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## **GPAT 2015 Question Paper with Answer Key**

**Graduate Pharmacy Aptitude Test conducted by NBEMS**

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# GPAT QUESTION PAPER 2015 WITH ANSWER KEY

## GPAT QUESTIONS

- Which type of alkaloid is present in Vinca?
  - Ergot
  - Tropane
  - Indole
  - Quinoline
- What is the biological source of Alexandrian Senna
  - Cassia augustifolia
  - Cassia acutifolia
  - Cassia Bravifolia
  - Cassia Nerifolia
- In the following drug find out the Potassium Sparing Diuretics
  - Milrinone
  - Thiazide
  - Spironolactone
  - Amiloride
- How the wetting agent act in the suspension
  - Increase contact angle between substance and solvent
  - Reduce contact angle between substance and solvent
  - No change in contact angle between substance and solvent
  - None of the above
- Which phase of suspension is reversible phase
  - Cracking
  - Creaming
  - Phase Inversion
  - Coalescence
- Which eye infection is also called as 'Pink Eye' infection
  - Fungal keratitis
  - Viral keratitis
  - Conjunctivitis
  - Myopia
- Match compounds with the pathway they inhibit
 

(1) Vancomycin	(P) Folate metabolism
(2) Rifampin	(Q) DNA synthesis
(3) Puromycin	(R) Protein synthesis
(4) Ciprofloxacin	(S) RNA synthesis
	(T) Cell wall synthesis

  - 1-T, 2-S, 3-R, 4-Q
  - 1-R, 2-S, 3-T, 4-P
  - 1-Q, 2-R, 3-T, 4-Q
  - 1-T, 2-Q, 3-P, 4-S
- The given reaction is an example of
  - Arndt-Eistert homologation
  - Mannich reaction
  - Michael addition
  - Chichibabin amination reaction
- What is the 6-methyl derivative of erythromycin
  - Azithromycin
  - Roxithromycin
  - Clarithromycin
  - Clindamycin
- In the diagnosis of myasthenia gravis, only one of the following drugs will be used as a drug of choice
  - Neostigmine
  - Pyridostigmine
  - Physostigmine
  - Edrophonium
- Methyl [5(propylthio)-1H-benzimidazol-2-yl] carbamate is Geneva name of which of the following drug
  - Mebendazole
  - Albendazole
  - Thibendazole
  - Triclabendazole
- Which of the following is oil of fruit pulp
  - Arachis oil
  - Castor oil
  - Olive oil
  - Apricot oil

13. What is true about bioavailability
  - (a) Amount of unbound drug (Free drug reaching systemic circulation)
  - (b) Amount of bound Drug
  - (c) Amount of metabolite drug
  - (d) Amount of Excreted Drug
14. Polymorphs in pharmaceutical solids are detected by which technique
  - (a) MS
  - (b) LC-MS
  - (c) Solid state NMR
  - (d) Coulter counter
15. A series of  $\alpha$  - acylureido penicillin's like azlocillin, mezlocillin, and piperacillin are superior because of
  - (a) Reduced acid hydrolysis
  - (b) Increased  $\beta$  - lactamase resistance
  - (c) Improved penetration through the cell envelop
  - (d) Slow rate of metabolism
16. Bacillus subtilis is used in assay of which antibiotics
  - (a) Penicillin
  - (b) Cephalosporin
  - (c) Vancomycin
  - (d) Streptomycin
17. Which of the following titrations will always have an equivalence point at a pH > 7.00
  - (a) Weak acid with a weak base
  - (b) Strong acid with a weak base
  - (c) Weak acid with a strong base
  - (d) None of the above
18. Inadequate drying during coating of tablet leads to which coating defect
  - (a) Chipping
  - (b) Lamination
  - (c) Mottling
  - (d) Lamination
19. Match the crude drug with its biological source
 

