選擇題: 選出單一正確答案，每題二分。

1. Which one of the following receptors produces pharmacological effects through GTP-binding proteins?
   A. nicotinic acetylcholine receptor
   B. β-adrenoreceptor
   C. nitric oxide (NO) receptor
   D. glucocorticoid receptor
   E. atrial natriuretic factor (ANF) receptor

2. Which of the following statements is CORRECT?
   A. Phenobarbital shows analgesic properties.
   B. Phenobarbital induces respiratory depression, which is enhanced by the consumption of alcohol.
   C. Diazepam and phenobarbital induces liver microsome enzyme activity.
   D. Buspirone as well as phenobarbital induce respiratory depression.
   E. Clinical improvement of anxiety requires 2-4 weeks of treatment with benzodiazepines.

3. Which of the following is FM-2?
   A. Diazepam
   B. Triazolam
   C. Oxazepam
   D. Flurazepam
   E. Flunitrazepam

4. Which of the following statements is CORRECT?
   A. Benzodiazepines directly open chloride channels.
   B. Benzodiazepines do not cause physical dependence.
   C. Respiratory depression induced by high doses of barbiturates can be treated by administration of ethanol.
   D. Buspirone is useful in treatment of generalized anxiety disorders and has an efficacy comparable to the benzodiazepines.
   E. Benzodiazepines, like other CNS depressants, readily produce general anesthesia.

5. Which of the following drugs are effective in the treatment of tonic-clonic convulsion (grand mal) EXCEPT:
   A. Phenytoin.
   B. Carbamazepine.
   C. Phenobarbital.
   D. Valproic acid.
   E. Ethosuximide.

6. Which of the following statements concerning chlorpromazine is INCORRECT?
   A. Chlorpromazine is used mainly in treating schizophrenia.
   B. Chlorpromazine produces a high incidence of sedation.
   C. Chlorpromazine produces a high incidence of orthostatic hypotension.
   D. Chlorpromazine as well as haloperidol produce high degree of causing changes of extrapyramidal motor function.
   E. Haloperidol has less potential for anticholinergic effects than chlorpromazine.

7. Which of the following anesthetics exhibits the shortest induction time when each agent is administered at a concentration that ultimately produces surgical anesthesia?
   A. Ethyl ether
   B. Halothane
   C. Nitrous oxide
   D. Methoxyflurane
   E. Benzodiazepine

(背面仍有題目,請繼續作答)

8. Which of the following statements about morphine is INCRRECT?
A. It is used therapeutically to relieve pain caused by severe head injury.
B. It rapidly enters all body tissues, including the fetus of a pregnant woman.
C. It causes constipation.
D. It is most effective by parenteral administration.
E. Its withdrawal symptoms can be relieved by methadone.

9. At a drug concentration of 1 nM, the effect is 10% of Emax; at a drug concentration of 10 nM, the effect is 50% of Emax. If there is no spare receptor, $K_{dissociation}$ of drug-receptor binding is
A. 1 nM.
B. 5 nM.
C. 10 nM.
D. 50 nM.
E. 100 nM.

10. Which of the following statements is CORRECT?
A. Ethanol at intoxicating levels shows first-order metabolism.
B. Disulfiram stimulates the oxidation of acetaldehyde.
C. Benzodiazepines can be used to treat the symptoms of withdrawal in chronic alcoholic.
D. Respiratory depression induced by high doses of barbiturates can be treated by administration of ethanol.
E. Benzodiazepines do not cause physical dependence.

11. Common adverse effects of cimetidine include:
A. agranulocytosis.
B. systemic lupus erythematosus.
C. antiestrogenic effects.
D. hypertension.
E. inhibition of hepatic metabolism of other drugs.

12. Which of the following organisms has been implicated as a possible cause of chronic gastritis and peptic ulcer disease?
A. Campylobacter jejuni
B. Escherichia coli
C. Calymmatobacterium granlomatis
D. Helibacter pylori
E. Giardia lamblia

13. All of the following drugs are correctly matched to their actions EXCEPT:
A. cimetidine: blocks H_2 histamine receptors
B. misoprostol: inhibits cAMP production
C. omeprazole: activates adenylate cyclase
D. pirenzepine: selectively blocks muscarinic receptors in stomach
E. sulcrafate: protects ulcerated mucosa

14. Which one of the following statements is CORRECT?
A. Famotidine blocks the action of gastrin on the parietal cell.
B. Gastrin and acetylcholine induce a disease in intracellular calcium levels.
C. Histamine and prostaglandin E_2 have opposing actions on the secretion of gastric acid.
D. Omeprazoie blocks muscarinic receptors of parietal cell.
E. Pirenzepine is similar to atropine in its actions.

