with the same molal concentration
(b) Concentrated nonelectrolytes with the same molal concentration
(c) Diluted electrolytes with the same molal concentration
(d) Concentrated electrolytes with the same molal concentration

46. Which statements are correct for the micelle formation?

(P) Micelles are dynamic structures that are continually formed and broken down in solution.
(Q) The typical micelle diameter is about 2–3 μm and so they are visible under the light micro scope.
(R) Micelle formation is a spontaneous process.
(S) When the surfactant concentration is increased above the CMC, the number of micelles
increases and the free surfactant concentration decreases below CMC.
(a) P and Q (b) P and R (c) P and S (d) R and S

47. Which equation is used to predict the stability of a drug product at room temperature from experiments at accelerated temperature?

(a) Higuchi equation (b) The Arrhenius' equation
(c) Hildebrand equation (d) The Hixson-Crowell equation

48. Which statement correctly describes Hess's Law?

(a) The enthalpy of all reactants in their standard states is defined as zero
(b) Enthalpy changes can be calculated only if one or more of the reactants is/are element
(c) The enthalpy change of a reaction can be calculated only at 1 atm pressure and 25 °C
(d) The enthalpy change of a reaction is independent of the route of reaction

49. Identify the starting material A and B in the synthesis of Clomifene.

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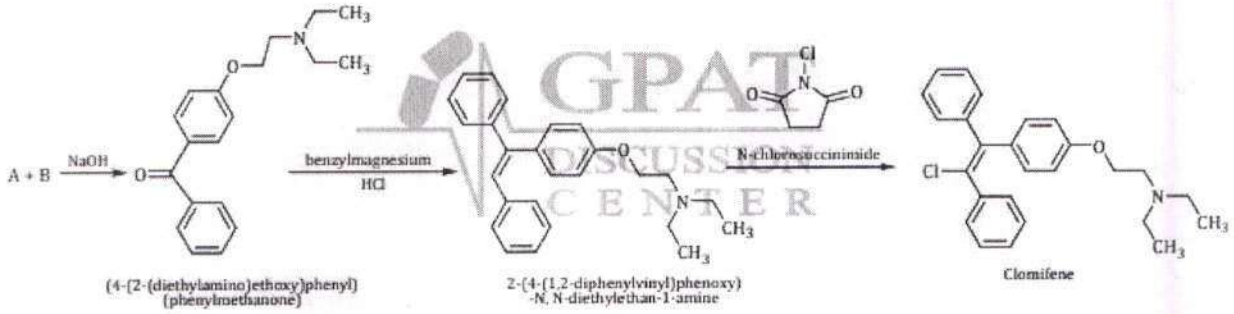

(a) Where A 4-hydroxy-benzophenone and B 2-diethylamino-ethyl chloride
(b) Where A 4-hydroxy benzaldehyde and B 4-methoxy aniline
(c) Where A 4-hydroxy-benzophenone and B 4-methoxy aniline
(d) Where A 4-hydroxy-benzophenone and B benzaldehyde

50. The role of glutathione in tissues includes all except:-
(a) Participate in decomposition of hydrogen peroxide
(b) Participate in activation of methionine
(c) Participate in detoxification reactions
(d) Biologically active in oxidized form

51. When Ke is constant and Ka is larger:-
(a) C_{max} is more and t_{max} is longer
(b) C_{max} is lesser and t_{max} is longer
(c) C_{max} is lesser and t_{max} is short
(d) C_{max} is more and t_{max} is short

52. When considering drug delivery to the brain which of the following is false?
(a) The cells in the blood vessels that supply the brain are tightly connected which restricts drug absorption
(b) Only relatively small lipophilic molecules readily, passively diffuse in to the brain
(c) Drugs with a low log P value show improved passive diffusion into the brain (P: oil / water
partition coefficient)
(d) Polar molecules can be taken up into the brain through active transport

53. IVIVC utilizes the principles of statistical moment analysis:-
(a) Level A (b) Level B (c) Level C (d) Level D

54. The systems that follows, Weibull Mathematical Model used to describe drug release kinetics are:-
(a) Swellable polymeric devices
(b) Diffusion matrix formulation
(c) Erodible matrix formulation
(d) Transdermal system

55. Which method is used by pharmacists for complete blending of potent powders with large quantities of diluents?
(a) Spatulation (b) Levigation (c) Trituration (d) Geometric dilution

56. Substance used to reduce friction during tablet compression and facilitate ejection of tablets from the die cavity is called as:-
(a) Lubricant (b) Glidant (c) Anti-adherent (d) Humectant

