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GPAT 2019 Question Paper with Answer Key

Graduate Pharmacy Aptitude Test conducted by NBEMS

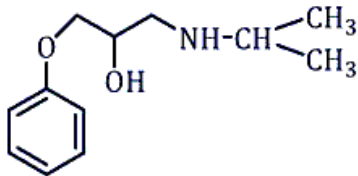
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GPAT 2019

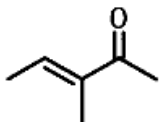
- As per the Medical Termination of Pregnancy Act and rules, the safe custody of "Forms" is with :
(a) Standing committee (b) Registered Medical Practitioner
(c) Owner of the approved place (d) Chief Medical Officer
- For protein detection most commonly used probe is :
(a) Interferon (b) Antibody (c) Lectin (d) Antigen
- Consumer who are loyal to two-three brands are considered as :
(a) Split loyals (b) Switcher loyals (c) Semi-core loyals (d) Shifting loyals
- Choose the CORRECT statement with respect to "The Pharmacy Act, 1948 :
(a) Education regulation 1991 dose not prescribe the minimum qualification for the registration as Pharmacist
(b) Section 12 of the act deals with the approval of course of study under chapter 2 there of.
(c) Section 12 of the act deals with the approval of course of study and examination under chapter 2 there of.
(d) State Govt is authorised to make any rules with respect to course of study.
- ELISA is based upon
(a) Antigen Protein Interaction (b) Antibody - protein Interaction
(c) Antigen Antibody Interaction (d) Lectin - Antibody Interaction
- The relation between emissive power of the surface and its absorptivity is given by
(a) Stefan - Boltzmann Law (b) Darcy's Law
(c) Fourier's Law (d) Kirchhoff's Law
- In India the patent office has its head office at Kolkata and branch offices at :
(a) Dibrugarh, Indore and Vapi (b) Kashmir, Ahmedabad and Trivandrum
(c) Chandigarh, Hyderabad and Goa (d) Mumbai, Chennai and New Delhi
- Penalty for the cultivation of any cannabis plant to produce, sell purchase transport in contravention of Narcotic Drugs and Psychotropic substances Act and Rules on first conviction is
(a) Rigorous imprisonment up to 10 years or fine up to Rs. 10 Lakhs
(b) Rigorous imprisonment up to 10 years or fine up to Rs. 1 Lakh
(c) Rigorous imprisonment up to 6 months
(d) Fine up to Rs. 10 Lakh
- In Direct, Contact or Jet condensers, barometric leg serves one of the following functions :
(a) To remove the condensate/cooling water mixture
(b) To measure the pressure difference across the tube
(c) To Heat the liquid feed to ifs boiling point
(d) To transfer the feed in to the evaporating chamber
- Which of the following is considered as differentiated product ?
(a) Ranitidine (b) Zantac (c) Isoniazid (d) Paracetamol
- Hardinge mill is a variant of :
(a) Fluid energy mill (b) Ball mill (c) Hammer mill (d) Rotary cutter mill

PHARMACEUTICAL CHEMISTRY

12. Retention hyperbilirubemia is caused due to
- (a) Choleric jaundice (b) Non clearance of bilirubin
(c) Reflux of bilirubin into blood stream (d) Over production of bilirubin
13. What will be the Heat of vaporisation of 1 mole of water, when it has the entropy change (ΔS) of 35.2 cal/mole.deg (at 25°C) ?
- (a) 1.408 cal/ mole (b) 10489 cal/ mole
(c) 8465 cal/ mole (d) 880 cal/mole
14. Identify the name of drug with the following structure :

