

# GPAT QUESTION PAPER 2013 WITH ANSWER KEY

## GPAT QUESTIONS

- Heckel's plot represents .....
  - Extent of plastic and elastic deformation of material during compaction
  - Force-time of force-displacement relationship
  - Pressure-porosity (volume) relationship
  - Stress relaxation measurements
- Which of the following would cause increase in the binding strength at the dry granulation process in significant degree
  - Carboxymethylamylopectiglycolate
  - Macrogol 4000
  - Magnesium Stearate
  - Lactose
- The correct statements concerning concertation microencapsulation
  - Concertation always leads to monophasic microcapsule
  - When the gelatin is used for microcapsule's wall material, the concertation is bound to happen
  - Only gelatin can be used for microcapsule's wall
  - Simple or compound concertation can be distinguished according to the number of macromolecular colloids taking part in the process
  - The pH conditions of the system and the solubility of the auxiliary materials do not have any effect on the preparation of the microcapsule
  - Only 1 and 4 are correct
  - Only 2 and 3 are correct
  - Only 1 and 5 are correct
  - Only 2 and 4 are correct
- Cyclohexanone exhibits only ..... peaks in  $^{13}\text{C}$ NMR spectrum due to symmetry
  - 2
  - 3
  - 4
  - 5
- If an organic compound does not absorb UV visible radiation it means compound does not contain .....
  - Single bond
  - Sigma bond
  - Conjugated double bond
  - Dative bond
- The positively polarized carbon atom of a carbonyl group acts as.....
  - An electrophile and a lewis base
  - A nucleophile and a lewis acid
  - A nucleophile and a lewis base
  - An electrophile and a lewis acid
- The Pinene hydrochloride rearranged into bornylterpenoid is called as.....
  - Wagner-Meerwein rearrangement
  - A nucleophile and a lewis acid
  - Fries rearrangements
  - Backmann rearrangement
- The mouse model for type I diabetes mellitus is.....
  - NZB mouse
  - SCID mouse
  - Nude mouse
  - NOD mouse

9. Cholesterol contributors to ..... Of the biological membrane  
 (a) Rigidity (b) Fluidity  
 (c) Permeability (d) Osmolality
10. Active site for all serine proteases consists of which triad  
 (a) Ser-Glu-Asp (b) Ser-Glu-Met  
 (c) Ser-His-Asp (d) Ala-Glu-Met
11. \_\_\_\_\_, Anthelmintics having Immunosuppressant activity.  
 (a) Piperazine (b) Levamisole (c) Ivermectin (d) Niclosamide
12. Which of the following is selective  $\alpha_2$  selective antagonist  
 (a) Clonidine (b) Prozac  
 (c) Phentamine (d) Yohimbine
13. Which one of the following is NOT a protoplast fusion agent  
 (a) Inactivated Sendai Virus (b)  $Ca^{++}$  at alkaline pH  
 (c) Polythelen glycol (d) Colchicine
14. Clinically used Labetolol is .....  
 (a) S, S (b) R, R (c) R, S (d) S, R
15. For intramuscular injection, angle of administration is ..... Degree  
 (a) 30 (b) 45 (c) 60 (d) 90
16. Aromatase is an enzyme complex that is the target for several anticancer drugs. Which of the following anticancer drugs targets aromatase  
 (a) Cyproterone acetate (b) Raloxifene  
 (c) Aminoglutethimide (d) Testosterone propionate
17. Vinca alkaloids that are used in combination therapy to treat a variety of tumors. How do cancer cells normally gain resistance to these agents  
 (a) Mutation of the target structure  
 (b) Overexpression of the carrier protein called P-glycoprotein  
 (c) Increased metabolism of the drug  
 (d) Decreased ability of the drug to enter target cells
18. A set of closely related genes of generic markers that are inherited as a single unit is  
 (a) Cistron (b) Gene families (c) Haplotype (d) Haploid
19. Ginseng saponins belong to the series of.....  
 (a) Lupane (b) Bursane (c) Oleanane (d) Dammarane
20. Stokes Einstein equation is related to the series of.....  
 (a) Energy changes in sedimentation suspension setting  
 (b) Sedimentation of suspension  
 (c) Diffusion coefficient  
 (d) Coefficient of energy consumption
21. The source of radiation for FAR IR spectrometer is.....  
 (a) Golay cell (b) Nernst glower and globar  
 (c) Mercury lamp (d) Highly heated tungsten filament