(1) Pale catechu	(P) Conium maculatum
(2) Clove	(Q) Cymapsistetragonoloba
(3) Gaur bean	(R) Uncaria gambir
(4) Hemlock	(S) Syzygium aromaticum

  - (a) 1-Q, 2-P, 3-S, 4-R
  - (b) 1-Q, 2-S, 3-R, 4-P
  - (c) 1-R, 2-S, 3-Q, 4-P
  - (d) 1-R, 2-S, 3-P, 4-Q
20. Which of the following plot indicates the effects of antagonist on receptors
  - (a) Michaelis-Menten plots
  - (b) Line weaver burk Plots
  - (c) Displacement plots
  - (d) Schild plots
21. All of the following statements concerning zero-order degradation are true except
  - (a) Its rate is independent of the concentration
  - (b) A plot of  $\ln C$  Vs time gives a straight line on reactilinear paper and a slope is a rate constant
  - (c) Its half-life is a changing parameter
  - (d) Its concentration remains unchanged with respect to time
22. The liquefaction time of cocoa butter of hydrogenated vegetable oil based suppositories is
  - (a) 30-50 min
  - (b) 30-40 min
  - (c) 11-17 min
  - (d) 3-7 min
23. Which of the following is most likely to undergo lysis
  - (a) A cell losing water from its cytoplasm
  - (b) A cell with intact, multilayer peptidoglycan cell wall
  - (c) A cell with disturbed pentaglycine bridges in its cell wall
  - (d) A cell a hydrophilic outermost layer in its cell wall

24. Match the drugs with the disease for which it is prescribed

- |                        |                        |
|------------------------|------------------------|
| (1) Bedaquiline        | (P) Antidiabetic       |
| (2) Sitagliptin        | (Q) Antiarrhythmic     |
| (3) Mexilitine         | (R) Antidepressant     |
| (4) Paraoxitine        | (S) Antitubercular     |
| (a) 1-S, 2-P, 3-Q, 4-R | (b) 1-S, 2-P, 3-Q, 4-R |
| (c) 1-Q, 2-P, 3-R, 4-S | (d) 1-R, 2-S, 3-P, 4-Q |

25. Which micro-organism used in hairy root culture

- |                              |                           |
|------------------------------|---------------------------|
| (a) Agrobacterium rhizogenes | (b) A. tumefaciens        |
| (c) N. tabacum               | (d) Solanum chrysotrichum |

26. Delayed disintegration in tablet is a result of

- |                                |                                |
|--------------------------------|--------------------------------|
| (a) Large force of compression | (b) Small force of compression |
| (c) Higher amount of granule   | (d) Low amount of granule      |

27. Match drugs with their receptor that they inhibit

- |                                  |                        |
|----------------------------------|------------------------|
| (1) 5HT <sub>1A</sub> agonist    | (P) Cisapride          |
| (2) 5HT <sub>3</sub> antagonist  | (Q) Ketanserin         |
| (3) 5HT <sub>2A</sub> antagonist | (R) Ondansetron        |
| (4) 5HT <sub>4</sub> agonist     | (S) Buspiron           |
| (a) 1-S, 2-R, 3-Q, 4-P           | (b) 1-R, 2-S, 3-T, 4-P |
| (c) 1-Q, 2-R, 3-T, 4-Q           | (d) 1-T, 2-Q, 3-P, 4-S |

28. Passive immunity in new born babies is due to

- |         |         |         |         |
|---------|---------|---------|---------|
| (a) IgG | (b) IgM | (c) IgE | (d) IgA |
|---------|---------|---------|---------|

29. Upper consolute temperature and lower consolute temperature are related to

- |                |                   |
|----------------|-------------------|
| (a) CMC temp   | (b) Kraft Temp    |
| (c) Cloud temp | (d) Absolute temp |

30. Compact size, low weight mass instrument is:

- |               |                      |
|---------------|----------------------|
| (a) EI-TOF    | (b) MALDI-Quadrupole |
| (c) MALDI-TOF | (d) Ion-Trap         |