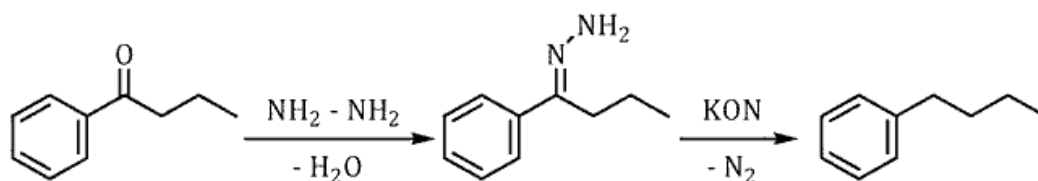


- (a) Esmolol (b) Betaxolol (c) Metoprolol (d) Bisoprolol
15. The following ACE inhibitor used in treating cardiovascular disorder is synthesized from the natural amino acids L-alanine and L-proline :
- (a) Ramipril (b) Enalapril (c) Insompril (d) Captopril
16. The infra-red absorption peaks of Nujol is due to vibrations involving
- (a) S - hstr and S - hdef (b) S - hstr and O - hdef
(c) C - hstr and C - hdef (d) N - hstr and N - hdef
17. Permitted tolerance limit for a 100mL class B volumetric flask and 1000 mL class B volumetric flask according to BS 1792 specifications respectively are ____ mL
- (a) 0.15 and 0.80 (b) 0.80 and 0.30 (c) 1.00 and 10.00 (d) 0.15 and 1.5
18. Predict λ_{max} for $\pi - \pi^*$ absorption band in the UV spectrum of following compound :



- (a) 237 nm (b) 215 nm (c) 241 nm (d) 240 nm
19. One of the following is a most commonly used protecting group for amines :
- (a) Para Methyl benzyl (PMB) (b) t-Butyloxy carbonyl (t-BOC)
(c) Methoxy methylene (MOM) (d) Tetra hydro pyranyl oxy (THP)
20. Choose the correct sequence of process during Atomization in atomic absorption spectroscopy
- (a) Desolvation → Nebulization → Dissociation → Volatilization → Ionization
(b) Nebulization → Desolvation → Volatilization → Dissociation → Ionization
(c) Desolvation → Nebulization → Volatilization → Dissociation → Ionization
(d) Nebulization Volatilization → Desolvation → Dissociation → Ionization
21. Which among the following carrier gases has the highest thermal conductivity ?
- (a) Nitrogen (b) Oxygen
(c) Helium (d) Compressed Air
22. Phase solubility Analysis curve is not a good tool for :
- (a) Complex formation (b) Bioavailability determination
(c) Polymorph detection (d) Impurity detection

23.



Identify the named reaction;

- (a) Curtius Rearrangement (b) Clemmensen reduction
 (c) Wolf-Kishner reduction (d) Wolf-Rearrangement
24. Which of the following inactive clotting factor is activated by the vitamin-K as a co-enzyme ?
 (a) I, II, III, IV (b) II, V, IX, X
 (c) II, V, VI, VIII (d) II, VII, IX, X
25. Identify the molecule which will not exhibit Dipole moment ?
 (a) Carbon dioxide (b) Carbon monoxide (c) Chloroform (d) Ammonia
26. The following combination of drugs are used in treating severe travelers diarrhoea :
 (a) Pyrimethamine and sulfadiazine (b) Trimethoprim and sulfadiazine
 (c) Pyrimethamine and sulfamethoxazole (d) Trimethoprim and sulfamethoxazole
27. Reaction of an α -halo ester with an aldehyde or ketone in the presence of a base like NaNH_2 gives α, β -epoxy carboxylic ester. This reaction is referred as : <http://www.xamstudy.com>
 (a) Willgerodt rearrangement (b) Bamford steven reaction
 (c) Darzen's glycidic synthesis (d) Bayer villiger rearrangement
28. Amylopectin, a component of starch gives colour with iodine
 (a) No colour (b) Green (c) Blue (d) Red-purple
29. Anti addition of bromine to trans-2-butene yields :
 (a) Enantiomer and racemic mixture (b) Only racemic mixture
 (c) Only enantiomers (d) Only meso compounds
30. Conversion of aryldiamium chloride to arylchloride can be achieved in the presence of :
 (a) Copper (II) chloride (b) Copper (I) chloride
 (c) Sodium chloride (d) Calcium chloride
31. Von Gierke's glycogen storage disease is due to defect of which enzyme :
 (a) Phosphofructokinase (b) Glucosyl 4 - 6 transferase
 (c) Glycogen phosphorylase (d) Glucose - 6 - phosphatase
32. The chief product obtained by the reaction of neo-pentyl bromide under E_1 reaction conditions ;
 (a) neo pentyl alcohol (b) 2-methyl-2-butene
 (c) 2-methyl-1, 3-butadiene (d) 2-methyl butene
33. RNA molecules having intrinsic catalytic activity are called as
 (a) mRNAs (b) Ribozymes (c) sn RNAs (d) rRNAs
34. This semi synthetic derivative of penicillin is synthesized by acylation of 6-APA with p-hydroxy phenyl glycine :
 (a) Becampicillin (b) Amoxicillin (c) Ampicillin (d) Carbenicillin
35. Choose the correct product of the following reaction :
 $\text{HNO}_3 + 2\text{H}_2\text{SO}_4 \rightleftharpoons ?$
 (a) $\text{H}_3\text{O}^{\oplus} + 2\text{HSO}_4^{\ominus} + \text{NO}_2^{\oplus}$ (b) $\text{H}_2\text{O} + 2\text{HSO}_4^{\ominus} + \text{NO}_2^{\oplus}$
 (c) $\text{H}_3\text{O}^{\oplus} + 2\text{HSO}_4^{\oplus} + \text{NO}_2^{\oplus}$ (d) $\text{OH} + 2\text{HSO}_4^{\oplus} + \text{NO}_2^{\ominus}$