57. What quantities of 95% v/v and 45% v/v alcohols are to be mixed to make 800 mL of 65% v/v alcohol?
(a) 480 mL of 95% and 320 mL of 45% alcohol
(b) 320 mL of 95% and 480 mL of 45% alcohol
(c) 440 mL of 95% and 360 mL of 45% alcohol
(d) 360 mL of 95% and 440 mL of 45% alcohol

58. The proportion of NaCl liquid to give 1.5% solution of drug isotonic with blood plasma is:- (The freezing point of 1% w/v solution of drug is -0.122 and NaCl is -0.576 °C)
(a) 0.79% (b) 0.585% (c) 0.9% (d) 0.5%

59. Which of the following statement is NOT TRUE about prokaryotes?
(a) Nucleus is not bounded by nuclear membrane
(b) Cell wall contains peptidoglycan
(c) 80S ribosomes are distributed in cytoplasm
(d) It is Haploid in nature

60. Match the following diseases under column I with the respective causative organisms under Column II.

Column I Column II
i. Creutzfeldt-Jacob disease p. Yersinia pestis
ii. Typhus q. Prions
iii. Syphilis r. Rickettsia prowazekii
iv. Plague s. Treponema palladium
(a) i-r, ii-s, iii-p, iv-q (b) i-p, ii-q, iii-r, iv-s (c) i-q, ii-r, iii-s, iv-p (d) i-s, ii-p, iii-q, iv-r

61. As the dielectric constant values increases, the polarity of the solvents _____.
(a) Decreases
(b) Increases
(c) Remains constant
(d) Decreases and then remains constant

62. The angle of repose is calculated by _____.
(a) tan α = Radius/Height
(b) tan α = 1+ Radius/Height
(c) tan α = 1- Radius/Height
(d) tan α = Height/Radius

63. Spray drying / spray congealing method is generally used to prepare _____.
(a) Tablets (b) Microcapsules (c) Capsules (d) Ointments

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64. HLB value of tragacanth is:-
(a) 4.7 (b) 8.7 (c) 13.2 (d) 14.3

65. Vials and bottles are regularly not subjected to following test:-
(a) Sterility test (b) Clarity test (c) Leaker (chamber) test (d) Pyrogen test

66. As per USP, test limit for treated soda lime glass with container size of 200 ml is:-
(a) 0.70ml of 0.02N Acid
(b) 1.0ml of 0.2N Acid
(c) 0.20ml of 0.02N Acid
(d) 0.70ml of 0.2N Acid

67. In plasma, phenobarbital is present as ionized and unionized forms in equal amount because:-
(a) It is weakly acidic drug
(b) It is weakly basic drug
(c) pH of plasma is 6.8
(d) pKa of the phenobarbital is 7.4

68. A material which is insoluble and inert and used in matrix tablet formulation is:-
(a) Polyethylene (b) Stearyl alcohol (c) Polyethylene glycol (d) Triglycerides

69. Which test is done for USP Type-I glass containers for injections?
(a) Water attack test
(b) Powdered glass test
(c) Powdered glass followed by water attack test
(d) Water attack followed powdered glass test

70. Isoelectric point of Type A gelatin is _____.
(a) pH 7.0 (b) pH 4.7 (c) pH 9.0 (d) pH 7.4

71. What is the effective ratio of methyl paraben and propyl paraben for anti-microbial activity?
(a) 1:1 (b) 5:1 (c) 2.5:1 (d) 10:1

72. Which of the following formula is used to determine shelf life as per first order reaction?
(a) t90 0.693/k (b) t90 0.104/k (c) t1/2 0.693/k (d) t1/2 0.105/k

73. Following are endogenous carriers use for targeted drug delivery except:-
(a) Lipoprotein (b) Serum Albumin (c) Erythrocyte (d) Microparticulates

74. The friability issue of the tablet can be solved by different ways except:-
(a) Increasing the upper punch pressure of tablet machine
(b) Addition of more tablet binder to granules
(c) Increasing the moisture content of granules
(d) Adjusting the lower punch pressure of tablet machine

75. What are the specific surface per unit volume Sv of spherical particles with density of 3 gm/cm3 and volume surface diameter, dvs of 2.57μm?
(a) 7.78 x 103 cm2/cm3
(b) 2.33 x 103 cm2/cm3
(c) 1.55 x 103 cm2/cm3
(d) 1.00 x 103 cm2/cm3

76. In a free-flowing powder, the bulk density and tapped density would be close in value, therefore, the Carr index would be :-
(a) Small (b) Medium (c) Large (d) None

77. Buffer capacity is also referred to as :-
(a) Buffer index (b) Buffer value (c) Buffer efficiency (d) All of these

78. Keesom interactions has a force of :-
(a) 0.5- 1 kcal/mol (b) 1-7 kcal/mol (c) 1-3 kcal/mol (d) None of these

79. Dipole - induced dipoles are also known as :-
(a) London forces (b) Keesom forces (c) Debye forces (d) Hydrogen bonding

