

D.Pharma 2nd Year

Diploma in Pharmacy

2nd Year

Unit Test

MCQ



Mahatma Gandhi University

Daramdin , Sikkim

737121

www.mgusikkim.com

mgusikkim@gmail.com

The top of the first page of your response sheets should look like this:

Unit Test MCQ

Submitted to

Department of Pharmacy

Mahatma Gandhi University , Sikkim



- 1. Name of the Student :**
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**Pharmacy Law
&
Ethics**

1. Pharmaceutical legislation in India primarily aims to:

- A) Maximize the profit of pharmaceutical companies
- B) Regulate the import, manufacture, distribution, and sale of drugs
- C) Promote the use of traditional medicine only
- D) Reduce the number of pharmacies in the country

Answer:

2. The "Drugs Technical Advisory Board" (DTAB) is constituted under which Act?

- A) Pharmacy Act, 1948
- B) Narcotic Drugs and Psychotropic Substances Act, 1985
- C) Drugs and Cosmetics Act, 1940
- D) Poisons Act, 1919

Answer:

3. The Drug Controller General of India (DCGI) is the head of which organization?

- A) Pharmacy Council of India
- B) Central Drugs Standard Control Organization (CDSCO)
- C) Indian Pharmacopoeia Commission
- D) National Pharmaceutical Pricing Authority

Answer:

4. "Jurisprudence" in the context of pharmacy refers to:

- A) The study of drug formulations
- B) The science of law and legal principles related to pharmacy
- C) The ethics of medical research
- D) The study of drug interactions

Answer:

5. Which of the following is the primary difference between a "law" and an "ethics" in the pharmacy profession?

- A) Laws are voluntary, while ethics are enforceable by the state
- B) Laws are enforceable by the state, while ethics are moral principles guiding conduct
- C) Laws are only for manufacturers, while ethics are for pharmacists
- D) There is no difference; both terms are interchangeable

Answer:

6. The Pharmacy Act was passed in India in the year:

- A) 1940
- B) 1945
- C) 1948
- D) 1950

Answer:

7. The Pharmacy Council of India (PCI) was established under which Act?

- A) Drugs and Cosmetics Act, 1940
- B) Pharmacy Act, 1948
- C) Narcotic Drugs and Psychotropic Substances Act, 1985
- D) Indian Pharmacopoeia Act

Answer:

8. The main object of the Pharmacy Act, 1948 is to:

- A) Control the advertisement of drugs
- B) Regulate the profession of pharmacy
- C) Prevent cruelty to animals
- D) Regulate the sale of narcotics

Answer:

9. The Pharmacy Council of India is also known as the:

- A) State Pharmacy Council
- B) Joint Pharmacy Council
- C) Central Council of Pharmacy
- D) Medical Council of India

Answer:

10. The Pharmacy Council of India (PCI) consists of how many elected members among themselves by registered pharmacists from each state?

- A) One
- B) Two
- C) Three
- D) Four

Answer:

11. The Pharmacy Council of India has how many state government-nominated members?

- A) Three
- B) Five
- C) Seven
- D) Nine

Answer:

12. Which of the following is NOT a function of the Pharmacy Council of India (PCI)?

- A) To prescribe the minimum standards of education for pharmacy
- B) To maintain a central register of pharmacists
- C) To approve courses of study for pharmacists
- D) To control the prices of medicines in the country

Answer:

13. The Education Regulations prescribed by the PCI are related to:

- A) The minimum qualification for admission to pharmacy courses
- B) The duration of the pharmacy course
- C) The syllabus and conditions for examination
- D) All of the above

Answer:

14. The State Pharmacy Council is constituted under which Act?

- A) Drugs and Cosmetics Act, 1940
- B) Pharmacy Act, 1948
- C) NDPS Act, 1985
- D) Poisons Act, 1919

Answer:

15. The nominated or elected members in the "State Pharmacy Council" hold office for a term of:

- A) 3 years
- B) 4 years
- C) 5 years
- D) 6 years

Answer:

16. A "Joint State Pharmacy Council" can be constituted for:

- A) One state only
- B) Two or more states
- C) Union territories only
- D) International jurisdictions

Answer:

17. A person is eligible for registration as a pharmacist if he/she:

- A) Has passed the 10th standard exam
- B) Has a Diploma in Pharmacy and is of good character
- C) Is a medical doctor
- D) Has worked in a pharmacy for 5 years

Answer:

18. The register of pharmacists is maintained by which body?

- A) Central Drugs Standard Control Organization
- B) State Pharmacy Council
- C) Indian Medical Association
- D) National Pharmaceutical Pricing Authority

Answer:

19. A person whose name is removed from the register of pharmacists can be reinstated by:

- A) The Central Government
- B) The State Pharmacy Council
- C) The Drug Inspector
- D) The High Court

Answer:

20. Which section of the Pharmacy Act, 1948 deals with inter-state agreements for joint pharmacy councils?

- A) Section 10
- B) Section 20
- C) Section 42
- D) Section 15

Answer:

21. The Pharmacy Practice Regulations, 2015, were introduced by the PCI to:

- A) Regulate the practice of pharmacy professionals
- B) Control the prices of medicines
- C) Regulate the import of cosmetics
- D) Establish new pharmacy colleges

Answer:

22. According to the Pharmacy Practice Regulations, 2015, a registered pharmacist must display his/her registration certificate:

- A) At home
- B) At a conspicuous place in the pharmacy
- C) With the drug inspector
- D) At the local police station

Answer:

23. The minimum educational qualification for registration as a pharmacist under the Pharmacy Act is:

- A) 10+2 with science
- B) Diploma in Pharmacy (D.Pharm) from a PCI-approved institution
- C) Bachelor of Science
- D) Certificate course in pharmacy

Answer:

24. A person who is not registered as a pharmacist but still dispenses drugs is liable for punishment under which Act?

- A) Drugs and Cosmetics Act
- B) Pharmacy Act
- C) NDPS Act
- D) Indian Penal Code

Answer:

25. The first register of pharmacists is prepared by which authority?

- A) Central Government
- B) State Government
- C) State Pharmacy Council
- D) Pharmacy Council of India

Answer:

26. The Drugs and Cosmetics Act was passed in the year:

- A) 1940
- B) 1945
- C) 1948
- D) 1950

Answer:

27. The Drugs and Cosmetics Act, 1940 was passed on which date?

- A) 10th April 1940
- B) 10th August 1940
- C) 15th May 1940
- D) 15th June 1940

Answer:

28. The Drugs and Cosmetics Rules were framed in the year:

- A) 1940
- B) 1945
- C) 1948
- D) 1950

Answer:

29. The primary objective of the Drugs and Cosmetics Act is to:

- A) Regulate the import, manufacture, distribution, and sale of drugs and cosmetics
- B) Promote the export of Indian drugs
- C) Provide free medicines to the poor
- D) Regulate the price of medicines

Answer:

30. If a drug is manufactured under a name that belongs to another drug, it is called:

- A) Adulterated drug
- B) Misbranded drug
- C) Spurious drug
- D) Patent drug

Answer:

31. A drug that contains a filthy, putrid, or decomposed substance is known as:

- A) Spurious drug
- B) Adulterated drug
- C) Misbranded drug
- D) Generic drug

Answer:

32. Which of the following schedules of the Drugs and Cosmetics Act specifies the expiry periods of drugs?

- A) Schedule J
- B) Schedule P
- C) Schedule M
- D) Schedule X

Answer:

33. Schedule G of the Drugs and Cosmetics Act deals with:

- A) Standards for disinfectants
- B) Drugs that must be sold under generic names only
- C) List of drugs to be labelled with the symbol "Rx"
- D) Standards for ophthalmic preparations

Answer:

34. Schedule H drugs can be sold only:

- A) Over the counter (OTC)
- B) On the prescription of a registered medical practitioner
- C) By a wholesale dealer
- D) Without any restriction

Answer:

35. Schedule X drugs are those which are:

- A) Habit-forming and require stricter control than Schedule H drugs
- B) Over-the-counter drugs
- C) Cosmetics
- D) Veterinary drugs

Answer:

36. Schedule M of the Drugs and Cosmetics Act deals with:

- A) Good Manufacturing Practices (GMP) for pharmaceutical products
- B) Standards for disinfectants
- C) List of drugs to be sold under generic names
- D) Standards for cosmetics

Answer:

37. Schedule N of the Drugs and Cosmetics Act deals with:

- A) List of drugs to be sold under generic names
- B) List of approved drugs
- C) Requirements for the premises of a pharmacy
- D) Standards for biological products

Answer:

38. A retail license for the sale of drugs is granted in which form?

- A) Form 19
- B) Form 20
- C) Form 21
- D) Form 22

Answer:

39. A wholesale license for the sale of drugs is granted in which form?

- A) Form 19
- B) Form 20
- C) Form 21
- D) Form 22

Answer:

40. A restricted license for the sale of drugs (for certain categories like poisons) is granted in which form?

- A) Form 19
- B) Form 20
- C) Form 21
- D) Form 22

Answer:

41. The duration of a license to sell drugs is valid for a period of:

- A) 1 year
- B) 2 years
- C) 3 years
- D) 5 years

Answer:

42. Which of the following is NOT a class of drugs prohibited from import under the Drugs and Cosmetics Act?

- A) Drugs that are not of standard quality
- B) Drugs that are patent or proprietary
- C) Drugs that are spurious
- D) Drugs that are misbranded

Answer:

43. A drug inspector is appointed under which section of the Drugs and Cosmetics Act?

- A) Section 18
- B) Section 21
- C) Section 25
- D) Section 30

Answer:

44. The Central Drugs Laboratory (CDL) is established under which section of the Drugs and Cosmetics Act?

- A) Section 3
- B) Section 6
- C) Section 10
- D) Section 15

Answer:

45. The minimum punishment for the manufacture of spurious drugs under the Drugs and Cosmetics Act is:

- A) 3 months imprisonment
- B) 1 year imprisonment
- C) 5 years imprisonment
- D) 10 years imprisonment

Answer:

46. Which of the following is a loan license?

- A) License to import drugs
- B) License to manufacture drugs by a party using the facilities of another manufacturer
- C) License to sell drugs at a wholesale level
- D) License to export drugs

Answer:

47. Which schedule of the Drugs and Cosmetics Act contains the list of drugs that must be sold under generic names only?

- A) Schedule C
- B) Schedule F
- C) Schedule G
- D) Schedule W

Answer:

48. Which schedule contains the list of drugs that are prohibited to be manufactured and sold in India?

- A) Schedule E
- B) Schedule H
- C) Schedule I
- D) Schedule X

Answer:

49. The "Drugs Consultative Committee" is constituted to advise the:

- A) Central Government
- B) State Governments
- C) Drug Controller General of India
- D) Central and State Governments on matters related to uniformity in the administration of the Act

Answer:

50. The primary responsibility of the Central Drugs Standard Control Organization (CDSCO) under the Drugs and Cosmetics Act is:

- A) Ensuring compliance with the regulations to protect public health
- B) Issuing licenses for drug manufacturing only
- C) Regulating the prices of cosmetics
- D) Conducting clinical trials for new drugs

Answer:

51. The Narcotic Drugs and Psychotropic Substances (NDPS) Act was enacted in the year:

- A) 1980
- B) 1985
- C) 1990
- D) 1995

Answer:

52. The primary objective of the NDPS Act is to:

- A) Promote the use of narcotic drugs
- B) Control and regulate operations related to narcotic drugs and psychotropic substances
- C) Legalize the use of cannabis
- D) Regulate the sale of antibiotics

Answer:

53. Which section of the NDPS Act prohibits the cultivation, production, sale, and possession of narcotic drugs?

- A) Section 8
- B) Section 10
- C) Section 27
- D) Section 37

Answer:

54. The minimum punishment for an offence involving a commercial quantity of a narcotic drug is:

- A) 1 year imprisonment
- B) 5 years imprisonment
- C) 10 years imprisonment
- D) Life imprisonment

Answer:

55. Which section of the NDPS Act deals with punishment for possession of narcotic drugs for personal use (small quantity)?

- A) Section 8
- B) Section 21
- C) Section 27
- D) Section 37

Answer:

56. The chief agency responsible for enforcing the NDPS Act at the central level is the:

- A) Central Bureau of Investigation (CBI)
- B) Narcotics Control Bureau (NCB)
- C) Enforcement Directorate (ED)
- D) National Investigation Agency (NIA)

Answer:

57. According to the NDPS Act, drugs are classified into quantities of:

- A) Small, Intermediate, and Commercial
- B) Low, Medium, and High
- C) Personal, Medical, and Commercial
- D) Retail, Wholesale, and Bulk

Answer:

58. The bail provisions under the NDPS Act are very strict. Which section deals with these conditions?

- A) Section 27
- B) Section 35
- C) Section 37
- D) Section 42

Answer:

59. Under the NDPS Act, the authority to issue warrants for search and seizure is with the:

- A) Police Inspector
- B) Magistrate
- C) Drug Inspector
- D) Chief Minister

Answer:

60. Which of the following is NOT a psychotropic substance as per the NDPS Act?

- A) Diazepam
- B) Alprazolam
- C) Paracetamol
- D) Codeine

Answer:

61. Cultivation of opium poppy is controlled under which Act in India?

- A) Drugs and Cosmetics Act
- B) Pharmacy Act
- C) NDPS Act, 1985
- D) Poisons Act

Answer:

62. The punishment for consumption of a narcotic drug under the NDPS Act may include:

- A) Imprisonment up to 1 year
- B) Fine up to ₹20,000
- C) Both A and B
- D) Only community service

Answer:

63. The Narcotics Control Bureau (NCB) functions under the administrative control of which ministry?

- A) Ministry of Health and Family Welfare
- B) Ministry of Home Affairs
- C) Ministry of Finance
- D) Ministry of Law and Justice

Answer:

64. "Coca leaf," "opium," and "cannabis" are defined under which Act?

- A) Pharmacy Act, 1948
- B) Drugs and Cosmetics Act, 1940
- C) NDPS Act, 1985
- D) Poisons Act, 1919

Answer:

65. The NDPS Act adopts a reformative approach towards which category of persons?

- A) Drug traffickers
- B) Drug addicts
- C) Drug manufacturers
- D) Police informers

Answer:

66. The Drugs and Magic Remedies (Objectionable Advertisements) Act was passed in the year:

- A) 1954
- B) 1960
- C) 1965
- D) 1970

Answer:

67. The main objective of the Drugs and Magic Remedies (Objectionable Advertisements) Act is to:

- A) Promote the sale of magic remedies
- B) Prohibit advertisements of certain drugs and remedies for objectionable diseases
- C) Regulate the price of drugs
- D) Promote generic medicines

Answer:

68. Which of the following diseases CANNOT be advertised as being cured by a drug under the Drugs and Magic Remedies Act?

- A) Common cold
- B) Cancer
- C) Headache
- D) Muscular pain

Answer:

69. The Prevention of Cruelty to Animals Act was passed in the year:

- A) 1950
- B) 1960
- C) 1970
- D) 1980

Answer:

70. The authority responsible for regulating animal experimentation in India is:

- A) Pharmacy Council of India
- B) Central Drugs Standard Control Organization
- C) Committee for the Purpose of Control and Supervision of Experiments on Animals (CPCSEA)
- D) Indian Council of Medical Research (ICMR)

Answer:

71. The Poisons Act was passed in the year:

- A) 1919
- B) 1940
- C) 1945
- D) 1950

Answer:

72. The Medical Termination of Pregnancy (MTP) Act was passed in the year:

- A) 1970
- B) 1971
- C) 1980
- D) 1985

Answer:

73. The Food Safety and Standards Authority of India (FSSAI) was established under which Act?

- A) Food Safety and Standards Act, 2006
- B) Drugs and Cosmetics Act, 1940
- C) Pharmacy Act, 1948
- D) NDPS Act, 1985

Answer:

74. The National Pharmaceutical Pricing Authority (NPPA) was established to:

- A) Promote the export of pharmaceuticals
- B) Regulate drug prices and ensure affordable access to essential medicines
- C) Conduct clinical trials
- D) Approve new drug applications

Answer:

75. The Drugs Price Control Order (DPCO) is issued under the provisions of the:

- A) Pharmacy Act, 1948
- B) Essential Commodities Act, 1955
- C) Drugs and Cosmetics Act, 1940
- D) NDPS Act, 1985

Answer:

76. The latest DPCO was issued in which year?

- A) 2005
- B) 2010
- C) 2013
- D) 2018

Answer:

77. The National List of Essential Medicines (NLEM) is prepared by the:

- A) Pharmacy Council of India
- B) Central Drugs Standard Control Organization
- C) Ministry of Health and Family Welfare
- D) National Pharmaceutical Pricing Authority

Answer:

78. The "New Drugs and Clinical Trials Rules" were introduced in the year:

- A) 2015
- B) 2017
- C) 2019
- D) 2021

Answer:

79. The Indian Pharmacopoeia Commission (IPC) is an autonomous body under the:

- A) Ministry of Finance
- B) Ministry of Health and Family Welfare
- C) Ministry of Commerce
- D) Ministry of Law and Justice

Answer:

80. The term "ANDA" stands for:

- A) Abbreviated New Drug Application
- B) American New Drug Application
- C) Active New Drug Authorization
- D) Approved New Drug Analysis

Answer:

81. The term "NDA" in the context of drug regulation stands for:

- A) New Drug Authorization
- B) New Drug Application
- C) National Drug Authority
- D) Narcotic Drug Act

Answer:

82. A generic drug is one that is:

- A) Equivalent to a brand-name drug in dosage, safety, strength, and use
- B) Cheaper and of lower quality
- C) Only available over the counter
- D) Always manufactured by the innovator company

Answer:

83. The Pharmaceutical Policy 2002 in India focuses on:

- A) Promoting the use of generic medicines
- B) Strengthening the patent system
- C) Reducing the number of pharmacies
- D) Increasing the price of all medicines

Answer:

84. A "clinical trial" is a systematic study conducted to:

- A) Market a new drug
- B) Evaluate the safety and efficacy of a drug in humans
- C) Manufacture a drug on a large scale
- D) Package a drug

Answer:

85. The "Institutional Animal Ethics Committee" (IAEC) is responsible for:

- A) Conducting clinical trials
- B) Reviewing and approving animal experiments in an institution
- C) Regulating drug prices
- D) Controlling drug advertisements

Answer:

86. The Code of Pharmaceutical Ethics is a set of guidelines for pharmacists that primarily deals with:

- A) How to maximize profit
- B) Moral and professional conduct
- C) The chemical synthesis of drugs
- D) The marketing of cosmetics

Answer:

87. A pharmacist is ethically bound to maintain:

- A) Patient confidentiality
- B) The highest price for medicines
- C) A close relationship with only one doctor
- D) A competitive attitude towards other pharmacists

Answer:

88. In relation to his trade, a pharmacist should NOT:

- A) Dispense generic medicines
- B) Advertise his professional services in an unethical manner
- C) Maintain proper records
- D) Counsel patients on drug use

Answer:

89. The Pharmacist's Oath includes a commitment to:

- A) Serve humanity and place the health of the patient first
- B) Maximize personal financial gain
- C) Promote only brand-name drugs
- D) Ignore patient concerns

Answer:

90. A pharmacist should refuse to dispense a prescription if:

- A) The prescription is not signed by the prescriber
- B) The patient requests a cheaper alternative
- C) The pharmacist is busy
- D) The prescription is written in English

Answer:

91. "Ethical problem solving" in pharmacy involves:

- A) Ignoring ethical dilemmas
- B) Applying moral principles and professional guidelines to resolve conflicts
- C) Prioritizing profit over patient safety
- D) Disobeying the law

Answer:

92. The code of ethics for a pharmacist in relation to the medical profession emphasizes:

- A) Rivalry with doctors
- B) Collaboration and mutual respect
- C) Prescribing drugs independently
- D) Avoiding contact with medical professionals

Answer:

93. A pharmacist is ethically bound to provide emergency services:

- A) Only during business hours
- B) At any time, even outside normal working hours, if possible
- C) Only for high-value customers
- D) Never, as it is the doctor's responsibility

Answer:

94. "Code of ethics for pharmacists in relation to his job" includes:

- A) Dispensing drugs with accuracy and care
- B) Maintaining a clean and well-organized pharmacy
- C) Keeping abreast of new knowledge and developments
- D) All of the above

Answer:

95. If a pharmacist suspects a prescription is forged, he/she should:

- A) Dispense the medication anyway
- B) Verify the prescription with the prescriber
- C) Ignore the suspicion
- D) Sell the medication at a higher price

Answer:

96. A valid prescription must be signed by:

- A) The patient
- B) The pharmacist
- C) A registered medical practitioner
- D) The patient's relative

Answer:

97. Which of the following is a legal requirement for a prescription to be valid?

- A) The patient's medical history
- B) The pharmacy's approval
- C) The physician's signature
- D) The patient's identification number

Answer:

98. The abbreviation "Rx" on a prescription stands for:

- A) Take thou
- B) Pharmacy only
- C) Dangerous drug
- D) For external use only

Answer:

99. A prescription drug is one that:

- A) Can be bought without a prescription
- B) Has no known side effects
- C) Requires a prescription from a licensed healthcare provider
- D) Is non-addictive and legal to sell without restrictions

Answer:

100. The symbol "Rx" on a drug label indicates that the drug is:

- A) Over the counter (OTC)
- B) Prescription only
- C) For veterinary use only
- D) A cosmetic product

Answer:

**Hospital
&
Clinical Pharmacy**

1. A hospital pharmacy is a department within a hospital that is responsible for:

- A) Only manufacturing of drugs
- B) Procurement, storage, dispensing, and monitoring of medications
- C) Only patient admission
- D) Surgical procedures

Answer:

2. The head of the hospital pharmacy department is usually designated as:

- A) Chief Medical Officer
- B) Director of Pharmacy / Chief Pharmacist
- C) Drug Inspector
- D) Nursing Superintendent

Answer:

3. The pharmacy and therapeutics committee (PTC) in a hospital is responsible for:

- A) Managing the hospital budget
- B) Formulating the hospital formulary and promoting rational drug use
- C) Conducting surgical operations
- D) Admitting patients

Answer:

4. Which of the following is NOT a function of a hospital pharmacist?

- A) Dispensing medications
- B) Monitoring drug interactions
- C) Performing major surgeries
- D) Patient counseling

Answer:

5. The "hospital formulary" is a list of:

- A) Only expensive drugs
- B) Approved drugs with their dosage forms, strengths, and policies for use in the hospital
- C) All drugs available in the market
- D) Only generic drugs

Answer:

6. The "drug and therapeutic information" service in a hospital is often provided by:

- A) A nurse
- B) A clinical pharmacist
- C) A hospital administrator
- D) A dietician

Answer:

7. Which of the following is a type of hospital pharmacy layout?

- A) Centralized pharmacy
- B) Decentralized pharmacy (satellite pharmacy)
- C) Both A and B
- D) Only retail pharmacy

Answer:

8. A "unit dose drug distribution system" refers to:

- A) Dispensing drugs in bulk to nursing units
- B) Dispensing a single dose of a drug in a ready-to-administer form for a specific patient
- C) Dispensing only liquid formulations
- D) Dispensing only controlled substances

Answer:

9. Which of the following is an advantage of the unit dose system?

- A) Reduces medication errors
- B) Reduces drug waste
- C) Improves inventory control
- D) All of the above

Answer:

10. The "floor stock" system in a hospital refers to:

- A) Storing medications in the central pharmacy only
- B) Keeping a limited supply of drugs in patient care areas for immediate use
- C) Dispensing drugs only on prescription
- D) Storing drugs in the basement

Answer:

11. Which of the following drugs is commonly kept as floor stock in emergency wards?

- A) Antidotes (e.g., naloxone)
- B) Emergency drugs (e.g., epinephrine, atropine)
- C) IV fluids
- D) All of the above

Answer:

12. The "two-bin system" is a method of:

- A) Drug dispensing
- B) Inventory control
- C) Patient counseling
- D) Waste disposal

Answer:

13. The "ABC analysis" in inventory management categorizes items based on:

- A) Their alphabetical order
- B) Their cost and consumption value
- C) Their expiry date
- D) Their therapeutic category

Answer

14. In ABC analysis, "A" category items typically constitute:

- A) 10-20% of items but 70-80% of the total inventory value
- B) 50% of items and 50% of value
- C) 70-80% of items but 10-20% of value
- D) 100% of items

Answer:

15. The "economic order quantity (EOQ)" is the order size that minimizes:

- A) Total inventory cost (ordering cost + carrying cost)
- B) Only ordering cost
- C) Only carrying cost
- D) Drug price

Answer:

16. "FEFO" method of stock rotation stands for:

- A) First Expired, First Out
- B) First Entered, First Out
- C) Fast Expiry, Fast Out
- D) Free Entry, Free Out

Answer:

17. Which of the following is a document used in hospital pharmacy to record narcotic drug transactions?

- A) Prescription register
- B) Narcotic register
- C) Patient file
- D) Discharge summary

Answer:

18. The "code blue" situation in a hospital refers to:

- A) Fire emergency
- B) Cardiac arrest emergency
- C) Bomb threat
- D) Power failure

Answer:

19. The "crash cart" (emergency cart) in a hospital contains:

- A) Emergency drugs and equipment for resuscitation
- B) Patient records
- C) Surgical instruments
- D) Food supplies

Answer:

20. Which of the following is NOT a responsibility of the hospital pharmacist regarding the drug storage area?

- A) Maintaining proper temperature and humidity
- B) Keeping drugs out of reach of children
- C) Performing patient surgeries
- D) Segregating expired drugs

Answer:

21. The "individual prescription order" system in a hospital means:

- A) All drugs for all patients are dispensed together
- B) Each patient's medication is dispensed based on a separate prescription
- C) Drugs are dispensed without any prescription
- D) Only narcotics are dispensed

Answer:

22. Which of the following is a disadvantage of the individual prescription order system?

- A) Increased medication errors
- B) Increased workload for pharmacists
- C) Higher cost due to duplicate packaging
- D) All of the above

Answer:

23. In a "decentralized pharmacy" model, satellite pharmacies are located:

- A) Outside the hospital
- B) Near patient care areas (e.g., ICU, oncology)
- C) Only in the basement
- D) Only in the administrative block

Answer:

24. "Automated dispensing cabinets" (ADCs) in hospitals help to:

- A) Increase medication errors
- B) Securely store and dispense medications at the point of care
- C) Replace pharmacists entirely
- D) Increase drug costs

Answer:

25. Which of the following is a type of "closed-loop medication management" system?

- A) Prescribing → Transcribing → Dispensing → Administering → Monitoring
- B) Only dispensing
- C) Only prescribing
- D) Only administering

Answer:

26. "Intravenous admixture services" in a hospital pharmacy involve:

- A) Preparing oral suspensions
- B) Preparing sterile IV solutions (e.g., adding drugs to IV fluids)
- C) Dispensing tablets
- D) Packing capsules

Answer:

27. The "central sterile supply department" (CSSD) in a hospital is responsible for:

- A) Sterilizing and supplying surgical instruments and supplies
- B) Dispensing oral medications
- C) Managing the hospital budget
- D) Conducting clinical trials

Answer:

28. Which of the following is a high-alert medication that requires special handling?

- A) Paracetamol
- B) Insulin
- C) Vitamin C
- D) Calcium tablets

Answer:

29. "Look-alike, sound-alike" (LASA) drugs are a major cause of:

- A) Medication errors
- B) Improved patient outcomes
- C) Reduced pharmacy workload
- D) Lower drug costs

Answer:

30. An example of a LASA pair is:

- A) Paracetamol and Ibuprofen
- B) Amoxicillin and Amlodipine
- C) Aspirin and Atorvastatin
- D) Cetirizine and Ciprofloxacin

Answer:

31. "Tall man lettering" is used to:

- A) Make drug names look attractive
- B) Distinguish between LASA drug names (e.g., buPROPion vs busPIRone)
- C) Increase the font size of all drug labels
- D) Indicate high-cost drugs

Answer:

32. The "medication error reporting system" in a hospital is important for:

- A) Punishing staff
- B) Learning from errors and preventing recurrence
- C) Increasing workload
- D) Reducing drug inventory

Answer:

33. A "near miss" in medication safety refers to:

- A) An error that reaches the patient
- B) An error that is caught before reaching the patient
- C) A fatal error
- D) An error in prescription writing only

Answer:

34. The "five rights" of medication administration do NOT include:

- A) Right patient
- B) Right drug
- C) Right dose
- D) Right profit

Answer:

35. The "right to refuse medication" is a right of the:

- A) Doctor
- B) Pharmacist
- C) Patient
- D) Nurse

Answer:

36. Clinical pharmacy is a branch of pharmacy that focuses on:

- A) Manufacturing of drugs
- B) Direct patient care and optimization of drug therapy
- C) Drug marketing
- D) Packaging of drugs

Answer:

37. The term "clinical pharmacist" was first introduced in which country?

- A) India
- B) United States
- C) United Kingdom
- D) Germany

Answer:

38. A clinical pharmacist typically works in:

- A) Community pharmacy only
- B) Hospital or clinical setting as part of a healthcare team
- C) Pharmaceutical industry only
- D) Regulatory agency only

Answer:

39. Which of the following is a core clinical pharmacy activity?

- A) Medication therapy management (MTM)
- B) Patient counseling
- C) Drug therapy monitoring
- D) All of the above

Answer:

40. "Medication reconciliation" is the process of:

- A) Reconciling pharmacy bills
- B) Creating the most accurate list of a patient's current medications and comparing it with new orders
- C) Reconciling drug inventory
- D) Reconciling staff schedules

Answer:

41. "Pharmacovigilance" is the science related to:

- A) Drug manufacturing
- B) Detection, assessment, understanding, and prevention of adverse drug reactions (ADRs)
- C) Drug pricing
- D) Drug advertising

Answer:

42. An "adverse drug reaction (ADR)" is defined as:

- A) A beneficial effect of a drug
- B) A harmful, unintended response to a drug at normal doses
- C) An overdose effect
- D) A placebo effect

Answer:

43. Which of the following is an example of a type A (augmented) ADR?

- A) Anaphylaxis due to penicillin (dose-independent)
- B) Hypoglycemia due to insulin overdose (dose-dependent)
- C) Stevens-Johnson syndrome
- D) Drug-induced lupus

Answer:

44. The "Naranjo algorithm" is used to:

- A) Calculate drug doses
- B) Assess the causality of an ADR
- C) Measure blood pressure
- D) Identify drug interactions

Answer:

45. "Drug interaction" refers to:

- A) A drug reacting with a container
- B) A modification of the effect of one drug by another drug, food, or substance
- C) A drug expiring
- D) A drug being adulterated

Answer:

46. An example of a pharmacokinetic drug interaction is:

- A) Warfarin + Aspirin → increased bleeding (pharmacodynamic)
- B) Tetracycline + Milk → decreased absorption of tetracycline
- C) Morphine + Diazepam → increased CNS depression
- D) Aspirin + Clopidogrel → increased bleeding

Answer:

47. An example of a pharmacodynamic drug interaction is:

- A) Rifampin + Oral contraceptive → decreased contraceptive effect (pharmacokinetic)
- B) Warfarin + Vitamin K → decreased anticoagulant effect
- C) Digoxin + Quinidine → increased digoxin levels
- D) Phenytoin + Valproate → altered phenytoin levels

Answer:

48. "Therapeutic drug monitoring" (TDM) is most useful for drugs with:

- A) Wide therapeutic index
- B) Narrow therapeutic index (e.g., digoxin, phenytoin, aminoglycosides)
- C) No side effects
- D) Very short half-life

Answer:

49. Which of the following drugs is commonly monitored by TDM?

- A) Paracetamol
- B) Vancomycin
- C) Ibuprofen
- D) Cetirizine

Answer:

50. The trough concentration of a drug is the concentration measured:

- A) Immediately after drug administration
- B) Just before the next dose is administered
- C) At peak effect
- D) 24 hours after the last dose

Answer:

51. Patient counseling by a pharmacist involves:

- A) Providing verbal and written information about medications to patients
- B) Performing surgery
- C) Diagnosing diseases
- D) Prescribing drugs independently

Answer:

52. Which of the following is a key element of effective patient counseling?

- A) Using medical jargon
- B) Speaking very quickly
- C) Using simple language and checking patient understanding
- D) Avoiding eye contact

Answer:

53. The "teach-back" method in patient counseling is used to:

- A) Teach the patient to read
- B) Ask the patient to repeat the instructions in their own words to confirm understanding
- C) Test the pharmacist's knowledge
- D) Fill prescriptions

Answer:

54. Which of the following should be included when counseling a patient on a new medication?

- A) Name and purpose of the medication
- B) Dosage and route of administration
- C) Common side effects and what to do if they occur
- D) All of the above

Answer:

55. A patient prescribed warfarin should be counseled to avoid:

- A) Green leafy vegetables high in vitamin K
- B) Grapefruit juice
- C) Dairy products
- D) Caffeinated beverages

Answer:

56. A patient taking an ACE inhibitor (e.g., lisinopril) should be counseled about:

- A) Persistent dry cough as a possible side effect
- B) Taking with high-fat meals
- C) Avoiding all fruits
- D) Taking with alcohol

Answer:

57. Which of the following is an example of "non-adherence" to medication?

- A) Taking the correct dose at the correct time
- B) Forgetting to take a dose
- C) Reading the label before use
- D) Asking the pharmacist about side effects

Answer:

58. Factors that contribute to medication non-adherence include:

- A) Complexity of the regimen
- B) Lack of understanding
- C) Adverse effects
- D) All of the above

Answer:

59. The "Motivational Interviewing" technique is used by pharmacists to:

- A) Increase patient motivation to adhere to therapy
- B) Increase drug prices
- C) Reduce drug inventory
- D) Perform clinical trials

Answer:

60. A patient using an inhaler for asthma should be counseled to:

- A) Shake the inhaler before use (if required)
- B) Breathe out fully before inhaling the medication
- C) Rinse mouth after using steroid inhalers
- D) All of the above

Answer:

61. A patient on metformin for diabetes should be counseled about:

- A) Taking it with meals to reduce GI upset
- B) The risk of lactic acidosis (rare but serious)
- C) Monitoring kidney function
- D) All of the above

Answer:

62. Which of the following is a barrier to effective patient counseling?

- A) Language differences
- B) Low health literacy
- C) Time constraints
- D) All of the above

Answer:

63. The "ASK ME 3" program encourages patients to ask three questions to improve understanding. These include:

- A) What is my main problem? What do I need to do? Why is it important?
- B) How much does it cost? Can I get a discount? Is it covered by insurance?
- C) Who made this drug? Where was it manufactured? When will it expire?
- D) None of the above

Answer:

64. A patient taking nitroglycerin sublingual tablets for angina should be counseled to:

- A) Swallow the tablet with water
- B) Place the tablet under the tongue and not swallow it
- C) Chew the tablet
- D) Take it only with food

Answer:

65. Which of the following is a sign of poor health literacy?

- A) The patient asks many questions
- B) The patient cannot name their medications
- C) The patient brings all their medications to the appointment
- D) The patient reads the label carefully

Answer:

66. A "Drug Information Center" (DIC) in a hospital provides:

- A) Only drug prices
- B) Evidence-based information on drug therapy to healthcare professionals and patients
- C) Surgical services
- D) Food services

Answer:

67. The "systematic approach" to answering a drug information question involves which step first?

- A) Formulating an answer
- B) Searching the literature
- C) Securing the demographics and details of the requestor and patient
- D) Evaluating the literature

Answer:

68. Which of the following is a primary literature source in drug information?

- A) Goodman & Gilman's The Pharmacological Basis of Therapeutics
- B) A randomized controlled trial published in a journal
- C) The Cochrane Database of Systematic Reviews
- D) Micromedex

Answer:

69. Which of the following is a tertiary literature source?

- A) A clinical study
- B) A textbook (e.g., Pharmacotherapy: A Pathophysiologic Approach)
- C) A case report
- D) An in vitro study

Answer:

70. "Micromedex" and "Lexicomp" are examples of:

- A) Secondary literature databases
- B) Tertiary literature compendia (electronic)
- C) Primary literature sources
- D) Only print textbooks

Answer:

71. "PubMed" is a:

- A) Tertiary literature source
- B) Secondary literature database (indexes and abstracts primary literature)
- C) Primary literature source
- D) Drug formulary

Answer:

72. The "PICO" format is used to formulate a clinical question. "PICO" stands for:

- A) Patient/Problem, Intervention, Comparison, Outcome
- B) Pharmacy, Information, Control, Order
- C) Prescription, Intake, Counseling, Outcome
- D) Patient, Identity, Control, Observation

Answer:

73. Which of the following is a "do-not-crush" medication that should not be crushed before administration?

- A) Extended-release tablets
- B) Enteric-coated tablets
- C) Sublingual tablets
- D) All of the above

Answer:

74. A "medication use evaluation" (MUE) is a:

- A) Method to evaluate the cost of drugs
- B) Performance improvement method to evaluate and optimize medication use processes
- C) Method to evaluate patient satisfaction
- D) Method to evaluate hospital cleanliness

Answer:

75. The "WHO model formulary" is used as a reference for:

- A) Surgical procedures
- B) Selecting essential medicines for a healthcare system
- C) Building design
- D) Staff salaries

Answer:

76. A normal serum creatinine level (adult male) is approximately:

- A) 0.2-0.5 mg/dL
- B) 0.6-1.2 mg/dL
- C) 2.0-3.0 mg/dL
- D) 4.0-5.0 mg/dL

Answer:

77. An elevated serum creatinine level indicates:

- A) Liver dysfunction
- B) Kidney dysfunction
- C) Anemia
- D) Infection

Answer:

78. Normal blood urea nitrogen (BUN) level is approximately:

- A) 5-20 mg/dL
- B) 50-100 mg/dL
- C) 100-200 mg/dL
- D) 1-2 mg/dL

Answer:

79. The normal fasting blood glucose level is:

- A) 50-70 mg/dL
- B) 70-100 mg/dL
- C) 120-150 mg/dL
- D) 200-250 mg/dL

Answer:

80. HbA1c (glycated hemoglobin) level is used to monitor:

- A) Blood pressure
- B) Long-term blood glucose control in diabetes (goal <7% for most)
- C) Kidney function
- D) Liver function

Answer:

81. A low hemoglobin level indicates:

- A) Polycythemia
- B) Anemia
- C) Dehydration
- D) Infection

Answer:

82. Normal total cholesterol level is desirable at:

- A) < 200 mg/dL
- B) > 300 mg/dL
- C) 500-600 mg/dL
- D) 1000 mg/dL

Answer:

83. An elevated serum alanine aminotransferase (ALT) level indicates:

- A) Kidney damage
- B) Liver damage
- C) Heart attack
- D) Bone fracture

Answer:

84. The normal platelet count is:

- A) 1,000-5,000 per μL
- B) 150,000-450,000 per μL
- C) 5,000,000-6,000,000 per μL
- D) 100-200 per μL

Answer:

85. A low platelet count (thrombocytopenia) increases the risk of:

- A) Bleeding
- B) Clotting
- C) Infection
- D) Anemia

Answer:

86. A clinical pharmacist participating in a medical ward round can contribute by:

- A) Providing drug information
- B) Identifying drug interactions
- C) Recommending dose adjustments
- D) All of the above

Answer:

87. A "pharmacist's progress note" in a patient's chart typically includes:

- A) SOAP format (Subjective, Objective, Assessment, Plan)
- B) Only the drug name
- C) Only the patient's name
- D) The hospital's financial status

Answer:

88. In the SOAP note, "S" stands for:

- A) Subjective (patient's symptoms and history)
- B) Solution
- C) Surgery
- D) Safety

Answer:

89. In the SOAP note, "A" stands for:

- A) Assessment (pharmacist's evaluation of the problem)
- B) Administration
- C) Analysis
- D) Action

Answer:

90. A "medication history" taken by a pharmacist includes:

- A) Current prescription drugs
- B) Over-the-counter medications
- C) Allergies and adverse reactions
- D) All of the above

Answer:

91. "Chart review" by a clinical pharmacist involves:

- A) Reviewing the patient's medical record for medication-related issues
- B) Drawing blood samples
- C) Performing physical examinations
- D) Cleaning the pharmacy

Answer:

92. Which of the following is a "pharmacist intervention" that should be documented?

- A) Changing a drug dose based on renal function
- B) Recommending a switch from IV to oral therapy
- C) Identifying a potential drug interaction
- D) All of the above

Answer:

93. A "discharge counseling" session by a pharmacist aims to:

- A) Increase hospital readmission rates
- B) Ensure the patient understands their medications at the time of leaving the hospital
- C) Collect payment
- D) Advertise the pharmacy