36. Oxazole is prepared by the condensation of α -amino carbonyl compound with
- (a) Amino acid (b) Isocyanide
(c) Aminoether (d) Iminoester
37. Select the correct order of ortho/para directing ability Of the functional groups from those given below :
- (Strongest first, Weakest last)
- (a) $-\text{NHCOR} > -\text{OH} > -\text{C}_6\text{H}_5 > \text{I}$ (b) $-\text{NHCOR} > -\text{NH}_2 > -\text{C}_6\text{H}_5 > \text{I}$
(c) $-\text{NHCOR} > -\text{NR}_2 > -\text{C}_6\text{H}_5 > \text{I}$ (d) $-\text{NHR} > -\text{NHCOR} > -\text{C}_6\text{H}_5 > \text{I}$
38. Blockade in β -oxidation results in :
- (a) Von Gierk's disease (b) Scurvy
(c) Sudden infant death syndrome (d) Taruli' s disease
39. The basic ring system present in the antihypertensive and antiglaucoma drug Timolol" is:
- (a) 1, 3, 5 - Thiadiazole and Morpholine (b) 1, 3 - Thiazole and Morpholine
(c) 1, 2, 5 - Thiadiazole and Morpholine (d) 1, 2, 4 - Thiadiazole and Morpholine
40. Dehydration of this dicarboxylic acid to obtain corresponding anhydride is difficult due to stereo chemical arrangement :
- (a) Malic acid (b) Fumaric acid (c) Glutaric acid (d) Succinic acid
41. Which of the following pair of drugs is con sidered as selective α_1 -Blockers ?
- (a) Timolol and Metoprolol (b) Prazosin and Terazosin
(c) Formoterol and Levalbuterol (d) Yohimbine and Carynanthine
42. Calculate the accurate osmotic pressure at 00C of a blood serum sample using Lewis equation having freezing point $- 053^\circ \text{C}$
- (a) 0.636 atm (b) 6.39 atm (c) 574.28 atm (d) 0.0441 atm
43. PM indicators are used in :
- (a) Redox titrations (b) Non-Aquous titrations
(c) Acid-base titrations (d) Complexometric titrations
44. Kinetically $\frac{x}{a(a-x)} kt$ is the expression for:
- (a) First order reaction (b) Second order reaction
(c) Pseudo first order reaction (d) Fractional order reaction
45. Conversion Of a carbonyl functionality directly to its hydrocarbon in basic media can be achieved by
- (a) Lithium aluminium hydride reduction (b) Clemmensen reduction
(c) Sodium borohydride reduction (d) Wolf Kishner reduction
46. Which of the following second generation β_1 - selective blockers contains 1, 3, 5 - thiadiazole ring in its structure ?
- (a) Sotalol (b) Timolol (c) Penbutolol (d) Pindolol
47. The structural features present in anti-cancer antibiotics (Doxorubicin, Daunorubicin, Idarubicin and Epirubicin) are
- (a) Naphthalene nucleus connected with amino sugar via glycosidic linkage
(b) Anthracene nucleus fused to cyclohexane ring that is subsequently connected with amino sugar via glycosidic linkage
(c) Quinoline nucleus connected with amino sugar via glycosidic linkage
(d) Phenanthrene nucleus fused to cyclohexane ring that is subsequently connected with amino sugar Via glycosidic linkage