80. The interfacial tension of Oleic acid against water at 20°C is:-
(a) 15.6 (b) 52.3 (c) 428 (d) 8.51

81. Suspensions of starch in water exhibit:-
(a) Plastic flow (b) Psudoplastic flow (c) Dilatant flow (d) None of these

82. Very weak bases having pKa < 5:-
(a) Are ionized in the entire pH range of GIT
(b) Absorbed only in stomach
(c) Are unionized at all pH values
(d) None of these

83. During determination of absorption rate constant by method of residual, flip-flop phenomenon occurs when (Ka absorption rate constant and KE overall elimination rate constant).
(a) K_E /Ka≥3 (b) Ka/K_E≥3 (c) K_E/Ka≤3 (d) Ka/K_E≤3

84. Which of the following disinfectant effectively destroys vegetative bacterial cells including Gram positive and Gram negative bacteria, bacterial endospores, fungi, and viruses?
(a) 8% formaldehyde + 70% alcohol (b) 70% Alcohol
(c) 0.1% Phenol aqueous (d) 0.1% Iodine aqueous

85. Which of the following are obligatory intracellular parasites?
(P) Virus (Q) Fungus (R) Mycoba cterium (S) Rickettsia
(a) all (b) (P), (Q) and (R) (c) (R) and (S) (d) (P) and (S)

86. Select the correct statement.
(a) Acids salt corresponding to an insoluble salt will be more water soluble than original salt
(b) Hydroxides and oxides of compounds other than alkali metal cations and the common ions

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are generally water soluble
(c) Sulphides are water soluble except for their alkali metal salts
(d) Ammonium and Quaternary ammonium salts are water insoluble

=1.0 cP) with the 200mL of liquid B (η=3.4 cP)?η87. What is the viscosity of resulting liquid after mixing 300mL of liquid A (
(a) 2.2 cP (b) 1.4 cP (c) 1.6 cP (d) 1.8 cP

88. A compound now increasingly used as standard practice for enhancing the flow of rubber latex by spraying on to the scraped bark of the rubber tree increasing the latex yields from 36% to 130% is:-
(a) Brassinosteroids (b) Abscisic acid (c) Ethephon (d) Kinetin

89. The constituent of Cochineal is:-
(a) Cantharidin (b) Hirudin (c) Tannic acid (d) Carminic acid

90. The sweet taste and odour of fennel is due to:-
(a) Anethole (b) Fenchone (c) Eugenol (d) Phellandrene

91. Catechu is used in medicine as an:-
(a) Antidiabetic (b) Anti cancer (c) Antipyretic (d) Astringent

92. Tropane alkaloids are biosynthesized from _____ amino acid.
(a) Phenylalanine (b) Tyrosine (c) Ornithine (d) Leucine

93. One mg of Lycopodium contains an average of:-
(a) 97000 spores (b) 96000 spores (c) 95000 spores (d) 94000 spores

94. Charaka, a physician belonged to which system of medicine?
(a) Ayurveda (b) Unani (c) Siddha (d) Homeopathy

95. The CCCN code indicating the botanical drugs is:-
(a) 2211 (b) 1122 (c) 1211 (d) 1311

96. Uncaria gambir belongs to the family:-
(a) Rubiaceae (b) Combretaceae (c) Punicaceae (d) Rosaceae

97. Alkanna tinctoria (Boraginaceae) roots are used in:-
(a) Dandruff
(b) Tooth paste
(c) Facial cleansing wash
(d) Lipstick formulations and hair dyes

98. Identify the clotting factor which is known as Stuart factor or thrombokinase.
(a) Clotting factor - IV
(b) Clotting factor - VIII
(c) Clotting factor - X
(d) Clotting factor - XII

99. Which part of the eye is light sensitive (photosensitive)?
(a) Iris (b) Sclera (c) Lens (d) Retina

100. Identify the specific site where maturation of sperm takes place.
(a) Spermatic cord (b) Epididymis (c) Testis (d) Vas deference

101. Identify the hormone that stimulates sperm production in testes and ovulation in females.
(a) Prolactin
(b) Luteinising hormone
(c) Follicle stimulating hormone
(d) Adrenocorticotropic hormone

102. Identify the correct pair from the following:-
(a) Sympathetic stimulation: Bronchoconstriction
(b) Parasympathetic stimulation: Secretion of gastric juice
(c) Sympathetic stimulation: Contraction of pupil
(d) Parasympathetic stimulation: Dilatation of pupil

103. The number of subjects required in a phase 1 clinical trial is:-
(a) 20 to 100
(b) Upto several hundred
(c) 300 to 3,000
(d) Several thousands