31. A Pharmaceutical company plans to market a generic version of a drug whose patent has expired. Which type of documentation must be submitted to the FDA

- |          |                             |
|----------|-----------------------------|
| (a) IND  | (b) NDA                     |
| (c) ANDA | (d) NDMA & Letter of intent |

32. Which of the following does not produce azeotropic mixture with water

- |              |                 |
|--------------|-----------------|
| (a) Methanol | (b) Ethanol     |
| (c) Propanol | (d) Isopropanol |

33. For a particular drug, the rate of absorption but not the extent of the absorption of GIT, is affected by presence of food in GIT then taking the drug with food will result in
- Smaller area under the plasma drug concentration time curve
  - Smaller maximal plasma drug concentration
  - Smaller time at which the maximal plasma drug concentration occurs
  - Smaller fractional bioavailability and total clearance
34. According to USP Alcohol contains
- 94.9 to 96% Ethanol
  - 94.9 to 96% Methanol
  - 50% Ethanol
  - 50% Methanol
35. What does it mean that a cell is polyploid
- That it contains more than 2 copies of one or a few of its chromosomes
  - That it contains more than 2 copies of a full set of homologous chromosomes
  - That it contains more than 2 copies of its sex chromosome
  - That it contains more than 2 copies of its autosomal chromosomes
36. Amount of dextrose in large volume infusion fluids
- 5% w/v
  - 10% w/v
  - 25% w/v
  - 50% w/v
37. \_\_\_\_\_, Anthelmintics having Immunosuppressant activity.
- Piperazine
  - Levamisole
  - Ivermectin
  - Niclosamide
38. Choose correct statement for PEGylation: <http://www.xamstudy.com>
- Used to enhance In-vivo half-life of smaller Peptides and proteins
  - Avoidance of Reticulo-endothelial (RES) clearance
  - Reduce clearance rate through kidney
  - All
39. Characteristics feature of hemorrhagic dengue fever is
- Reduction in platelet count
  - Reduction in RBC count
  - Reduction in coagulation factors
  - Increased RBC
40. The carbonyl stretching frequency for simple aldehydes, ketones, and carboxylic acids is about  $1710\text{ cm}^{-1}$ , whereas the carbonyl stretching frequency for esters is about .....  $\text{cm}^{-1}$
- 1650
  - 1700
  - 1750
  - 1850
41. Polarographic method of analysis to obtain individual amounts of  $\text{Cu}^{2+}$  and  $\text{Cd}^{2+}$  in a given mixture of the two ions ( $\text{Cu}^{2+}$  and  $\text{Cd}^{2+}$ ) is achieved by measuring their
- Half-wave potentials
  - Migration currents
  - Decomposition potentials
  - Diffusion currents
42. Consider the reaction:  $\text{A} + \text{B} \rightleftharpoons \text{C}$
- The unit of the thermodynamic equilibrium constant for the reaction is
- $\text{mol L}^{-1}$
  - $\text{L mol}^{-1}$
  - $\text{mol}^2 \text{L}^{-2}$
  - Dimensionless