48. When 50 ml of sodium hydroxide (0.1 M) is added to 100 mL of 0.1 M acetic acid, pH of the resultant solution is
- K_a of acetic acid = 1.82×10^{-5}
- (a) 8.58 (b) 7.42 (c) 4.74 (d) 7.06
49. Gabriel ring closure method is employed for the synthesis of :
- (a) 1,4-oxazine (b) Aziridine (c) Oxirane (d) Oxaziridine

PHARMACEUTICS

50. "Shake well" label must be placed on the containers of :
- (a) Ophthalmic suspension (b) Occuserts
(c) Ophthalmic solution (d) Ophthalmic gels
51. In case of Aerosol testing, valve delivering acceptance criteria for a volume of 54 mL or less
- (a) $\pm 75\%$ (b) $\pm 5\%$ (c) $\pm 10\%$ (d) $\pm 15\%$
52. Containers may be rendered free from pyrogens by adequate cleaning and by:
- (a) Autoclaving at 121 °C for 15 minutes (b) Heating at 210 °C for 3-4 hours
(c) Autoclaving at 121 °C for 1 hour (d) Heating at 100 °C for 3-4 hours
53. GMP regulation are pertaining to minimum requirements to be met by industry when :
- (a) Manufacturing, packaging and holding of human drugs and veterinary drugs
(b) Manufacture of human drugs and veterinary drugs
(c) Manufacture and packaging of human drugs and veterinary drugs
(d) Manufacture and holding of human drugs and veterinary drugs
54. Which one of the following viscometers can be used for characterizing non-Newtonian system ?
- (a) Falling sphere viscometer (b) Cup and Bob viscometer
(c) Capillary viscometer (d) Hoeppler viscometer
55. For drug substances with highly variable pharmacokinetic characteristics the following Bioequivalence study design is used
- (a) Parallel Design (b) Non-Replicate Design
(c) Non-Parallel Design (d) Replicate Design
56. Roll-tube technique is the modification of :
- (a) Pour plate technique (b) The streak - plate technique
(c) Micromanipulator technique (d) Spread plate technique
57. Which mechanism of metabolism of drug is not affected by weight change of patient ?
- (a) Conjugative metabolism (b) Acetylation metabolism
(c) Hydrolytic metabolism (d) Oxidative metabolism
58. 21 CFR part 211 of USFDA describes :
- (a) Current good clinical practice (b) Current good packaging practice
(c) Current good manufacturing practice (d) Current good laboratory practice
59. In treating immunodeficiency disease the goal is to maintain IgG levels at about :
- (a) 100 mg/ dL (b) 400 mg/ dL (c) 200 mg/ dL (d) 300 mg/ dL
60. Which one of the following is the property of micro-emulsion ?
- (a) They have particle size more than 1 micron
(b) They have poor stability
(c) They exhibit a viscoelastic gel phase, when internal phase is added in excess
(d) They have milky yellow colour