104. To obtain a more effective bronchodilation, the drugs that are combined along with beta-adrenoceptor agonists are:-
(a) Cholinergic antagonists
(b) Cholinergic agonists
(c) Beta-adrenoceptor antagonists
(d) Alpha-adrenoceptor antagonists

105. Which of the following antipsychotic drugs, at low doses, is combined with antidepressants in treatmentresistant depression?
(a) Chlorpromazine (b) Haloperidol (c) Risperidone (d) Fluphenazine

106. The management of Type-B adverse drug reaction is:-
(a) To reduce the dose (b) To withhold the dose and avoid in future
(c) To increase the dose (d) To reintroduce and withdraw slowly

107. Abatacept, a fusion protein, and a co-stimulation blocker used in the treatment of Rheumatoid arthritis blocks the:-
(a) Activation of T-cells
(b) Inhibition of T-cells
(c) Activation of B-cells
(d) Inhibition of B-cells

108. Hemophilia A is a disease characterized by deficiency of:-
(a) Factor VIII (b) Factor II (c) Factor VII (d) Factor V

109. The enzyme HMG-CoA reductase is involved in the pathogenesis of:-
(a) Atherosclerosis

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(b) Renal failure
(c) Alzheimer disease
(d) Parkinson disease

110. Rheumatic heart disease is caused by:-
(a) Streptococcal infection
(b) Excessive lipid consumption
(c) Abnormal lipid metabolism
(d) Atherosclerosis

111. Which of the following is NOT a gene associated with breast cancer?
(a) BRCA1 (b) HER2 (c) BRCA2 (d) CHRM1

112. Which of the following is NOT true about the Ebola Virus Disease (EVD)?
(a) Spreads through human-to-human transmission via direct contact
(b) Antiviral drugs are approved by FDA to mitigate the infection
(c) Diagnostic tests include ELISA
(d) The virus is named after a river

113. Hypodermoclysis refers to which route of drug administration?
(a) Sublingual (b) Intradermal (c) Subcutaneous (d) Intravenous

114. Which of the following is a shortest acting cholinersterase inhibitors enlisted below?
(a) Neostigmine (b) Pyridostigmine (c) Edrophonium (d) Physostigmine

115. Which of the following is a suitable antidote for mercury poisoning?
(a) Atropine (b) Dimercaprol (c) Naloxone (d) Nalorphine

116. Histamine concentration is highest in:-
(a) Beta cells (b) Mast cells (c) Lymphocytes (d) Adipocytes

117. Select the â-lactamase inhibitor.
(a) Griseofulvin (b) Clavulanic acid (c) Sulfamethoxazole (d) Tetracycline

118. The mechanism of action of ciprofloxacin is:-
(a) Inhibition of protein synthesis by interacting with 30s ribosome
(b) Inhibition of protein synthesis by interacting with 50s ribosomes
(c) Inhibition of DNA synthesis by interacting with topoisomerase
(d) Inhibition of cell wall synthesis

119. Which of the following is NOT CORRECT for myasthenia gravis?
(a) Down regulation of nicotinic receptors (Nm) leads to myasthenia gravis
(b) Tubocurarine is used to treat myasthenia gravis
(c) It is an autoimmune disorder
(d) Thymectomy is treatment option for myasthenia gravis

120. Which of the following describes the effect of Sodium cromoglycate?
(a) Mast cell degranulation

(b) Mast cell stabilization
(c) Leukotriene antagonism
(d) Glucocorticoid receptor agonism

121. Which of the following side effect of ACE inhibitors result from inhibition of bradykinin breakdown?
(a) Analgesia (b) Hyperglycaemia (c) Productive cough (d) Dry cough

122. Identify antihistamine drug with additional serotonin receptor blocking activity and good appetite stimulant property.
(a) Cyproheptadine (b) Cimetidine (c) Ranitidine (d) Chlorpheniramine

123. Which of the following are the mechanisms of action of digitalis glycosides?
i. Inhibition of Na^+-K^+ ATPase enzyme.
ii. Reduction in the auriculo-ventricular conduction rate.
iii. Increase in the cardiac output.
iv. Acceleration of auriculo-ventric ular conduction rate.
(a) Only iii (b) i, ii and iii (c) ii, iii and iv (d) Only i

124. The following is NOT true for Furosemide:-
(a) Causes hypokalemia (b) Causes hypouricemia
(c) Causes hypomagnesemia (d) Acts by inhibiting sodium reabsorption

125. Which of the following about the Varicella-Zoster Virus (VZV) is NOT true?
(a) Varicella develops after an individual is exposed to VZV for the first time
(b) Herpes zoster develops from reactivation of the virus later in life
(c) There are no vaccines for this virus
(d) The infection results in post-herpetic neuralgia