22. Which of the following alkaloids derived from lysine  
 (a) Emtin (b) Cinchonidin  
 (c) Brucin (d) Lobelin
23. The agent that can only be given intravenously for heart failure is.....  
 (a) Digoxin (b) Amiodarone  
 (c) Quinidine (d) Dobutamine
24. A prescription order for an antibiotic preparation includes the directions "ii gtt AU q.i.d" what auxiliary label should be affixed to the prescription order container  
 (a) Take with meals (b) For the eye  
 (c) For rectal use (d) For the ear
25. Which one of the following amino acid residues is specifically recognized by chymotrypsin during peptide bond cleavage  
 (a) Phe (b) Leu (c) Val (d) Asp
26. Which of the following criteria should be considered when reviewing a medication for addition to the hospital formulary  
 (a) The amount of samples provided to hospital physicians  
 (b) Research funds donated to the hospital by the pharmaceutical company  
 (c) National adverse drug reaction reports  
 (d) Whether is a gluten-free oral formulation
27. Identify the GABA reuptake inhibitor  
 (a) Progabide (b) Tigabine (c) Bicuculline (d) Baclofen
28. What is the reason of complicated penetration of some drugs through brain-blood barrier  
 (a) High lipid solubility of a drug <http://www.xamstudy.com>  
 (b) High endocytosis degree in a brain capillary  
 (c) Absence of pores in the brain capillary endothelium  
 (d) Meningitis
29. Reynold's number is given by.....  
 (a)  $Re = \mu/\rho vD$  (b)  $Re = \rho v/\mu D$   
 (c)  $Re = \rho vD/\mu$  (d)  $Re = vD/\rho\mu$
30. The increase in concentration of second messengers (cAMP, cGMP,  $Ca^{2+}$  etc.) leads to:  
 (a) Inhibition of intracellular protein kinases and protein phosphorylation  
 (b) Protein kinases activation and protein phosphorylation  
 (c) blocking of interaction between a receptor and an effector  
 (d) Antagonism with endogenous ligands
31. Which of the following cholinomimetics activates both muscarinic and nicotinic receptors  
 (a) Lobeline (b) Pilocarpine (c) Carbachol (d) Bethanechol
32. Deoxy position of deoxyribose in DNA is at.....  
 (a) 1<sup>st</sup> carbon (b) 2<sup>nd</sup> carbon (c) 3<sup>rd</sup> carbon (d) 5<sup>th</sup> carbon
33. All are potent 3A4 inhibitors EXCEPT.....  
 (a) Antifungals (-azoles) (b) Protease inhibitors (-avir)  
 (c) Macrolides (-mycin) (d) Barbiturates