43. \_\_\_\_\_ system does not have orifice to release the drug.
- (a) Elementary Osmotic Pump (b) L-OROS  
(c) Sandwich Osmotic Pump Tablet (d) Controlled Porosity Osmotic Pump Tablet
44. Sanguinarine belongs to the subgroup of:
- (a) Morphinans (b) Benzyl isoquinolines  
(c) Phthalide isoquinolines (d) Benzophenanthrenes
45. Identify the IUPAC of dexamethasone
- (a) 2-Chloro-6 $\alpha$ , 9 $\alpha$ -difluoro-11 $\alpha$ , 17, 21-trihydroxy-16 $\alpha$ -methylpregna-1,4-dien-3, 20-dione  
(b) 9 $\alpha$ -Fluoro-11 $\beta$ , 17 $\alpha$ , 21-trihydroxy-16 $\beta$ -methylpregna-1, 4-diene-3, 20-dione  
(c) 9 $\alpha$ -Fluoro-11 $\beta$ , 17 $\alpha$ , 21-trihydroxy-16 $\beta$ -methylpregna-1, 4-diene-3, 20-dione  
(d) 6 $\alpha$ -Fluoro-11 $\alpha$ , 21-dihydroxy-16 $\alpha$ -methylpregna-1, 4-diene-3. 20-dione
46. Tamoxifen is nonsteroidal drug acting at steroid receptor(s) It produces which type of effects
- (P) Androgen (Q) Antiestrogen  
(R) Antiprogesterone (S) Estrogen
- (a) P and Q (b) Q and S (c) Q and R (d) R and S
47. Which enzymes is used by the HIV to form DNA in the host cell
- (a) Restriction endonuclease (b) DNA-directed polymerase only  
(c) Reverse transcriptase only (d) Both (b) and (c)
48. 'Sparging' is the process where
- (a) Silanol groups react with trimethylsilyl group  
(b) An inert gas is bubbled through the solvent reservoir to remove dissolved gases  
(c) Solvents are mixed together in a fixed ratio  
(d) Column is washed with solvents from nonpolar to polar and reverse
49. Morphine does not cause:
- (a) Constriction of pupil (b) CNS depression  
(c) Respiratory depression (d) Diarrhoea
50. Which of the following is not recommended in patients with renal insufficiency or cardiac dysfunction
- (a) Aloe (b) Bisacodyl (c) Isapgol (d) Magnesium hydroxide
51. Higuchi model is applicable to drug that is..... In the formulation
- (a) Dissolved in formulation (b) Dispersed in formulation  
(c) Chemically bound to carrier in formulation (d) Osmotically controlled in the formulation
52. Which of the following is correct about parenteral nutrition
- (a) Parenteral nutrition solutions are hypertonic solutions and IV fluids are isotonic  
(b) Parenteral nutrition solutions and IV preparations are isotonic solutions  
(c) Parenteral nutrition solutions are hypertonic solutions and IV fluids are isotonic  
(d) Parenteral nutrition solutions can be supplemented with medications

53. Cyclic AMP (cAMP) is an important second messenger in signal transduction pathway(s) Which enzyme catalyzes the generation/accumulation of cAMP after a receptor – ligand interaction
- (a) Protein kinase A (b) cAMP phosphodiesterase  
(c) Guanylyl cyclase (d) Adenylate cyclase
54. Which of the following is not included in immunization programme as per WHO recommendations for all children
- (a) BCG (b) Oral polio (c) Measels (d) Typhoid
55. Match the given condition with appropriate drug used for its treatment
- (1) Pernicious anemia (P) Erythropetin  
(2) Megaloblastic anemia (Q) Oprelvekin  
(3) Anemia associated with chronic renal failure (R) Raltegravir Vitamin B<sub>12</sub>  
(4) Thrombocytopenia due to cancer chemotherapy (S) Folic acid
- (a) 1-P, 2-Q, 3-R, 4-S (b) 1-R, 2-S, 3-P, 4-Q (c) 1-R, 2-Q, 3-S, 4-P (d) 1-R, 2-P, 3-S, 4-Q
56. In mammals, The major fat in adipose tissue is:
- (a) Triglyceride (b) Cholesterol  
(c) Sphingophospholipids (d) Phospholipids
57. Polarographic method of analysis to obtain individual amounts of Cu<sup>2+</sup> and Cd<sup>2+</sup> in a given mixture of the two ions (Cu<sup>2+</sup> and Cd<sup>2+</sup>) is achieved by measuring their
- (a) Half-wave potentials (b) Migration currents  
(c) Decomposition potentials (d) Diffusion currents
58. What is the objective of trademark
- (a) To claim exclusive properties of products or services  
(b) To claim innovation of products or services  
(c) To deal with market place of expressive ideas  
(d) To protect consumers from being misled
59. Turbulent flow is exhibited by fluids whose
- (a) Re < 40' (b) Re > 40' (c) Re = 40 (d) All of the above
60. Characteristics of drug-protein binding
- (P) Often parallels drug lipid solubility  
(Q) Drug-plasma albumin binding tends to be relatively nonselective  
(R) Acidic drugs bind to albumin while basic drugs bind to glycoproteins  
(S) In rheumatoid arthritis patients, increased alpha<sub>1</sub>-acidic glycoprotein tends to promote increased lidocaine protein binding
- (a) P and Q (b) P, Q and R (c) P, Q, R and S (d) P and R
61. C=O stretchings are very strong and easily observable bands in IR spectroscopy. However in the IR spectrum of glucose C=O absorption band is not seen. Why
- (a) In glucose, C=O group is not terminal (b) In glucose C=O group is absent  
(c) In glucose, hemiacetal group is present (d) In glucose, hemiketal group is present