61. The rheological and functional properties of synovial fluid are impaired due to :
- (a) Increase in the content of mucus (b) Decrease in the content of mucus
(c) Increase in the content of hyaluronic acid (d) Decrease in the content of hyaluronic acid
62. Movement of charged particle through a liquid under the influence of an applied potential difference is known as
- (a) Sedimentation Potential (b) Streaming Potential
(c) Electrophoresis (d) Electroosmosis
63. As per US FDA, NDA's for new chemical entities are classified as either :
- (a) 'P' for product review or 'S' for standard review
(b) "P" for priority review or 'S' for standard review
(c) 'P' for product review or 'S' for safety review
(d) 'P' for priority review or 'S' for safety review
64. In preformulation study polymorphs can be detected by
- (a) Counter - current chromatography (b) Retractometry
(c) High performance liquid chromatography (d) Differential scanning
65. The following is/are used to determine the amount of drug bound to a protein:
- (a) Equilibrium dialysis (b) Solubility (c) pH titration (d) Distribution method
66. In tablet, hydroxy propyl methyl cellulose is used as :
- (a) Diluent (b) Film former (c) Disintegrant (d) Binder
67. Dakin's solution is a synonym for :
- (a) Ammonium Acetate solution (b) Chlorinated soda solution
(c) Chloroxylenol solution (d) Aluminium Acetate solution
68. MEDLINE, EMBASE, EBM AND IDIs are :
- (a) Drug databases (b) New compendial specification of drugs
(c) Chronicles of drug standards (d) Source for drug patents
69. Theories of emulsification are characterized by one of the following EXCEPT:
- (a) Film formation (b) Phase inversion
(c) Monomolecular adsorption (d) Solid particle adsorption
70. When two brands of a drug product gives same clinical results, it is termed as :
- (a) Therapeutic equivalence (b) Bio equivalence
(c) Pharmaceutical equivalence (d) Clinical equivalence
71. Soda ash is also known as :
- (a) Lime stone (b) Sodium carbonate (c) Pure silica (d) Calcium carbonate
72. Microcrystalline cellulose is also called as :
- (a) Sugar tab (b) Nutab (c) Emdex (d) Avicel
73. Which of the following statement is NOT true regarding bulkiness ?
- (a) The reciprocal of bulk density is bulkiness
(b) Bulkiest substance will require container larger than required for less bulky substance
(c) Smaller particles shift between larger ones and increases bulkiness
(d) Bulkiness increases with decrease in particle size
74. A mixture of emulsifier A and emulsifier B with values of 4 and 14 respectively are to be mixed in a proportion to get mixture with required HLB 12. What is the weight of individual emulsifier that is to be taken to have a total weight of 7 gm ?
- (a) A = 5.8 gm and B = 1.2 gm (b) A = 1.4 gm and B = 5.6 gm
(c) A = 5.6 gm and B = 1.4 gm (d) A = 1.2 gm and B = 5.8 gm

75. Which of the following oxide is not used for achieving Amber color to glass ?
 (a) Manganese (b) Iron (c) Cobalt (d) Carbon
76. In case of open model intravenous infusion, C_{ss} (steady state plasma concentration) is equal to :
 (a) $\frac{[\text{Plasma concentration}] [\text{Infusion rate}]}{\text{Clearance}}$ (b) $\frac{[C_{max}] [\text{Infusion rate}]}{\text{Clearance}}$
 (c) $\frac{[t_{max}] [\text{Infusion rate}]}{\text{Clearance}}$ (d) $\frac{\text{Infusion rate}}{\text{Clearance}}$
77. In case of suppositories base, SFI stands for :
 (a) Solidified Fatty acid Indices (b) Solid Fluid Indices
 (c) Solidified Fatty acid Incline (d) Solid Fat Index
78. If mean volume — number diameter of a powdered sample is $2.41\mu\text{m}$, density is 3 gm/cm^3 , the number of particles/gm will be .
 (a) 538×10^{10} (b) 3.68×10^{10} (c) 4.55×10^{10} (d) 4.70×10^{10}
79. Which polymorphic form of a drug candidate has highest melting point :
 (a) Unstable (b) Metastable (c) Hydrates (d) Stable
80. For bitter drugs in paediatric formulations, excellent flavouring agent will be.
 (a) Raspberry syrup (b) Orange syrup
 (c) Lemon syrup (d) Black current syrup
81. The co-administration of erythromycin with cyclosporine :
 (a) Increase bioavailability, due to inhibition of hepatic metabolism
 (b) Increase bioavailability, due to inhibition of microflora in intestine
 (c) Decrease bioavailability due to complex formation
 (d) Decrease bioavailability, due to induction of hepatic metabolism
82. Essentially Hospital Formulary system provide mechanism to :
 (a) Streamline prescription writing (b) Improve quality and hygenicity of food
 (c) Avoid brand and therapeutic duplication (d) Improve surgical procedures
83. Volume of blood that flows per unit time per unit volume of the tissue is :
 (a) Residence time (b) Elimination rate
 (c) Gastric emptying rate (d) Perfusion rate
84. Leaching by immersion Of crude material in a solvent is also known as :
 (a) Maceration (b) Precipitation (c) Evaporation (d) Crystallization
85. The protein toxins that have been modified to reduce the toxicity without significantly altering the immunogenicity are known as :
 (a) Sera (b) Antisera (c) Toxoids (d) Vaccines
86. Which of the following is NOT a mechanism for achieving gastroretention ?
 (a) Osmosis (b) Floating (c) Mucoadhesion (d) Swelling
87. The phase contrast microscopy is valuable in studying living cells which are :
 (a) Stained (b) Unstained
 (c) Treated with fluorescent dye (d) Treated with fluorescent antibody