34. 'Probability of nonsterility' is given by.....
- (a) F value                      (b) Z value                      (c) D value                      (d) None of the above
35. Which of the following is a selective medium for the growth of vibreochelerae
- (a) Thayer martin medium                      (b) Cefoxitin cycloserine fructose agar  
(c) Skirrow's medium                      (d) Thiosulfate citratr bile surcrose agar
36. Specific conductance unit is.....
- (a) Ohm cm<sup>-1</sup>                      (b) Mho cm<sup>-1</sup>                      (c) Ohm cm                      (d) None of the above
37. Karplus curve is associated with which spectroscopy
- (a) UV                      (b) Mass                      (c) FTIR                      (d) NMR
38. Which of the following pair of volujmetric method of argentometric titration and indicator used is matched correctly
- (1) Fajan's Method                      Chromate  
(2) Mohr's method                      Fluroescein  
(3) Vohlard's method                      Ferric salt
- The method and indicator matches correctly in.....
- (a) 1 and 2 only                      (b) 2 and 3 only                      (c) 3 only                      (d) 2 only
39. The reaction of the citric acid cycle that is most similar to the pyruvate dehydrogenase complex catalyzed conversion of pyruvate to acetyl-CoA is the conversion of
- (a) Citrate to isocitrate                      (b) Fumarate to malate  
(c) Malate to oxaloacetate                      (d)  $\alpha$ -ketogultarate to succinyl-CoA
40. Which one of the following pairs of lipids & related compounds exhibit opposite biological activities
- (a) 5-HPETE & leukotriene D4                      (b) Cholic acid & Lithocholic acid  
(c) Neuraminidase Inhibitors                      (d) Acetone &  $\beta$ -hydroxybutyprate
41. HIV may NOT respond to.....
- (a) Nucleoside analogues                      (b) Protease inhibitors  
(c) Neuraminidase inhibitors                      (d) Reverse transcriptase inhibitors
42. Palmitic, oleic or stearic acid ester of cholesterol used manufacture of cosmetic creams is.....
- (a) Oleo oil                      (b) Lanoline                      (c) Spermaceti                      (d) Chaulmoogra oil
43. .... Is needed for suspensions, lotions, emulsions, creams and ointments to keeps a high container consistency and yet pour and spread easily when needed. It also is satisfactory for IM slow release yet easy to inject
- (a) Thinxotropy                      (b) Rheopecty                      (c) Rheology                      (d) Newtonian flow
44. The enzyme superoxide dismutase (SOD) converts
- (a) O<sub>2</sub>-to hydrogen peroxide (H<sub>2</sub>O<sub>2</sub>)                      (b) Hydrogen peroxide (H<sub>2</sub>O<sub>2</sub>) to H<sub>2</sub>O  
(c) H<sub>2</sub>O to hydroxyl (OH) redicals                      (d) O<sub>2</sub>- to O<sub>2</sub>
45. For first order reactions the rate constant, k, has the units as.....
- (a) Ms<sup>-1</sup>                      (b) M<sup>-1</sup> s<sup>-1</sup>                      (c) M<sup>-2</sup> s<sup>-1</sup>                      (d) s<sup>-1</sup>

46. Which of the following may be used to assess the relative bioavailability of two chemically equivalent drug product in a crossover study
- (a) Dissolution test (b) Peak concentration  
(c) Time-to-peak concentration (d) Area under the plasma level time curve
47. A 25.0 mL sample of a solution of a monoprotic acid is titrated with a 0.115 M NaOH solution the titration curve shows equivalence point at 7.05. which of the following indicators would be best for this titration
- (a) Methyl red (b) Bromthymol blue (c) Thymol blue (d) Phenopltakin
48. Which of the following in termed as mass filter
- (a) Time of flight (b) Farady cup (c) Quadupole (d) Ion trap
49. Which of the following is produced in phenyl propanoid pathway
- (a) PHeenolics (b) Catotenes (c) Alkaloids (d) Terpenes
50. A diode array detector coupled with UV detection is advantageous because it
- (a) Covers a range of wavelengths  
(b) Allow lower concentrations of analyte to be detected  
(c) Speeds up the detection at a single wavelength  
(d) Allows a single wavelength of detection to be moreprecisely chosen
51. The LOD of an analysis is at the femtogram level. This corresponds to detection at the
- (a) 1 in  $10^{-18}$  level (b) 1 in  $10^{-15}$  level (c) 1 in  $10^{-12}$  level (d) 1 in  $10^{-9}$  level
52. Which are those therapeutic systems, which liberate the active ingredient through a special hole, prepared by laser
- (a) TTS patches (b) IUD systems (c) OCUSERT systems (d) OROS systems
53. Which of following chromatographic technique is most suitable for small, nonvolatile water-insoluble solutes
- (a) GC (b) Reverse phase LC  
(c) Normal phase LC (d) SEC
54. Which of the following antiviral agent in not a nucleoside analog
- (a) Moroxidin (b) Vidarabine  
(c) Cytarabine (d) Idoxuridine
55. Regarding two compartment pharmacokinetics all are true EXCEPT
- (a) A drug is always removed from the peripheral compartment  
(b) A drug with a high volume of distribution is likely to be lipophilic  
(c) A drug can have a short duration of action while being eliminated very slowly  
(d) Most anesthetic drugs are modeled well with a two-compartment model
56. Phenothiazine is obtained by.....with sulfur
- (a) Cyclization of dibenzyl (b) Cyclization of diphenyl amine  
(c) Reduction of diphenyl amine (d) Reduction of dibenzyl amine
57. Vitamin K is constituted of .....ring
- (a) Hdroquinone (b) Nathphaquinone  
(c) Lonone (d) Denzimidazole