62. What is/are use/s of phenol coefficient

- (a) To compare a disinfectant's killing efficacy to that of phenol
- (b) To determine the dilution at which the disinfectant is to be used
- (c) To determine the purity of disinfectant
- (d) All of the above

63. Arrange the following esters as per decreasing order of rate of saponification

- |                               |                               |
|-------------------------------|-------------------------------|
| (I) Ethyl benzoate            | (II) Ethyl p- methoxybenzoate |
| (III) Ethyl p- chlorobenzoate | (IV) Ethyl p-nitrobenzoate    |
| (a) I>II>III>IV               | (b) IV>III>II>I               |
| (c) IV>III>I>II               | (d) II>IV>I>III               |

64. Which of the following statements about bentonite are CORRECT

- (P) Glycerin is used to pre-wet the bentonite prior to mixing with water to form its gel
  - (Q) Aqueous bentonite suspensions retain their viscosity above pH 6 but are precipitated by acids
  - (R) MgO increase gel formation while alcohol in significant amounts can precipitate bentonite gel
  - (S) Bentonite exhibits rheopexy
- (a) P and Q                      (b) Q and R                      (c) P, Q and R                      (d) P, Q, R and S

65. Acid insoluble ash of a leaf is called as

- (a) Earthy matter & silica
- (b) Inorganic content
- (c) Organic Content
- (d) All of the above

66. Grape fruit juice is P- glycoprotein and CYP40 enzyme inhibitor . if drug X is degraded by proteolytic enzymes, administration of grapefruit juice with X

- (a) Increase bioavailability of X
- (b) Decrease Bioavailability of X
- (c) Does not affect bioavailability of X
- (d) Cause unexpected action of X

67. Tannins give positive test for all of the following EXCEPT

- |                           |                       |
|---------------------------|-----------------------|
| (P) Goldebeater skin test | (Q) Phenazone         |
| (R) Biuret test           | (S) FeCl <sub>3</sub> |
| (a) P and Q               | (b) Q and R           |
| (c) P, Q and R            | (d) P, Q and S        |

68. Vigabatrin is a GABA analogue that potentiates action of GABA in the brain because it

- (a) Binds to GABA receptor and acts as agonist
- (b) Inhibits GABA transaminase
- (c) Blocks NMDA receptor via the glycine binding site
- (d) Inhibits neuronal reuptake of GABA from synapses

69. Drug that increases systolic B.P. but reduces diastolic B.P.

- (a) Isoproterenol
- (b) Epinephrine
- (c) Nor Epinephrine
- (d) Propranolol



70. Which of the following are characteristics for colloid mills

- (P) Due to centrifugal forces, the mill undergoes periodical vibratory movement  
 (Q) Particles smaller than  $1\ \mu\text{m}$  can be obtained with them  
 (R) The main types of colloid mills are hammer, turbine and dial mills  
 (S) The principle of their operation is based on the abrasion of particles at high speed
- (a) Only P, Q and R are correct (b) Only P and R are correct  
 (c) Only Q and S are correct (d) P, Q, R and S are correct