15. A competitive antagonist of receptor alters
A. the maximum effect of agonist.
B. the number of receptor binding sites.
C. the agonist concentration at the receptor site.
D. the affinity of drug-receptor binding.
E. the magnitude of drug effect at low concentration.

16. Which one of the following topical corticosteroids has the highest relative efficacy on their anti-inflammatory activity?
A. Triamcinolone acetonide
B. Hydrocortisone
C. Clobetasol propionate
D. Betamethasone valerate
E. Fluocinolone acetonide

17. The antifungal activity of griseofulvin can be attributed to the following mechanisms EXCEPT:
A. interaction with the sterols of cell membrane.
B. inhibition of hyphal cell wall synthesis.
C. effects on nucleic acid synthesis.
D. inhibition of mitosis.
E. destruction of cytoplasmic microtubules.

18. At inflammation stage, serum proteins often move from serum into the interstitial fluid. For a drug highly binding to the plasma proteins, the change often leads to
A. a decrease in the apparent volume of distribution.
B. a decrease in the total body clearance.
C. an increase in the apparent volume of distribution.
D. an increase in the total body clearance.
E. an increase in the apparent volume of distribution and a decrease in the total body clearance.

19. The following statements about topical retinoic acid are true EXCEPT:
A. it is used for the treatment of acne vulgaris.
B. it is a vitamin A derivative.
C. it increases epidermal cell turnover.
D. it is well absorbed into the systemic circulation.
E. it's most common side effects are erythma and dryness.

20. Which one of the following agents provides the best protection against UVA radiation?
A. p-aminobenzoic acid
B. oxybenzone
C. dioxybenzone
D. sulisobenzone
E. dibenzoylmethane

21. Which one of the following acts at central presynaptic α_2 receptor?
A. Clonidine
B. Enalapril.
C. Hydrochlorothiazide
D. Minoxidil
E. Verapamil

22. Which of the following drugs may enhance the rate of gastric emptying?
A. metoclopramide
B. propantheline
C. morphine
D. atropine
E. mecamylamine

23. The β-adrenergic blockers, such as propranolol, are contraindicated as a treatment of angina in patients with all of the following conditions EXCEPT:
A. asthma.
B. hypertension.
C. congestive heart failure.
D. insulin-dependent diabetes.
E. peripheral vascular disease.

(背面仍有題目,請繼續作答)

24. All of the following are therapeutically useful in the treatment of congestive heart failure EXCEPT:
A. a β-blocker such as propranolol.
B. a vasodilator such as hydralzine.
C. a cardiac glycoside such as digoxin.
D. a diuretic such as hydrochlorothiazide.
E. a β-adrenergic agonist such as norepinephrine.

25. Increasing urinary pH will:
A. increase the renal clearance of methamphetamine.
B. increase the active secretion of methamphetamine.
C. increase the passive reabsorption of methamphetamine.
D. increase the glomerular filtration rate of methamphetamine.
E. None of above.

26. Which of the following is most effective in treating the ischemic pain of variant angina?
A. Atropine
B. Isosorbide dinitrate
C. Nifedipine
D. Propranolol
E. Sodium nitroprusside

27. Which one of the following statements is INCORRECT?
A. Amiodarone prolongs repolarization.
B. Mexiletine shortens repolarization and decreases the effective refratory period.
C. Prapranolol increases phase 4 depolarization.
D. Quinidine prolongs repolarization and the effective refractory period.
E. Verapamil shortens the duration of the action potential.

28. The anticoagulant activity of warfarin can be potentiated by all of the following EXCEPT:
A. aspirin.
B. cimetidine.
C. disulfiram.
D. phenylbutazone.
E. rifampin.

29. Which of the following enzyme is well known to subject to genetic difference?
A. debrisoquine 4-hydroxylase
B. phenacetin O-deethylase
C. mephenytoin 4-hydroxylase
D. nefidipine hydroxylase
E. disopyramide N-dealkylase

30. All of the following produce a significant decrease in peripheral resistance EXCEPT:
A. ACE inhibitors.
B. β-blocker.
C. clonidine.
D. chronic administration of diuretics.
E. hydralazine.

31. All of the following statements concerning nitroglycerin are correct EXCEPT:
A. It undergoes significant first-pass metabolism in the liver.
B. It causes an evevation of intracellular cGMP.
C. It may cause significant reflex tachycardia.
D. It significantly decreases AV conduction.
E. It can cause postural hypotension.

32. All of the following are useful in the treatment of digitalis overdose EXCEPT:
A. dietary potassium supplements for patients being treated concomitantly with diuretics.
B. digoxin immune Fab fragments.
C. lidocaine.
D. phenytoin.
E. quinidine.