PHARMACOGNOSY

88. The size Of *Lycopodium* sp ores is :
(a) 45 μm (b) 15 μm (c) 35 μm (d) 25 μm
89. Regholarrenines A-F have been isolated from :
(a) Veratrums (b) Areca (c) Aconite (d) Kurchi
90. Pungency of *Zingiber officinale* rhizome is due to the presence of :
(a) Citral (b) Gingerol (c) Commiphoric acid (d) Gingeral
91. The principal cultivation areas of pyrethrum flowers are in -
(a) Sri Lanka (b) Malaysia (c) India (d) Kenya
92. In *Cassia angustifolia* short-term drought :
(a) Increases the concentration of sennosides A + B
(b) Decreases the concentration of sennosides A + B
(c) Causes loss of leaf biomass
(d) Causes death of the plant
93. The Glycoside Scilliroside in red squill acts as :
(a) Insecticide (b) Rodenticide (c) Acaricide (d) Molluscide
94. Shellac is a resinous substance pr4vtred from a secretion that encrusts the bodies of a scale insect :
(a) *Viverra civet* (b) *Karria lacca*
(c) *Acipenser huso* (d) *Alverites moschiferus*
95. All members of this order are trees or shrubs; mostly evergreen with needle - like leaves ; monoecious or dioecious - sporophylls usually in cones. Resin ducts occur in all parts :
(a) Cycadales (b) Ginkgoales (c) Taxales (d) Coniferae
96. In Gambir - fluorescein test the petroleum spirit layer shows a strong :
(a) Green fluorescence (b) Blue fluorescence
(c) Yellow fluorescence (d) Red fluorescence
97. Antiviral action of *Neem* is due to :
(a) Kaemferol (b) Nelanin (c) Nimbin (d) Azadirachitin

PHARMACOLOGY

98. Characteristic micrncapic features observed in Alzheimer's disease is:
(a) Epidural haemoregic patches
(b) Depigmentation of substantia nigra
(c) Demyelination of neurons in spinal cord
(d) Presence of neutritic plaques containing Ab-amyloid
99. Cardiac output is:
(a) Volume of blood ejected by the auride per minute
(b) Volume of the blood ejected by the left ventricle per beat
(c) Volume of the blood ejected by the left ventricle per minute
(d) Volume of blood ejected by the auricles per beat
100. What are sutures?
(a) Cartilaginous joints (b) Non fibrous joints
(c) Synovial joints (d) Fibrous joints of the skull

101. Following are the facts regarding clinical applications of muscarinic receptor blocking drugs.

Identify the false statement:

- (a) Used in the treatment of parkinson's disease is often an exercise in polypharmacy, since no single agent is fully effective.
- (b) Marked reflex vagal discharge may stimulate sinoatrial or atrioventricular node to improve cardiac output
- (c) Mydriasis produced greatly facilitates ophthalmoscopic examination of the retina and measurement of refractive error in uncooperative patient
- (d) Scopolamine is one among the old remedies used to treat sea-sickness

102. Which of the following cells are called scavenger cells?

- (a) Neutrophils
- (b) Natural killer cells
- (c) Macrophages
- (d) Mast cells

103. Which is NOT true about calcitriol?

- (a) It is active form of Vit D₃
- (b) It enhances reabsorption of calcium and phosphate from bone
- (c) It prevents tubular reabsorption of calcium and phosphate
- (d) Enhances absorption of calcium and phosphate from intestine

104. Production of an abnormal IgG immunoglobulin in Grave's disease causes:

- (a) Multinodular goitre
- (b) Hypothyroidism
- (c) Thyrotoxicosis
- (d) Rheumatoid arthritis

105. Metabolic acidosis does NOT occur during :

- (a) Starvation
- (b) Chronic renal failure
- (c) Wound healing
- (d) Uncontrolled diabetes mellitus

106. Glucocorticoids have following effects - EXCEPT:

- (a) Stimulation of immune responses
- (b) Resistance to stress
- (c) Lipolysis
- (d) Protein breakdown and glucose formation

107. Which one of the following is NOT the role of Nitric oxide?

- (a) Reliving vascular smooth muscle
- (b) Mediating microbicidal action of macrophages
- (c) Serving as neurotransmitter in CNS
- (d) Inducing platelet aggregation