71. Inflammation of soft tissue due to hyaluronidase is called as

- (a) Tendinitis (b) Bursitis  
 (c) Cellulitis (d) Cumulative Injury Disorder (CID)

72. The hydroxyl derivative of cymene is called as what

- (P) Thymol (Q) Carvacrol (R) Menthol (S) Cumene  
 (a) P, Q, R and S (b) P, Q, and R (c) P and Q (d) Only P

73. Which of the following are the correct properties of ferroin? Ferroin is

- (P) 1, 10-phenanthroline (Q) A bidentate ligand complex  
 (R) Red in reduced form (S) Blue in oxidized form  
 (a) P and Q (b) R and S (c) P, R and S (d) P, Q, R and S

74. Each of the following is a glycosaminoglycan dengue fever is

- (a) Chondroitin and dermatan (b) Heparan and heparin  
 (c) Hyaluronic acid and keratin (d) Keratin and chitin

75. If X is an equivalent of silver deposited in silver coulometer and Y is an equivalent of copper deposited in copper coulometer when constant current is passed through the electrochemical cell for the same time which of the following is correct

- (a)  $X = Y$  (b)  $X = 2Y$  (c)  $X = Y/2$  (d)  $2X = Y$

76. Which of the following classes of medication is the most common initial treatment of men with symptomatic benign prostatic hypertrophy (BPH)

- (a) Alpha-1 agonist (b) Alpha-1 blocker (c) Beta-1 agonist (d) Beta-1 blocker

77. Which of the following reagents can be used for alkaloid detection

- (P) Mayer reagent (Q) Kedde reagent  
 (R) Dragendoff reagent (S) Alcoholic solution of 2, 4 dinitrophenylhydrazine  
 (a) Only P and Q are correct (b) Only P and R are correct  
 (c) Only P and R are correct (d) Only R and S are correct

78. Which schedule Drugs & Cosmetics Act include Particulars to be shown in Manufacturing Records

- (a) Schedule A (b) Schedule V (c) Schedule U (d) Schedule W

79. All of the following statements about Plasmodium falciparum are correct EXCEPT

- (a) Trophozoites, Schizonts and gametocytes are not seen in peripheral blood smear.  
 (b) Is associated with recurrent relapses after initial treatment because of liver hypnozoites  
 (c) More than one parasite/multiple infection can be seen within single RBC  
 (d) Causes more severe disease in pregnancy

80. The chairman of the investigational new Drug (IND) committee in India is
- Drugs controller General of India, Government of India
  - Secretary, Department of Health Research, Government of India
  - Directorate General of Health Sciences, Government of India
  - Secretary, Department of Biotechnology, Government of India
81. In the filling of container what is the meaning of "overfill container"
- Container filled to its minimum capacity
  - Container filled to its maximum capacity
  - Empty container
  - Cleaned container
82. What is the name of floor on which production work is done rather than administration
- Administration area
  - Production area
  - Quality control area
  - Quarantine Area
83. Quinoline contains two basic rings. One of the rings in quinoline. It is attached to second ring via one carbon bridge. Which is the second ring
- 8-Azabicyclo [3.2.1] octane
  - 1-Azabicyclo [2.2.2] octane
  - 1, 4-Diazabicyclo [2.2.2] octane
  - Rubane
84. Which of the first drugs are potentiated by the second
- Phenytoin – Ethinylestradiol
  - Warfarin – Phenobarbitone
  - Lithium- Thiazide diuretics Potentiated due to reduced Lithium clearance
  - Bromocriptine- Metoprolol
85. Which of the following is a long acting  $\beta_2$  agonist that can be given by nebulization and as well a dry powder inhaler for the treatment of COPD
- Formoterol
  - Albuterol
  - Pulmicort
  - Fluticasone
86. Which anticholinergic drug mostly used as anti Parkinson drug
- Procyclidine
  - Methylnicot
  - Tacrine
  - Atropine
87. To create successful new product, a company understands consumers, markets, and competitors and develop a/an
- Impressive advertising campaign
  - Strong web site to push the product
  - Aggressive marketing strategy
  - Product that satisfies consumers' needs
88. Which of the following method is an example of facilitated diffusion?
- Passive diffusion
  - Endocytosis
  - Carrier mediated diffusion
  - Active transport
89. Which of the following causes arterial and bronchial constriction and platelet aggregation
- Prostaglandin  $E_2$
  - Prostaglandin  $A_2$
  - Prostaglandin  $D_2$
  - Thromboxane  $A_2$
90. What is mechanism of action of carbamazepine
- Inhibition of GABA transaminase
  - Blockade of sodium channel
  - Blockade of glutamate receptor
  - Blockade of GABA receptors