58. To balance intellectual property protection, competition and access to affordable prescription drug, the act made by US government is
- (a) Drug Price Competition act (b) Patent term Restoration act  
(c) Hatch-Waxman act (d) Orphan Drug Act
59. Gridnard test is used for the detection of.....
- (a) Flavonoids (b) S- glycosides  
(c) Cyanogenetic glycosides (d) O-glycosides
60. Which hormone works antagonistically to parathormone.....
- (a) Triiodothyronine (b) Insulin (c) Estrogen (d) Calcitonin
61. Drugs that have been found to be useful in one or more types of heart failure include all of the following EXCEPT.....
- (a) Na<sup>+</sup>/K<sup>+</sup> ATPase inhibitors (b) α adrenoceptor agonists  
(c) β Adrenoceptor agonists and antagonists (d) ACE inhibitors
62. Which one of the following is used in the Ames test
- (a) E. coli (b) Streptococcus aureus  
(c) Pseudomonas aerogenosa (d) Salmonella typhimurium
63. Which of the ultrashort acting adrenergic blocker
- (a) Carvedilol (b) Atenolol (c) Esmolol (d) Acetazolol
64. Match the following biochemical transformations with coenzymes involved
- (i) α -Ketoglutarate to glutamic acid (a) Tetrahydrofolate  
(ii) Uridine to thymidine (b) NADH  
(iii) Pyruvic acid to acetyl coenzyme A (c) Thiamine pyrophosphate  
(d) Pyridoxamine
- (a) i-d, ii-a, iii-c (b) i-a, ii-b, iii-d  
(c) i-b, ii-a, iii-c (d) i-d, ii-b, iii-c
65. Drugs that show nonlinear pharmacokinetics have which of the following property
- (a) A constant ratio of drug metabolites is formed as the administered dose increase.  
(b) The elimination half - life increasing as the administered dose increase  
(c) The area under the plasma drug concentration versus time curve increasing in direct proportion to an increase in the administered dose.  
(d) Both low and high doses follow first order elimination kinetics  
(e) The steady state drug concentration increases in direct proportion to the dosing rate
66. Appropriate reasons for the deviation from the Beer's law among the following are
- (P) Monochromaticity of light (Q) Very high concentration of analyte  
(R) Association of analyte (S) Dissociation of analyte
- (a) P, Q AND R (b) Q, R, and S  
(c) P, R and S (d) P, Q and S
67. An alternative to glycolysis pathway is.....
- (a) Glyoxylate pathway (b) Pentose phosphate pathway  
(c) Citric acid cycle (d) Gluconeogenesis

68. LeChatelier's principle states that increasing temperature favors a reaction that.....
- (a) Release energy as heat (b) Requires energy as heat  
(c) Involves a chemical catalyst (d) Gluconeogenesis
69. In absorption spectrometry, high values of absorbance values (grater than 1 or 2) tend to give poorer precision because
- (a) Too much light saturates the detector  
(b) Little light reaches the detector  
(c) Beer's law deviations are worse  
(d) Monochromators work poorly under intense light
70. When the angle of repose exceeds..... , the powder flow is rarely acceptable for pharmaceutical manufacturing purpose
- (a) 25 (b) 30 (c) 50 (d) 60
71. The chelate, EDTA4- can described as what type of chelating ligand
- (a) Bidentate (b) Tetradentate (c) Hexadentate (d) Tridentate
72. Living cells are negatively charged inside primarily because of.....
- (a) ATP, organic acids, and other negative molecules that cannot escape  
(b) Removal of sodium ions, which are positively charged, by the Na<sup>+</sup>/K pump  
(c) Extrusion of Ca<sup>2+</sup> ion, which is much more concentrated outside a cell than inside  
(d) Cell membranes that are more permeable to potassium than sodium
73. Which of the following drugs requires administration on an empty stomach
- (a) Naproxen (b) Levothyroxine  
(c) Prednisone (d) Nitrofurantoin
74. Which of the following is a non- aqueous binder
- (a) Ethyl cellulose (b) Starch (c) Veegum (d) Bentonite
75. Which of the following drugs requires administration on an empty stomach
- (a) Cannbichromene (b) Cannabinol  
(c) Cannabidiol (d) Tetrahydrocannabinol
76. What is the osmolality of a solution if one mmole of glucose and two mmoles of NaCl are dissolved in 1 kg of the water
- (a) 3 mOsm (b) 4 mOsm (c) 5 mOsm (d) 6 mOsm
77. How much can be the working revolution per minute (RPM) of the ball mill
- (a) 23-28 "D where D means the diameter of jar  
(b) Two times more than the critical revolution per minute  
(c) 42.3 "D (D=diameter of the jar)  
(d) The average of critical RPM and the optional RPM
78. A compound with an -OH group and -OR group bonded to the same carbon atom is.....
- (a) An actal (b) A hemicacetal (c) A simple ether (d) An aldol
79. The reaction of Grignard reagent with aldehydes and ketones gives alcohols. This is known as .....
- (a) NEcleophilic addition reaction (b) Neckleophilic substitution reaction  
(c) Electrophilic substitution reaction (d) Electrophilic addition reaction