108. Identify the drug which is not useful in the treatment of tuberculosis:

- (a) Pyrazinamide
- (b) Gentamicin
- (c) Streptomycin
- (d) Ciprofloxacin

109. What is anaplasia?

- (a) Morphological and functional alterations/changes, that are different from normal cells
- (b) Morphological and functional resemblance to normal cells
- (c) Increase in size of cell
- (d) Lack of growth of cells

110. Match the following liver abnormalities with consequences:

- (a) Steatosis
- (b) Cholestasis
- (c) Hepatitis
- (d) Fibrosis
- (M) Raised bilirubin level
- (N) Slight rise in serum transaminase level
- (O) Accumulation of fat droplets within liver cells
- (P) Elevated liver function test (LFT's)

- (a) (a) - (N), (b) - (P), (c) - (M), (d) - (O)
- (b) (a) - (O), (b) - (M), (c) - (P), (d) - (N)
- (c) (a) - (N), (b) - (O), (c) - (P), (d) - (M)
- (d) (a) - (P), (b) - (O), (c) - (N), (d) - (M)

111. Numerous isomers of human liver P450 enzyme have been identified, it is not worthy that ____ alone is responsible for the metabolism of over 55% of the prescription drugs metabolized by liver:

- (a) CYP3A4
- (b) CYP1A2
- (c) CYP1A11
- (d) CYP2B6

112. Which of the following directly inhibits Factor Xa?

- (a) Dabigatran
- (b) Warfarin
- (c) Bivalirudin
- (d) Rivaroxaban

113. Which of the following anticonvulsants have both inhibition of excitatory glutamatergic synapse and facilitation of GABA mediated Cl channel opening action?
(a) Valproate (b) Ethosuximide (c) Topiramate (d) Phenytoin
114. Which of the following is NOT a cardioselective β blocker?
(a) Bisoprolol (b) Nebivolol (c) Acebutolol (d) Pindolol
115. The term 'aneurysm' refers to:
(a) Permanent blockage of blood vessels
(b) Permanent abnormal dilatation of blood vessel
(c) Abnormal connections in blood vessels
(d) Abnormal growth of neurones near blood vessels
116. The antiemetic activity of glycopyrronium is related to potent inhibition of receptor both peripherally and centrally.
(a) $5HT_3$ (b) D_2 (c) M_1 (d) H_1
117. Identify the false statement about benzodiazepines from the following:
(a) Benzodiazepines cause reduction of anxiety
(b) Benzodiazepines cause convulsions
(c) Benzodiazepines produce muscle relaxation and loss of motor co-ordination
(d) Benzodiazepines are useful in insomnia
118. Which of the following is 5-alpha reductase inhibitor?
(a) Gliclazide (b) Sildenafil (c) Finasteride (d) Polvthiazide
119. Several different chemicals released by microbes and inflamed tissues attract phagocytes, this phenomenon is called as
(a) Phagocytosis (b) Integrins (c) Chemotaxis (d) Emigration
120. Hematocrit 65% to 70% indicates:
(a) Hemophilia (b) Polycythemia (c) Hypoxia (d) Anaemia
121. The adverse reaction associated with β_2 agonists administered by inhalation or nebulisation in the management of asthma does not include
(a) Peripheral vasodilation (b) Hypertension
(c) Tachycardia (d) Fine tremor
122. Select the ulcer protective drug from the following:
(a) Oxyphenonium (b) Metronidazole (c) Misoprostol (d) Sucralfate
123. Disturbances of oestrogen/progesterone balance could cause a relative deficiency of leading to disturbances in production of dopamine and serotonin. This contributes for emotional disturbances and depression.
(a) Enzyme decarboxylase (b) Tyrosine (c) Pyridoxine phosphate (d) Co-factor A
124. Testing of chemicals by OECD guideline No. 420 refers to which of the following:
(a) Acute oral toxicity by acute toxic class method
(b) Acute oral toxicity by up and Down procedure
(c) Repeated dose 28-day toxicity study in rodents
(d) Acute oral toxicity by fixed dose procedure
125. Which of the following is true?
Excessive use of diuretics can lead to:
(a) Hypervolemic shock (b) Neurogenic shock
(c) Hypovolemic shock (d) Cardiogenic shock

ANSWER KEY GPAT 2019

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