91. Passive diffusion follows which order of kinetics
  - (a) Non selective and mixed order
  - (b) Selective and first order
  - (c) Non selective and first order
  - (d) Selective and mixed order
92. Conc v/s time curve drawn from single oral dose, which parameter can be calculated
  - (a) Elimination constant
  - (b) Rate constant
  - (c) Absorption peak
  - (d) Plasma conc.
93. If a basic drug reabsorbed significantly from kidney which of the following statement will be correct
  - (a) Its renal clearance increases in basic urine
  - (b) Its renal clearance decreases in basic urine
  - (c) Its renal clearance increases in acidic urine
  - (d) Its renal clearance decreases in acidic urine
94. o, m, p- isomers can be differentiated on the basis of:
  - (a) Chemical shift
  - (b) Coupling constant
  - (c) Extinction coefficient
  - (d) Dipole moment
95. Monitoring of plasma drug concentration is required while using:
  - (a) Antihypertensive drugs
  - (b) Levodopa
  - (c) Lithium carbonate
  - (d) MAO inhibitors
96. Bacterial endotoxin are mainly detected by
  - (a) Pyrogen test
  - (b) LAL test
  - (c) Thermal test
  - (d) Bacterial test
97. The shelf life of a medicine is defined as :
  - (a) Time required for 10% degradation of drug
  - (b) Time required for 50% degradation of drug
  - (c) Time required for 90% degradation of drug
  - (d) Time required for 100% degradation of drug
98. In which rearrangement reaction, Isocyanate is formed?
  - (a) Curtius
  - (b) Lossen
  - (c) Both A & B
  - (d) None
99. Chitin gets converted into Chitosan upon:
  - (a) Acetylation
  - (b) Deacetylation
  - (c) Oxidation
  - (d) Reduction
100. Efficiency of drug is checked in modest population in
  - (a) Clinical trial-phase1
  - (b) Clinical trial-phase2
  - (c) Clinical trial-phase3
  - (d) Clinical trial-phase4
101. The mixed gland of our body which secretes both hormones and digestive enzyme, so pancreatic enzyme digest which substances
  - (a) Lipids, Protein, Carbohydrate but not Nucleic acid
  - (b) Protein, Carbohydrate, Nucleic acid but not Lipids,
  - (c) Carbohydrate, Lipids, nucleic acid but not Protein
102. In which type of bacteria the cell wall is thicker
  - (a) Gram +ve
  - (b) Gram -ve
  - (c) Both
  - (d) None
103. Out of the following anti cancer drug cardio toxicity is seen in
  - (a) Mitomycin-C
  - (b) Doxorubicin
  - (c) Methotrexate
  - (d) Cyclophosphamide
104. Which of the following free radical is most dangerous free radical
  - (a)  $O^{\cdot -}$
  - (b)  $H^{\cdot +}$
  - (c)  $H_2O_2$
  - (d) Superoxide