80. Osazone is formed by reaction of ..... moles of phenylthydrazine with monosaccharide  
 (a) 1 (b) 2 (c) 3 (d) 4
81. If a sugar contains..... fuction, it is a reducing sugar  
 (a) Hemiacetal (b) Acetal (c) Aldehyde (d) Ketal
82. Adverse effect of cerivastatin is .....  
 (a) Higher risk of rhabdomyolysis (b) Anaphylaxis  
 (c) Hepatic disorder (d) Hemolytic anemia
83. Following emigration from blood vesels, leucocyte migration to the site of infection or injury in mediated by  
 (a) Bradykinin (b) Chemokines and Complements C5a  
 (c) Histamine (d) Prostaglandins
84. In adults, drugs are an important cause of Fanconi's syndrome. Drugs that cause Fanconi's Syndrome include which group below. Select One  
 (a) Antiretroviral agents, aminoglycosides, glucocorticoids  
 (b) Tenofovir, outdated tetracycline, cisplatin  
 (c) Cidofovir, galactose supplements, NSAIDs  
 (d) Cyclosporin, Tenofovir, lamivudine
85. Which of the following is a type of phytoestrogen  
 (a) F (b) W (c) G (d) Y
86. Which aerosol particles will be deposited in alveoli  
 (a)  $>20 \mu\text{m}$  (b)  $<0.6 \mu\text{m}$  (c) 2 and 6  $\mu\text{m}$  (d) 1-2  $\mu\text{m}$
87. According to lipinski's rule of 5 , which of the following properties of drug molecules are likely to cause poor oral absorption  
 (a) A molecular weight lesser than 500 (b) A log P less than 5  
 (c) Less than 5 hydrogen bond donors (d) More than 10 hydrogen bond accepters
88. Polarographic method of analysis to obtain indivisual amonuts of  $\text{Cu}^{2+}$  and  $\text{Cd}^{2+}$  in a given mixture of the ions ( $\text{Cu}^{2+}$  and  $\text{Cd}^{2+}$ ) is achieved by measuring their.....  
 (a) Half way potentials (b) Migration currents  
 (c) Decomposition potentials (d) Diffusion currents
89. The most widely used agent for the treatment of acute gout arthritis is.....  
 (a) Indemethacin (b) Allopurinol  
 (c) Colchicine (d) Probenecid
90. Which of the following actions of norepinephrine would be antagonized by prazosin but not by propranolol.  
 (a) Increased heart rate (b) Mydriasis  
 (c) Relases of rennin (d) Glycogenolysis
91. Arginine serves as a precursor for which of the vasodilatory product  
 (a) Bradykinin (b) Atrial natriuretic peptide  
 (c) Nitrous oxide (d) L- Citrulline