33. A drug has a total body clearacne of 1 liter/hour; a volume of distribution of 70 liter. The half-life of the drug is approximately
A. 1 hr.
B. 7 hr.
C. 49 hr.
D. 70 hr.
E. 100 hr.

34. Cisplatin acts primarily by:
A. inhibiting protein synthesis.
B. cross-linking DNA.
C. inhibiting pyrimidine synthesis.
D. inhibiting the function of microtubule.
E. inhibiting nucleotide interconversions.

35. Etoposide is a(n):
A. alkylataing agent.
B. steroid hormone.
C. antibiotics.
D. antimetabolites.
E. inhibitor of topoisomerase II.

36. The clearance of theophylline for a 60 kg nonsmoking male patient is 0.2 L/kg/hr and volume of distribution is 0.5 L/kg. To achieve a plasma concentration of 15 mg/L immediately, what is the appropriate loading dose?
A. 450 mg
B. 180 mg
C. 450 mg/hr
D. 180 mg/hr
E. none of above

37. All the following statements about taxoids are accurate EXCEPT:
A. They are S-phase specific agents.
B. They act by inhibiting the formation of spindle fibers.
C. Have been used for the treatment of ovarian cancer that is unresponsive to first-line therapies.
D. Are extracted from the yew trees.
E. Are exampled by paclitaxel and docetaxel.

38. Which one of the following anticancer drugs is cell cycle nonspecific?
A. Vinblastine
B. Etoposide
C. Cytarabine
D. Cyclophosphamide
E. 5-fluorouracil

(背面仍有題目,請繼續作答)

39. Digitalis glycosides are used in which of the following conditions?
I. Atrial fibrillation
II. High-output cardiac failure
III. Paroxysmal atrial tachycardia
IV. Cardiac temponade
A. I, II, & III
B. I & III
C. II & IV
D. IV only
E. I, II, III, & IV

40. Which one of the following agents is used as the main drug for treating colon cancer?
A. Cyclophosphamide
B. Glucocorticoids
C. L-Asparaginase
D. 5-Fluorouracil
E. Methptrexate

41. Concerning resistance to multidrug all the following statements are correct EXCEPT:
A. The resistance is due to decreased drug accumulation and accerated drug efflux in the cell.
B. Is associated with increased production of P-glycoprotein.
C. Is due to over-expression of dihydrofolate reductase gene.
D. Is associated with gene amplification.
E. Is associated with increased expression of MDR genes.

42. The antiarrhythmic agent tocainide has which of the following properties?
I. It can be used for ventricular arrhythmias.
II. It can be given orally.
III. It is also a local anesthetic.
IV. It lengthens the action potential.
A. I, II, & III
B. I & III
C. II & IV
D. III only
E. I, II, III, & IV

43. Tamoxifen acts:
A. to inhibit DNA synthesis.
B. as a S-phase specific agent.
C. as an analogue of glucocorticoids.
D. as an estrogen antagonist.
E. as an alkylating agent.

44. Which one of the drugs is always administered in combination with imipenem to increase its plasma half-life:
A. Cilastatin
B. Clavulanic acid
C. Probenecid
D. Aztreonam
E. Ascorbic acid

45. All of the following statements about the action mechanisms of aminoglycosides are accurate EXCEPT:
A. They induce misreading of the code on the mRNA template.
B. They prevent polysome formation.
C. They bind to the 50S ribosomal subunit and interfere with the "initiation complex" of the peptide formation.
D. They enter bacteria partly by active transport and has little activity against strict anaerobes.
E. They are bactericidal.

46. Which one of the following enzymes is important for biosynthesis of cholesterol?
A. Adenylyl cyclase
B. topoisomerase
C. HMG-CoA reductase
D. ribonucleotide reductase
E. thymidylate synthase

47. Which one of the drugs is used for the inhibition of bacterial folic acid synthesis?
A. Dapsone
B. Trimethoprim
C. Pyrimethamine
D. p-aminosalicylic acid
E. p-aminobenzoic acid

48. Each of the following antiarrhythmic agents is correctly matched with an appropriate untoward effect EXCEPT
A. quinidine-cinchonism
B. procainamide-hypotension with intravenous administration
C. lidocaine-systemic lupus erythematosus-like syndrome
D. disopyramide-untoward anticholinergic effects
E. bretylium-orthostatic hypotension

49. Which one of the following antiviral agents inhibits virus' reverse transcriptase and is beneficial for AIDS patient?
A. Interferons
B. Acyclovir
C. Rimantadine
D. AZT
E. Rifampin

50. Which one of the antiviral agents has beneficial effects in some cases of Parkinson's disease?
A. Amantadine
B. Acyclovir
C. Ribavirin
D. Foscarnet
E. Methisazone