105. The phosphate of a metal has the formula  $MHPO_4$ . The formula of its Bromide would be:

- (a)  $MBr$  (b)  $MBr_2$  (c)  $MBr_3$  (d)  $MBr_4$

106. Silicone based adhesive used in TDDS possess following properties:

- (a) Chemical and biological inertness (b) Low toxicity  
(c) Low sensitization and irritation (d) All

107. Schleuniger tester is used for the tablets to measure:

- (a) Roughness (b) Hardness (c) Dissolution (d) Friability

108. Creatinine clearance is used as a measurement of:

- (a) Passive renal absorption (b) Glomerular filtration rate  
(c) Renal excretion rate (d) All

109. 1-[2-[(2-chloro thienyl)methoxy]-2-(2,4-dichlorophenyl)ethyl]-1imidazole is:

- (a) Oxiconazole (b) Sukonazole  
(c) Tioconazole (d) Miconazole

110. The drug of choice in prolonged febrile convulsions is:

- (a) Carbamazepine (b) Diazepam (c) Phenytoin (d) Paracetamol

111. Geometrical isomerism is possible in case of:

- (a) 2-Pentene (b) Pentane (c) Propene (d) Ethene

112. The loading dose (DL) of a drug is usually based on the:

- (a) Total body clearance of the drug  
(b) Percentage of drug bound to plasma proteins  
(c) Fraction of drug excreted unchanged in the urine  
(d) Apparent volume of distribution & desired drug concentration in plasma

113. Biologically active arachidonic acid is <http://www.xamstudy.com>

- (a) All transeicosatetraenoic acid (b) All cis eicosatetraenoic acid  
(c) All transeicosatrienoic acid (d) All cis eicosatrienoic acid

114. Antidiabetic action of gliburide starts at molecular level by which mechanism

- (a) Phosphorylation of receptor (b) Binding to potassium ions  
(c) Decrease in potassium efflux (d) Increase in potassium efflux

115. Momordica charantia having blood sugar lowering activity due to:

- (a) Momordicin (b) Charantin (c) Momortin (d) Charantiamarin

116. Insulin stimulates glucose transport by promoting the translocation of:

- (a) GLUT 4 (b) GLUT 2 & GLUT 4  
(c) GLUT 1 & GLUT 4 (d) GLUT 2

117. Oral rehydration salt contains ionic electrolytes in concentration mmol/L

- (a)  $Na^+$  20,  $K^+$  10 (b)  $Na^+$  40,  $K^+$  20 (c)  $Na^+$  53,  $K^+$  40 (d)  $Na^+$  60,  $K^+$  20

118. In pinacol – pinacolone rearrangement, the final product is ketone. What is the starting compound for the rearrangement

- (a) 1, 1-diol (b) 1, 2-diol (c) 1, 3-diol (d) Geminal diol



119. Which of the following method is useful for measuring the number of viable cells in a culture

- (a) Plate count technique (b) Dry weight method  
(c) Petroff-Hauser counter (d) Light scattering in a spectrophotometer

120. Seeding involves the spread of cancer cells to

- (a) Blood vessels (b) Serious membranes of body cavities  
(c) Fascia surrounding muscles and bones (d) Dermis and subcutaneous of the skin

121. Barbiturates are being replaced by hypnotic benzodiazepines because of

- (a) Low therapeutic index (b) Suppression in REM sleep  
(c) High potential of physical dependence, abuse (d) All of the above

122. Adverse drug Event reporting in the responsibility of all of the following EXCEPT

- (a) Pharmacist and physician (b) Manufacturer  
(c) Consumer (d) Regulatory authorities

123. Time dependent dilatant behavior is known as

- (a) Thixotrophy (b) Rheopexy (c) Rheomalaxis (d) Plastic

124. Chairman of DTAB is:

- (a) Health minister of India (b) Director general of Health services  
(c) Drug controller of India (d) President of AICTE

125. Plasmodesmata is:

- (a) Lignified element (b) Vascular element  
(c) Very fine protoplasmic thread (d) None

*End of paper*

### ANSWER KEY GPAT 2015

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