92. Which of the following is a test of digitoxose  
 (a) Keller Kiliani's (b) Kedde's reagent  
 (c) Raymond's reagent (d) Baljet's reagent
93. The Vd for phenytoin is 70 L and half life is 1.5 hours. What is the total clearance of phenytoin  
 (a) 34.32 L/h (b) 32.34 L/h  
 (c) 151.5 L/h (d) 51.51 L/h
94. Which of the following phytohormone usually acts as bud inhibitor  
 (a) Gibberlin (b) Cytokinin (c) Zeatin (d) Indole Acetic acid
95. What is the main different between HPLC and UPLC  
 (a) HPLC is reverse-phase whereas UPLC in normal-phase  
 (b) UPLC employs smaller stationary-phase particle size  
 (c) HPLC and UPLC employ different mobile phase  
 (d) HPLC and UPLC employ different detection methods  
 (e) HPLC operates at higher mobile phase pressures
96. Which drug is associated with hepatic/ renal toxic metabolite, N-acetyl-pbenzoquinone  
 (a) Diclofenac (b) Meclofenamate (c) Indomethacin (d) Acetaminophen
97. What is the percentage of chlorpromazine (pKa = 9.3) existing in ionized form in a solution of chlorpromazine hydrochloride at pH 7.4  
 (a) 98.76 (b) 1.24 (c) 0.32 (d) 99.68
98. Which of the following is a GLP-1 agonist  
 (a) Sitagliptin (b) Pramiltide (c) Exenatide (d) Eparlrestat
99. What is mechanism of aprotinin  
 (a) Inhibits Corboxypeptidase (b) Inhibits Plasminogen  
 (c) Inhibits plasmin (d) Inhibits plasminogen activator
100. Absolute alcohol is prepared from spirit by.....  
 (a) Distillation (b) Azeotropic distillation  
 (c) Fractional distillation (c) All of the above
101. Which of the following is interleukin agonist  
 (a) Aldesleukin (b) Rituximab (c) Anakinra (d) Etarecept
102. An extension of the normal pharmacological effects of a drug or its metabolite is termed as .....  
 (a) Type A ADR (b) Type B ADR (c) Type C ADR (d) Type D ADR
103. Which of the following parameters is/are important in determining bioequivalence  
 (a)  $T_{max}$  (b)  $C_{max}$  (c) AUC and  $C_{max}$  (d) None of these
104. What are known as balsams  
 (a) Resins dissolved in volatile oil (b) A mixture of volatile oils with sesquiterpenes  
 (c) Solidified resin devoid of votatile terpenes (d) Polysaccharide mixed with volatile oil
105. Sesquiterpenes are formed from ..... In the plants  
 (a) Farnesyl-pyrophosphate (b) Geranyl farnesyl pyrophosphate  
 (c) Coloring material (d) Degraded products of trierpenes
106. Which of the following is a type of phytoestrogen  
 (a) Lutein (b) Indoles  
 (c) Isothicotynates (d) Genistein

107. Attachment of polyethylene glycol (PEG) to proteins/ drugs do all of the following EXCEPT
- Protect them from rapid hydrolysis or degradation
  - Improves micromole solubility
  - Increases absorption from the gut
  - Minimizing the uptake by the cells of the reticuloendothelial systems
108. Identify the harmful drug-drug interaction
- Imipenem - Cilastatin
  - L-Dopa-Entacapone
  - Meperidine - Pargyline
  - Methotrexate - leucovorin
109. Synthesis of thyroid hormone is inhibited by all EXCEPT.....
- Propyl thiouracil
  - Methimazole
  - Perchlorate
  - Diatrazoate
110. Choose correct statement for PEGylation:
- Used to enhance In-vivo half-life of smaller Peptides and proteins
  - Avoidance of Reticulo-endothelial (RES) clearance
  - Reduce clearance rate through kidney
  - All
111. Which of the following is a common herbal remedy for insomnia
- Milkthistle
  - Echinacea
  - Eucalyptus
  - Valerian
112. In which category of in vitro in vivo correlation the mean in vitro dissolution time is compared either to the mean residence time of to the mean residence time or to the mean in vivo dissolution time
- A
  - B
  - C
  - D
113. What does the Hammett substituent constant ( $\sigma$ ) measure
- The steric effect of a substituent
  - The electronic effect of a substituent
  - The hydrophobic effect of a substituent
  - The effect on pH of a substituent
114. Property exploited by electroanalytical technique of coulometry is.....
- Electric potential
  - Electrical charge
  - Electrical current
  - Electrical resistance
115. All are true EXCEPT.....
- Soft soaps give emulsions with a pH in the basic range
  - Hard soaps form water-in-oil emulsions
  - Water-soluble polymers favor the formation of water-in-oil (w/o) emulsions
  - On the HLB system, lower numbers are assigned to lipophilic compounds while higher numbers are assigned to hydrophilic compounds <http://www.xamstudy.com>
116. In callus culture, roots can be induced by the supply of.....
- Auxin and no cytokinin
  - Higher concentration of auxin and lower concentration of cytokinin
  - Higher concentration of cytokinin and lower concentration of auxin
  - Auxin and cytokinin in equal proportions
117. Prostaglandin used in the treatment of postpartum hemorrhage is.....
- Carboprost
  - Latanoprost
  - Bimatoprost
  - Travoprost

118. Identity 5HT3 receptor antagonist which is 5HT4 agonist also  
 (a) Metoclopramide      (b) Cispride      (c) Cilasetron      (d) Graniseton
119. Which of the following AT-II receptor antagonists (SARTANs) does not possess tetrazole moiety in its structure  
 (a) Losartan      (b) Irbesartan  
 (c) Telmisartan      (d) Valsartan
120. What useful information can be found from a Van Deemter plot  
 (a) Optimum selectivity factor      (b) Optimum mobile phase flow rate  
 (c) Optimum column temperature      (d) The capacity factor
121. Brockman activity Scale' is used in the characterization of .....  
 (a) Stationary phase      (b) Mobile Phase  
 (c) Buffer System used      (d) Column specification
122. The FDA allows a maximum of ..... salicylic acid in commercial aspirin tablets  
 (a) 0.05 %      (b) 0.1 %      (c) 0.15%      (d) 0.25 %
123. A phenolic acid compound isolated from the ripe fruits of myrobalan (karitaki).....  
 (a) Chebulic acid      (b) Ferulic acid  
 (c) Emblicanin      (d) Pivalic acid
124. Asafoetida \_Nitric acid gives.....  
 (a) Reddish-brown colour      (b) Green colour  
 (c) Yellowish-orange colour      (d) Blue fluorescence
125. Endocrine effects of antipsychotic like chlorpromazine include all of the following EXCERT  
 (a) Decrease in adrencorticotrophins, Decrease in gonadotrophins  
 (b) Decrease in release of pituitary growth hormone  
 (c) Increase in prolactin secretion  
 (d) Decrease in thyroid hormone production

**End of paper**

**ANSWER KEY GPAT 2013**

|       |       |       |       |       |       |       |       |       |       |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1-c   | 2-b   | 3-d   | 4-c   | 5-c   | 6-d   | 7-a   | 8-d   | 9-a   | 10-c  |
| 11-b  | 12-d  | 13-d  | 14-b  | 15-d  | 16-c  | 17-b  | 18-c  | 19-d  | 20-c  |
| 21-c  | 22-d  | 23-d  | 24-d  | 25-a  | 26-c  | 27-b  | 28-c  | 29-c  | 30-b  |
| 31-c  | 32-b  | 33-d  | 34-a  | 35-d  | 36-b  | 37-d  | 38-c  | 39-d  | 40-c  |
| 41-c  | 42-b  | 43-a  | 44-a  | 45-d  | 46-c  | 47-b  | 48-c  | 49-a  | 50-a  |
| 51-b  | 52-d  | 53-b  | 54-a  | 55-a  | 56-b  | 57-b  | 58-c  | 59-c  | 60-d  |
| 61-b  | 62-d  | 63-c  | 64-c  | 65-b  | 66-b  | 67-b  | 68-b  | 69-b  | 70-c  |
| 71-c  | 72-a  | 73-b  | 74-a  | 75-d  | 76-c  | 77-a  | 78-b  | 79-a  | 80-c  |
| 81-a  | 82-a  | 83-b  | 84-b  | 85-c  | 86-d  | 87-d  | 88-d  | 89-c  | 90-b  |
| 91-c  | 92-a  | 93-b  | 94-d  | 95-b  | 96-d  | 97-a  | 98-c  | 99-c  | 100-d |
| 101-c | 102-a | 103-c | 104-a | 105-a | 106-d | 107-c | 108-c | 109-d | 110-a |
| 111-d | 112-b | 113-b | 114-b | 115-c | 116-b | 117-a | 118-b | 119-c | 120-b |
| 121-a | 122-c | 123-a | 124-b | 125-d |       |       |       |       |       |