Answer:

94. Which of the following is a high-risk medication that requires special monitoring during ward rounds?

- A) Multivitamins
- B) Heparin (anticoagulant)
- C) Calcium supplements
- D) Iron tablets

Answer:

95. The "STOPP/START" criteria are used to:

- A) Detect potentially inappropriate medications in older adults (STOPP) and identify omitted medications (START)
- B) Stop all medications
- C) Start all new medications
- D) Evaluate hospital finances

Answer:

96. "Total parenteral nutrition" (TPN) is indicated for patients who:

- A) Can eat normally
- B) Cannot receive nutrition via the gastrointestinal tract

C) Have mild diarrhea

D) Have a cold

Answer:

97. A TPN solution typically contains:

- A) Dextrose, amino acids, lipids, electrolytes, vitamins, and trace elements
- B) Only water
- C) Only glucose
- D) Only antibiotics

Answer:

98. "Chemotherapy" for cancer patients is often prepared in a:

- A) Open bench
- B) Biological safety cabinet (BSC) to protect the preparer and the product
- C) Ordinary kitchen
- D) Patient's room

Answer:

99. A "patient-controlled analgesia" (PCA) pump allows the patient to:

- A) Self-administer a preset dose of pain medication
- B) Control the hospital lights
- C) Control the room temperature
- D) Order food

Answer:

100. The "informed consent" process in a clinical setting involves:

- A) The patient agreeing to a procedure after understanding the risks and benefits
- B) Forcing the patient to accept treatment
- C) Hiding information from the patient
- D) Only signing a document without explanation

Answer:

Pharmacotherapeutics

1. Pharmacotherapeutics is the study of:

- A) Drug manufacturing processes
- B) The use of drugs in the treatment of disease and the rationale behind drug selection
- C) Drug pricing and marketing
- D) Pharmacy law and ethics

Answer:

2. The term "rational drug use" means:

- A) Using the most expensive drug available
- B) Using the right drug, at the right dose, for the right duration, at the right cost
- C) Using multiple drugs for every disease
- D) Using only generic drugs

Answer:

3. Which of the following is NOT a step in rational drug therapy?

- A) Making an accurate diagnosis
- B) Selecting the most appropriate drug
- C) Prescribing the cheapest drug regardless of efficacy
- D) Monitoring the patient for response and adverse effects

Answer:

4. Evidence-based medicine (EBM) integrates:

- A) Individual clinical expertise and best available external clinical evidence
- B) Only the doctor's opinion
- C) Only patient preferences
- D) Only cost considerations

Answer:

5. The highest level of evidence in EBM is generally considered to be:

- A) Expert opinion
- B) Case series
- C) Randomized controlled trials (RCTs) and systematic reviews/meta-analyses of RCTs
- D) Animal studies

Answer:

6. "First-line therapy" refers to:

- A) The initial treatment of choice for a condition based on efficacy, safety, and cost
- B) The most expensive treatment
- C) The last resort treatment
- D) A treatment that has not been tested

Answer:

7. The "step-care" approach in pharmacotherapy means:

- A) Starting with the most aggressive therapy immediately
- B) Beginning with simple, safe, and inexpensive treatment and progressing to more complex therapy if needed
- C) Using all available drugs at once
- D) Avoiding all medications

Answer:

8. The term "adherence" (compliance) in pharmacotherapy refers to:

- A) The doctor following the treatment guidelines
- B) The patient taking medication as prescribed (dose, time, frequency, duration)
- C) The pharmacist stocking the drug
- D) The drug manufacturer following GMP

Answer:

9. Which of the following is a common cause of poor adherence to drug therapy?

- A) Complex dosing regimen
- B) Lack of understanding of the disease
- C) Adverse drug reactions
- D) All of the above

Answer:

10. "Polypharmacy" is defined as:

- A) The use of a single drug
- B) The concurrent use of multiple medications (typically 5 or more)
- C) The use of herbal drugs only
- D) The use of injectable drugs only

Answer:

11. The "therapeutic index" (TI) of a drug is:

- A) The ratio of the toxic dose to the effective dose (TD50/ED50)
- B) The price of the drug
- C) The number of side effects
- D) The half-life of the drug

Answer:

12. A drug with a narrow therapeutic index requires:

- A) No monitoring
- B) Frequent therapeutic drug monitoring (TDM) to avoid toxicity
- C) A lower price
- D) A shorter duration of therapy

Answer:

13. The "goal of pharmacotherapy" in a chronic disease (e.g., diabetes) is usually:

- A) Complete cure within days
- B) Long-term management, symptom control, and prevention of complications
- C) Avoiding all medications
- D) Using only alternative medicine

Answer:

14. An "off-label" use of a drug means:

- A) Using the drug without a prescription
- B) Using the drug for an indication, dosage, or patient population not approved by the regulatory authority
- C) Using an expired drug
- D) Using a counterfeit drug

Answer:

15. The "number needed to treat" (NNT) is a measure of:

- A) The cost of a drug
- B) The number of patients who need to be treated to prevent one adverse outcome
- C) The number of side effects
- D) The drug's half-life

Answer:

16. First-line drug for essential hypertension according to JNC 8 guidelines is:

- A) Beta-blocker
- B) Thiazide diuretic, ACE inhibitor, ARB, or CCB
- C) Alpha-blocker
- D) Loop diuretic

Answer:

17. The target blood pressure for most hypertensive patients is:

- A) < 140/90 mmHg
- B) < 120/80 mmHg
- C) < 160/100 mmHg
- D) < 180/110 mmHg

Answer:

18. Which drug is considered first-line for heart failure with reduced ejection fraction (HFrEF)?

- A) Digoxin only
- B) ACE inhibitor (or ARB) + beta-blocker + diuretic (and aldosterone antagonist if needed)
- C) Only loop diuretics
- D) Only vasodilators

Answer:

19. The most commonly used diuretic in chronic heart failure is:

- A) Hydrochlorothiazide
- B) Furosemide (loop diuretic)
- C) Spironolactone
- D) Mannitol

Answer:

20. Which of the following drugs is used in the acute treatment of angina pectoris?

- A) Nitroglycerin (sublingual)
- B) Atorvastatin
- C) Aspirin (long-term)
- D) Metformin

Answer:

21. The mainstay of chronic stable angina prophylaxis includes:

- A) Beta-blockers, calcium channel blockers, or long-acting nitrates
- B) Only antibiotics
- C) Only analgesics
- D) Only anticoagulants

Answer:

22. Which drug is first-line for secondary prevention after a myocardial infarction (MI)?

- A) Aspirin + statin + beta-blocker + ACE inhibitor
- B) Only paracetamol
- C) Only multivitamins
- D) Only antacids

Answer:

23. The most effective class of drugs for lowering LDL cholesterol is:

- A) Fibrates
- B) Statins (HMG-CoA reductase inhibitors)
- C) Bile acid sequestrants
- D) Niacin

Answer:

24. Which of the following is a direct-acting oral anticoagulant (DOAC) used in atrial fibrillation?

- A) Warfarin
- B) Apixaban
- C) Heparin
- D) Enoxaparin

Answer:

25. The antidote for warfarin overdose is:

- A) Protamine sulfate
- B) Vitamin K (phytomenadione)
- C) Naloxone
- D) Flumazenil

Answer:

26. Which of the following drugs is a beta-blocker commonly used in heart failure?

- A) Metoprolol succinate (extended release)
- B) Atenolol
- C) Propranolol
- D) Esmolol

Answer:

27. The first-line therapy for a patient with acute decompensated heart failure with pulmonary edema is:

- A) Intravenous furosemide + oxygen
- B) Oral digoxin
- C) Sublingual nifedipine
- D) Intravenous antibiotics

Answer:

28. Which of the following is NOT a calcium channel blocker used in hypertension?

- A) Amlodipine
- B) Nifedipine
- C) Verapamil
- D) Lisinopril

Answer:

29. The major adverse effect of ACE inhibitors is:

- A) Dry cough
- B) Hypoglycemia
- C) Weight gain
- D) Hair loss

Answer:

30. Which of the following is a loop diuretic?

- A) Hydrochlorothiazide
- B) Furosemide
- C) Spironolactone
- D) Acetazolamide

Answer:

31. First-line maintenance therapy for chronic asthma is:

- A) Short-acting beta-agonist (SABA) alone
- B) Inhaled corticosteroid (ICS) + as-needed SABA, or low-dose ICS-formoterol as needed
- C) Oral steroids daily
- D) Only antibiotics

Answer:

32. The most commonly used short-acting beta-agonist (SABA) for acute asthma relief is:

- A) Salmeterol
- B) Albuterol (salbutamol)
- C) Formoterol
- D) Tiotropium

Answer:

33. Which of the following is a long-acting muscarinic antagonist (LAMA) used in COPD?

- A) Ipratropium bromide
- B) Tiotropium bromide
- C) Albuterol
- D) Prednisolone

Answer:

34. The preferred initial pharmacotherapy for stable COPD (Group A) is:

- A) LABA alone
- B) LAMA or LABA, or as-needed SABA/SAMA
- C) Oral corticosteroids
- D) Antibiotics

Answer:

35. Which of the following is NOT a trigger for asthma?

- A) Allergens (pollen, dust mites)
- B) Exercise
- C) Cold air
- D) Paracetamol

Answer:

36. Theophylline acts as a bronchodilator by:

- A) Beta-2 agonism
- B) Phosphodiesterase inhibition (and adenosine antagonism)
- C) Muscarinic antagonism
- D) Corticosteroid activity

Answer:

37. In a patient with acute severe asthma, which drug is given as first-line in the emergency department?

- A) Oral montelukast
- B) Nebulized short-acting beta-agonist (e.g., albuterol) + ipratropium + systemic corticosteroids
- C) Long-acting beta-agonist alone
- D) Oral theophylline

Answer:

38. The most common cause of community-acquired pneumonia (CAP) is:

- A) Streptococcus pneumoniae
- B) Staphylococcus aureus
- C) Escherichia coli
- D) Pseudomonas aeruginosa

Answer:

39. First-line empirical antibiotic for outpatient CAP in a previously healthy patient is:

- A) Amoxicillin or doxycycline or a macrolide
- B) Vancomycin
- C) Ciprofloxacin alone
- D) Meropenem

Answer:

40. Which of the following is an antileukotriene agent used in asthma?

- A) Montelukast
- B) Albuterol
- C) Beclomethasone
- D) Tiotropium

Answer:

41. Type 1 diabetes mellitus is characterized by:

- A) Insulin resistance
- B) Absolute deficiency of insulin due to autoimmune destruction of beta cells
- C) Obesity as the main cause
- D) No need for insulin therapy

Answer:

42. First-line pharmacotherapy for type 2 diabetes mellitus (after lifestyle modification) is:

- A) Insulin
- B) Metformin
- C) Sulfonylurea
- D) Thiazolidinedione

Answer:

43. Metformin primarily lowers blood glucose by:

- A) Increasing insulin secretion
- B) Decreasing hepatic glucose production and increasing peripheral glucose uptake
- C) Blocking carbohydrate absorption
- D) Increasing glucagon secretion

Answer:

44. The most common adverse effect of metformin is:

- A) Hypoglycemia
- B) Gastrointestinal upset (nausea, diarrhea)
- C) Weight gain
- D) Lactic acidosis

Answer:

45. Which of the following is a sulfonylurea that stimulates insulin secretion?

- A) Metformin
- B) Glimpiride
- C) Pioglitazone
- D) Dapagliflozin

Answer:

46. The main risk of sulfonylureas is:

- A) Weight loss
- B) Hypoglycemia
- C) Gastrointestinal bleeding
- D) Kidney stones

Answer:

47. Which class of oral antidiabetics works by inhibiting DPP-4 (increasing incretin levels)?

- A) SGLT2 inhibitors
- B) DPP-4 inhibitors (e.g., sitagliptin)
- C) Biguanides
- D) Thiazolidinediones

Answer:

48. SGLT2 inhibitors (e.g., empagliflozin) lower glucose by:

- A) Increasing insulin secretion
- B) Increasing urinary glucose excretion
- C) Decreasing carbohydrate absorption
- D) Increasing peripheral glucose uptake

Answer:

49. The target HbA1c for most non-pregnant adults with diabetes is:

- A) < 5%
- B) < 7%
- C) < 9%
- D) < 12%

Answer:

50. The preferred insulin for basal coverage in type 1 diabetes is:

- A) Regular insulin
- B) NPH insulin or long-acting analogs (glargine, detemir)
- C) Lispro insulin
- D) Aspart insulin

Answer:

51. Rapid-acting insulin analogs (e.g., lispro, aspart) are typically administered:

- A) 30 minutes before meals
- B) Immediately before or within 15 minutes of starting a meal
- C) Once daily at bedtime
- D) Only in emergency situations

Answer:

52. The most common acute complication of diabetes therapy is:

- A) Diabetic ketoacidosis
- B) Hypoglycemia
- C) Hyperglycemic hyperosmolar state
- D) Nephropathy

Answer:

53. Diabetic ketoacidosis (DKA) is characterized by:

- A) Hyperglycemia, ketosis, metabolic acidosis
- B) Hypoglycemia, ketosis
- C) Hyperglycemia without ketosis
- D) Normal blood glucose

Answer:

54. Which of the following is NOT a microvascular complication of diabetes?

- A) Diabetic retinopathy
- B) Diabetic nephropathy
- C) Diabetic neuropathy
- D) Peripheral arterial disease (macrovascular)

Answer:

55. The drug of choice for neuropathic pain in diabetes is:

- A) Paracetamol
- B) Duloxetine or gabapentin/pregabalin
- C) Ibuprofen
- D) Aspirin

Answer:

56. The first-line empirical treatment for uncomplicated urinary tract infection (UTI) in a young woman is:

- A) Nitrofurantoin or trimethoprim-sulfamethoxazole (TMP-SMX) or fosfomicin
- B) Intravenous vancomycin
- C) Oral rifampicin
- D) Topical miconazole

Answer:

57. The most common organism causing community-acquired UTI is:

- A) Staphylococcus aureus
- B) Escherichia coli
- C) Klebsiella pneumoniae
- D) Pseudomonas aeruginosa

Answer:

58. The first-line treatment for uncomplicated gonococcal infection is:

- A) Ceftriaxone (injection) plus azithromycin or doxycycline
- B) Oral penicillin
- C) Metronidazole
- D) Ciprofloxacin alone

Answer:

59. Which of the following is the treatment of choice for uncomplicated malaria (Plasmodium vivax) in India?

- A) Chloroquine plus primaquine
- B) Quinine
- C) Artesunate monotherapy
- D) Doxycycline alone

Answer:

60. The first-line treatment for uncomplicated falciparum malaria (in chloroquine-resistant areas) is:

- A) Chloroquine
- B) Artesunate + sulfadoxine-pyrimethamine (or other ACT)
- C) Quinine alone
- D) Mefloquine alone

Answer:

61. Which of the following is an anti-tuberculosis drug that is bactericidal?

- A) Isoniazid
- B) Rifampicin
- C) Pyrazinamide
- D) All of the above

Answer:

62. The standard regimen for drug-sensitive pulmonary tuberculosis (intensive phase) is:

- A) Isoniazid + rifampicin + ethambutol + pyrazinamide for 2 months
- B) Isoniazid + rifampicin for 12 months
- C) Only ethambutol for 6 months
- D) Streptomycin + para-aminosalicylic acid

Answer:

63. The most serious adverse effect of isoniazid is:

- A) Hepatotoxicity
- B) Optic neuritis
- C) Ototoxicity
- D) Nephrotoxicity

Answer:

64. Which antibiotic is first-line for methicillin-resistant Staphylococcus aureus (MRSA) infections?

- A) Amoxicillin
- B) Vancomycin or linezolid
- C) Ciprofloxacin
- D) Doxycycline

Answer:

65. The drug of choice for uncomplicated enterobiasis (pinworm) is:

- A) Albendazole or mebendazole
- B) Metronidazole
- C) Praziquantel
- D) Ivermectin

Answer:

66. Which of the following is a macrolide antibiotic?

- A) Amoxicillin
- B) Azithromycin
- C) Ciprofloxacin
- D) Gentamicin

Answer:

67. The most common adverse effect of tetracyclines (e.g., doxycycline) is:

- A) Photosensitivity and GI upset
- B) Anaphylaxis
- C) Nephrotoxicity
- D) Cardiac arrhythmias

Answer:

68. Which of the following is an antiviral drug used for influenza?

- A) Oseltamivir
- B) Acyclovir
- C) Ribavirin
- D) Lamivudine

Answer:

69. The drug of choice for herpes simplex virus (HSV) infections is:

- A) Acyclovir
- B) Ganciclovir
- C) Valganciclovir
- D) Foscarnet

Answer:

70. The primary treatment for candidal vaginitis is:

- A) Topical clotrimazole or oral fluconazole
- B) Metronidazole
- C) Doxycycline
- D) Penicillin

Answer:

71. The first-line treatment for gastroesophageal reflux disease (GERD) is:

- A) Antacids alone
- B) Proton pump inhibitor (PPI) (e.g., omeprazole) for 4-8 weeks
- C) Prokinetics only
- D) Antibiotics

Answer:

72. The most common cause of peptic ulcer disease is:

- A) Stress
- B) Helicobacter pylori infection and NSAID use
- C) Spicy food
- D) Alcohol

Answer:

73. The standard triple therapy for H. pylori eradication includes:

- A) PPI + amoxicillin + clarithromycin (or metronidazole)
- B) PPI + bismuth + tetracycline + metronidazole (quadruple)
- C) Only antacids
- D) Only sucralfate

Answer:

74. Which of the following is a prokinetic agent?

- A) Domperidone
- B) Omeprazole
- C) Ranitidine
- D) Sucralfate

Answer:

75. The drug of choice for acute diarrhea (non-specific, mild) is:

- A) Oral rehydration solution (ORS) ± loperamide (if no dysentery)
- B) Antibiotics routinely
- C) Antimotility agents for all cases
- D) Corticosteroids

Answer:

76. Which of the following is a laxative used for chronic constipation?

- A) Psyllium (bulk-forming)
- B) Bisacodyl (stimulant)
- C) Lactulose (osmotic)
- D) All of the above

Answer:

77. The drug of choice for nausea and vomiting in pregnancy (morning sickness) is:

- A) Ondansetron
- B) Doxylamine + pyridoxine (vitamin B6)
- C) Metoclopramide
- D) Prochlorperazine

Answer:

78. Which of the following is an antiemetic that acts as a 5-HT₃ antagonist?

- A) Ondansetron
- B) Metoclopramide
- C) Promethazine
- D) Domperidone

Answer:

79. The drug of choice for inflammatory bowel disease (ulcerative colitis) is:

- A) 5-aminosalicylates (e.g., mesalamine)
- B) Antibiotics
- C) Antacids
- D) Loperamide

Answer:

80. Which drug is used to treat hepatic encephalopathy by reducing ammonia absorption?

- A) Lactulose
- B) Omeprazole
- C) Metronidazole
- D) Ursodeoxycholic acid

Answer:

81. First-line therapy for generalized tonic-clonic seizures is:

- A) Valproate, lamotrigine, or levetiracetam
- B) Carbamazepine
- C) Phenobarbital
- D) Gabapentin

Answer:

82. The drug of choice for status epilepticus (acute management) is:

- A) Intravenous lorazepam or diazepam (benzodiazepines)
- B) Oral phenytoin
- C) Oral valproate
- D) Intramuscular haloperidol

Answer:

83. First-line treatment for Parkinson's disease (symptomatic) is:

- A) Levodopa/carbidopa
- B) Amantadine
- C) Trihexyphenidyl
- D) Selegiline

Answer:

84. Which drug is used to treat acute migraine attacks (moderate to severe)?

- A) Triptans (e.g., sumatriptan)
- B) Paracetamol alone
- C) Beta-blockers
- D) Tricyclic antidepressants

Answer:

85. The first-line pharmacotherapy for generalized anxiety disorder (GAD) is:

- A) SSRIs (e.g., escitalopram) or SNRIs (e.g., venlafaxine)
- B) Benzodiazepines as first-line long-term
- C) Antipsychotics
- D) Antihistamines

Answer:

86. The drug of choice for bipolar disorder (maintenance) is:

- A) Lithium
- B) Paracetamol
- C) Benzodiazepines
- D) Antipsychotics only

Answer:

87. Which antidepressant is associated with the highest risk of fatal overdose?

- A) Fluoxetine
- B) Citalopram
- C) Amitriptyline (tricyclic antidepressant)
- D) Venlafaxine

Answer:

88. The first-line treatment for schizophrenia is:

- A) Atypical antipsychotics (e.g., risperidone, olanzapine)
- B) Benzodiazepines
- C) SSRIs
- D) Lithium

Answer:

89. Which drug is used as a smoking cessation aid?

- A) Nicotine replacement therapy (NRT), bupropion, varenicline
- B) Paracetamol
- C) Aspirin
- D) Omeprazole

Answer:

90. The drug of choice for Alzheimer's disease (cognitive symptoms) is:

- A) Cholinesterase inhibitors (donepezil, rivastigmine) or memantine
- B) Antipsychotics
- C) Benzodiazepines
- D) Antidepressants

Answer:

91. The drug of choice for hypothyroidism is:

- A) Levothyroxine (thyroxine, T4)
- B) Liothyronine (T3)
- C) Methimazole
- D) Propylthiouracil

Answer:

92. The drug of choice for hyperthyroidism (Graves' disease) is:

- A) Methimazole or propylthiouracil (antithyroid drugs)
- B) Levothyroxine
- C) Iodine supplements
- D) Beta-blockers only

Answer:

93. Which drug is used to treat hyperuricemia and gout (chronic)?

- A) Allopurinol or febuxostat
- B) Colchicine
- C) NSAIDs
- D) Paracetamol

Answer:

94. The first-line treatment for an acute gout attack is:

- A) NSAIDs (e.g., naproxen, indomethacin), colchicine, or corticosteroids
- B) Allopurinol
- C) Probenecid
- D) Uricosurics

Answer:

95. Which of the following is a bisphosphonate used for osteoporosis?

- A) Alendronate
- B) Calcium carbonate
- C) Vitamin D

e

D) Calcitonin

Answer:

96. The drug of choice for severe hypercalcemia is:

- A) Intravenous bisphosphonates (e.g., pamidronate, zoledronic acid) + saline hydration
- B) Oral calcium
- C) Vitamin D
- D) Thiazide diuretics

Answer:

97. Which of the following is a disease-modifying antirheumatic drug (DMARD) for rheumatoid arthritis?

- A) Methotrexate
- B) Ibuprofen
- C) Prednisone
- D) Paracetamol

Answer:

98. The first-line treatment for mild to moderate osteoarthritis pain is:

- A) Paracetamol (acetaminophen) or topical NSAIDs
- B) Systemic opioids
- C) High-dose corticosteroids
- D) Methotrexate

Answer:

99. The drug of choice for benign prostatic hyperplasia (BPH) with lower urinary tract symptoms is:

- A) Alpha-blockers (e.g., tamsulosin) or 5-alpha reductase inhibitors (e.g., finasteride)
- B) Anticholinergics
- C) Beta-agonists
- D) Diuretics

Answer:

100. Which of the following is used as an antidote for opioid overdose?

- A) Naloxone
- B) Flumazenil
- C) N-acetylcysteine
- D) Protamine sulfate

Answer:

Biochemistry
&
Clinical Pathology

1. Biochemistry is the study of:

- A) The structure and function of the human body
- B) The chemical processes and substances that occur within living organisms
- C) The manufacturing of drugs
- D) The laws governing pharmacy practice

Answer:

2. The main intracellular fluid compartment is:

- A) Plasma
- B) Interstitial fluid
- C) Cytosol (cytoplasm)
- D) Lymph

Answer:

3. The pH of normal human blood is approximately:

- A) 7.0
- B) 7.4
- C) 8.0
- D) 6.8

Answer:

4. A buffer system resists changes in:

- A) Temperature
- B) Pressure
- C) pH
- D) Volume

Answer:

5. The most important buffer in human blood is:

- A) Phosphate buffer
- B) Protein buffer
- C) Bicarbonate buffer ($\text{H}_2\text{CO}_3/\text{HCO}_3^-$)
- D) Acetate buffer

Answer:

6. The normal level of bicarbonate (HCO_3^-) in blood is approximately:

- A) 10 mmol/L
- B) 24 mmol/L
- C) 40 mmol/L
- D) 100 mmol/L

Answer:

7. Which of the following is an acidic substance in the body?

- A) Sodium bicarbonate
- B) Lactic acid
- C) Sodium chloride
- D) Water

Answer:

8. The term "metabolism" refers to:

- A) Only the breakdown of substances
- B) Only the synthesis of substances
- C) Both catabolism (breakdown) and anabolism (synthesis)
- D) The excretion of waste products

Answer:

9. The energy currency of the cell is:

- A) Glucose
- B) ATP (adenosine triphosphate)
- C) NADH
- D) FADH₂

Answer:

10. Which organelle is the site of ATP production (cellular respiration)?

- A) Nucleus
- B) Ribosome
- C) Mitochondrion
- D) Golgi apparatus

Answer:

11. The general formula for a monosaccharide is:

- A) $(\text{CH}_2\text{O})_n$
- B) $\text{C}_n\text{H}_{2n}\text{O}_n$
- C) Both A and B
- D) $\text{C}_6\text{H}_{12}\text{O}_6$ only

Answer:

12. Which of the following is a pentose sugar?

- A) Glucose
- B) Fructose
- C) Ribose
- D) Sucrose

Answer:

13. The most abundant monosaccharide in the human body is:

- A) Fructose
- B) Galactose
- C) Glucose
- D) Mannose

Answer:

14. Sucrose (common table sugar) is a disaccharide composed of:

- A) Glucose + glucose
- B) Glucose + fructose
- C) Glucose + galactose
- D) Fructose + fructose

Answer:

15. Lactose (milk sugar) is composed of:

- A) Glucose + glucose
- B) Glucose + fructose
- C) Glucose + galactose
- D) Galactose + fructose

Answer:

16. Maltose (malt sugar) is composed of:

- A) Two glucose units
- B) Glucose + fructose
- C) Glucose + galactose
- D) Fructose + fructose

Answer:

17. Starch is a polysaccharide of glucose. It is stored in plants. The equivalent storage polysaccharide in animals is:

- A) Cellulose
- B) Glycogen
- C) Dextrin
- D) Inulin

Answer:

18. The major storage site of glycogen in the human body is:

- A) Brain and kidneys
- B) Liver and muscles
- C) Adipose tissue
- D) Bones

Answer:

19. The normal fasting blood glucose level is:

- A) 30-50 mg/dL
- B) 70-100 mg/dL
- C) 120-150 mg/dL
- D) 200-250 mg/dL

Answer:

20. The hormone that lowers blood glucose is:

- A) Glucagon
- B) Insulin
- C) Cortisol
- D) Adrenaline

Answer:

21. The hormone that raises blood glucose (counter-regulatory) includes:

- A) Glucagon
- B) Epinephrine
- C) Cortisol
- D) All of the above

Answer:

22. The breakdown of glycogen to glucose is called:

- A) Glycogenesis
- B) Glycogenolysis
- C) Gluconeogenesis
- D) Glycolysis

Answer:

23. The synthesis of glucose from non-carbohydrate sources (e.g., amino acids) is called:

- A) Glycogenesis
- B) Glycogenolysis
- C) Gluconeogenesis
- D) Glycolysis

Answer:

24. The process of breakdown of glucose to pyruvate with production of ATP is called:

- A) Glycolysis
- B) Gluconeogenesis
- C) Glycogenesis
- D) Pentose phosphate pathway

Answer:

25. The end product of glycolysis under anaerobic conditions (in muscles during exercise) is:

- A) Pyruvate
- B) Acetyl-CoA
- C) Lactate (lactic acid)
- D) Ethanol

Answer:

26. Amino acids are the building blocks of:

- A) Carbohydrates
- B) Lipids
- C) Proteins
- D) Nucleic acids

Answer:

27. The general structure of an amino acid includes:

- A) An amino group (-NH₂), a carboxyl group (-COOH), and an R-group
- B) Only an amino group
- C) Only a carboxyl group
- D) A phosphate group

Answer:

28. How many standard amino acids are found in human proteins?

- A) 10
- B) 15
- C) 20
- D) 25

Answer:

29. An essential amino acid is one that:

- A) Is not required by the body
- B) Cannot be synthesized by the body and must be obtained from the diet
- C) Is synthesized in large amounts
- D) Is only found in animal proteins

Answer:

30. Which of the following is an essential amino acid?

- A) Glycine
- B) Alanine
- C) Lysine
- D) Glutamic acid

Answer:

31. The peptide bond is formed between:

- A) Two amino groups
- B) Two carboxyl groups
- C) The amino group of one amino acid and the carboxyl group of another
- D) An amino acid and a fatty acid

Answer:

32. The primary structure of a protein refers to:

- A) The 3D shape of the protein
- B) The sequence of amino acids in the polypeptide chain
- C) The alpha-helix or beta-sheet structure
- D) The combination of multiple polypeptide subunits

Answer:

33. The secondary structure of a protein (e.g., alpha-helix) is stabilized by:

- A) Hydrogen bonds
- B) Disulfide bonds
- C) Ionic bonds
- D) Hydrophobic interactions

Answer:

34. Denaturation of a protein refers to:

- A) The complete breakdown into amino acids
- B) The loss of its 3D structure (secondary, tertiary, quaternary) without breaking peptide bonds
- C) The synthesis of a new protein
- D) The conversion of a protein into a carbohydrate

Answer:

35. Which of the following is a simple protein?

- A) Albumin
- B) Hemoglobin
- C) Lipoprotein
- D) Glycoprotein

Answer:

36. Hemoglobin is an example of a:

- A) Simple protein
- B) Conjugated protein (heme + globin)
- C) Lipid
- D) Carbohydrate

Answer:

37. The normal serum total protein level is approximately:

- A) 1-2 g/dL
- B) 3-4 g/dL
- C) 6-8 g/dL
- D) 10-12 g/dL

Answer:

38. A low serum albumin level is seen in:

- A) Liver disease (decreased synthesis)
- B) Kidney disease (protein loss)
- C) Malnutrition
- D) All of the above

Answer:

39. The process of transferring an amino group from an amino acid to a keto acid is called:

- A) Deamination
- B) Transamination
- C) Decarboxylation
- D) Urea cycle

Answer:

40. The major nitrogenous waste product of protein metabolism in humans is:

- A) Ammonia
- B) Uric acid
- C) Urea
- D) Creatinine

Answer:

41. Lipids are organic compounds that are:

- A) Soluble in water
- B) Insoluble in water but soluble in organic solvents (e.g., ether, chloroform)
- C) Soluble only in acids
- D) Soluble only in bases

Answer:

42. The most common simple lipids are:

- A) Triglycerides (triacylglycerols)
- B) Phospholipids
- C) Steroids
- D) Glycolipids

Answer:

43. A triglyceride is composed of:

- A) One fatty acid + glycerol
- B) Three fatty acids + glycerol
- C) One fatty acid + cholesterol
- D) Three fatty acids + cholesterol

Answer:

44. Saturated fatty acids have:

- A) No double bonds between carbon atoms
- B) One or more double bonds
- C) A ring structure
- D) A phosphate group

Answer:

45. An example of an unsaturated fatty acid is:

- A) Palmitic acid
- B) Stearic acid
- C) Oleic acid (one double bond)
- D) Myristic acid

Answer:

46. Cholesterol is a:

- A) Triglyceride
- B) Phospholipid
- C) Steroid
- D) Glycolipid

Answer:

47. The main function of cholesterol in the body is:

- A) Energy storage
- B) Component of cell membranes and precursor for steroid hormones, bile acids, and vitamin D
- C) Digestion of fats
- D) Oxygen transport

Answer:

48. Which lipoprotein is often called "bad cholesterol" because it transports cholesterol to tissues?

- A) HDL (high-density lipoprotein)
- B) LDL (low-density lipoprotein)
- C) VLDL (very low-density lipoprotein)
- D) Chylomicrons

Answer:

49. Which lipoprotein is called "good cholesterol" because it transports cholesterol away from tissues to the liver?

- A) HDL
- B) LDL
- C) VLDL
- D) Chylomicrons

Answer:

50. The normal total cholesterol level (desirable) is:

- A) < 100 mg/dL
- B) < 200 mg/dL
- C) < 300 mg/dL
- D) < 400 mg/dL

Answer:

51. The normal triglyceride level (fasting) is:

- A) < 50 mg/dL
- B) < 150 mg/dL
- C) < 300 mg/dL
- D) < 500 mg/dL

Answer:

52. The process of breaking down triglycerides into fatty acids and glycerol (lipolysis) is stimulated by:

- A) Insulin
- B) Glucagon and epinephrine
- C) Glucose
- D) Glycogen

Answer:

53. Beta-oxidation is the process of:

- A) Synthesis of fatty acids
- B) Breakdown of fatty acids to acetyl-CoA for energy production
- C) Synthesis of cholesterol
- D) Breakdown of glucose

Answer:

54. Ketone bodies (acetoacetate, beta-hydroxybutyrate, acetone) are produced in the liver during:

- A) Well-fed state
- B) Starvation or uncontrolled diabetes (excess fatty acid breakdown)
- C) High carbohydrate intake
- D) High protein intake

Answer:

55. A high level of LDL and low level of HDL is a risk factor for:

- A) Anemia
- B) Atherosclerosis and coronary artery disease
- C) Liver cirrhosis
- D) Kidney failure

Answer:

56. Enzymes are biological catalysts that are mostly:

- A) Carbohydrates
- B) Lipids
- C) Proteins
- D) Nucleic acids

Answer:

57. The substance on which an enzyme acts is called the:

- A) Product
- B) Substrate
- C) Coenzyme
- D) Activator

Answer:

58. The active site of an enzyme is:

- A) The entire enzyme molecule
- B) The region where the substrate binds and catalysis occurs
- C) The region that binds the cofactor
- D) The region that is destroyed after the reaction

Answer:

59. A coenzyme is:

- A) A metal ion
- B) An organic non-protein molecule that assists an enzyme
- C) The protein part of an enzyme
- D) The substrate

Answer:

60. An example of a coenzyme derived from vitamin B3 (niacin) is:

- A) NAD⁺ (nicotinamide adenine dinucleotide)
- B) FAD
- C) CoA
- D) Thiamine pyrophosphate

Answer:

61. The enzyme that catalyzes the conversion of glucose to glucose-6-phosphate is:

- A) Hexokinase/glucokinase
- B) Phosphofructokinase
- C) Pyruvate kinase
- D) Glucose-6-phosphatase

Answer:

62. The Michaelis constant (K_m) is a measure of:

- A) The maximum velocity of an enzyme
- B) The affinity of an enzyme for its substrate
- C) The pH optimum
- D) The temperature optimum

Answer:

63. An enzyme's activity is affected by:

- A) Temperature
- B) pH
- C) Substrate concentration
- D) All of the above

Answer:

64. The enzyme that is elevated in myocardial infarction (heart attack) is:

- A) Creatine kinase (CK-MB)
- B) Alkaline phosphatase
- C) Amylase
- D) Gamma-glutamyl transferase (GGT)

Answer

65. The enzyme that is elevated in acute pancreatitis is:

- A) Alanine aminotransferase (ALT)
- B) Aspartate aminotransferase (AST)
- C) Amylase and lipase
- D) Alkaline phosphatase (ALP)

Answer:

66. Vitamins are organic compounds required in small amounts for normal metabolism and must be obtained from the diet because the body cannot synthesize them (or not enough). Which vitamin is an exception?

- A) Vitamin C
- B) Vitamin D (can be synthesized in skin with sunlight)
- C) Vitamin B12
- D) Vitamin A

Answer:

67. Deficiency of vitamin A causes:

- A) Scurvy
- B) Night blindness and xerophthalmia
- C) Rickets
- D) Pellagra

Answer:

68. Deficiency of vitamin C (ascorbic acid) causes:

- A) Beri-beri
- B) Scurvy
- C) Pellagra
- D) Pernicious anemia

Answer:

69. Deficiency of vitamin D causes:

- A) Rickets in children and osteomalacia in adults
- B) Night blindness
- C) Beri-beri
- D) Microcytic anemia

Answer:

70. Deficiency of vitamin B1 (thiamine) causes:

- A) Pellagra
- B) Beri-beri (and Wernicke-Korsakoff syndrome)
- C) Pernicious anemia
- D) Scurvy

Answer:

71. Deficiency of vitamin B3 (niacin) causes:

- A) Pellagra (diarrhea, dermatitis, dementia)
- B) Beri-beri
- C) Rickets
- D) Hemorrhagic disease

Answer:

72. Deficiency of vitamin B12 (cobalamin) causes:

- A) Microcytic anemia
- B) Megaloblastic anemia and pernicious anemia
- C) Hemolytic anemia
- D) Aplastic anemia

Answer:

73. Folic acid deficiency causes:

- A) Megaloblastic anemia
- B) Neural tube defects in pregnancy
- C) Both A and B
- D) Scurvy

Answer:

74. Vitamin K is essential for:

- A) Blood coagulation (clotting factors II, VII, IX, X)
- B) Calcium absorption
- C) Antioxidant function
- D) Vision

Answer:

75. The major dietary source of vitamin D is:

- A) Citrus fruits
- B) Fatty fish, egg yolk, and fortified milk; also synthesized in skin from sunlight
- C) Green leafy vegetables
- D) Meat and grains

Answer:

76. Which mineral is essential for thyroid hormone synthesis?

- A) Iron
- B) Iodine
- C) Zinc
- D) Copper

Answer:

77. Iron deficiency leads to:

- A) Megaloblastic anemia
- B) Microcytic hypochromic anemia
- C) Hemolytic anemia
- D) Sickle cell anemia

Answer:

78. Calcium is important for:

- A) Bone formation
- B) Muscle contraction
- C) Blood clotting
- D) All of the above

Answer:

79. The normal serum calcium level is:

- A) 1-2 mg/dL
- B) 4-6 mg/dL
- C) 8.5-10.5 mg/dL
- D) 15-20 mg/dL

Answer:

80. Magnesium is a cofactor for many enzymes, including those involved in:

- A) ATP utilization
- B) DNA synthesis
- C) Protein synthesis
- D) All of the above

Answer:

81. The normal volume of urine passed by an adult in 24 hours is approximately:

- A) 200-500 mL
- B) 800-2000 mL (1-2 liters)
- C) 3000-4000 mL
- D) 100 mL

Answer:

82. The normal specific gravity of urine is:

- A) 1.000-1.005
- B) 1.003-1.030 (typically 1.015-1.025)
- C) 1.100-1.200
- D) 0.900-0.999

Answer:

83. The normal pH of urine is:

- A) 7.0 (neutral)
- B) Slightly acidic (around 6.0, range 4.5-8.0)
- C) 8.5
- D) 9.0

Answer:

84. Glycosuria (glucose in urine) is most commonly caused by:

- A) Diabetes mellitus (hyperglycemia exceeding renal threshold)
- B) Kidney infection
- C) Dehydration
- D) Liver disease

Answer:

85. Proteinuria (protein in urine) is a sign of:

- A) Glomerular damage (e.g., nephrotic syndrome, glomerulonephritis)
- B) Urinary tract infection
- C) Dehydration
- D) Diabetes insipidus

Answer:

86. The presence of ketone bodies in urine (ketonuria) is seen in:

- A) Uncontrolled diabetes mellitus (diabetic ketoacidosis)
- B) Starvation
- C) High-fat diet
- D) All of the above

Answer:

87. Hematuria (blood in urine) can be caused by:

- A) Urinary tract infection
- B) Kidney stones
- C) Trauma
- D) All of the above

Answer:

88. The reagent strip test for leukocyte esterase in urine is positive in:

- A) Urinary tract infection (pyuria)
- B) Liver disease
- C) Diabetes insipidus
- D) Dehydration

Answer:

89. The presence of bilirubin in urine (bilirubinuria) suggests:

- A) Hemolytic anemia
- B) Obstructive jaundice or hepatocellular disease
- C) Dehydration
- D) Diabetes mellitus

Answer:

90. The normal urine does NOT contain:

- A) Urea
- B) Creatinine
- C) Uric acid
- D) Glucose (in significant amounts)

Answer:

91. The normal red blood cell (RBC) count in adult males is approximately:

- A) 1-2 million/ μL
- B) 4.5-5.5 million/ μL
- C) 6-7 million/ μL
- D) 10 million/ μL

Answer:

92. The normal hemoglobin level in adult females is:

- A) 8-10 g/dL
- B) 12-16 g/dL
- C) 17-20 g/dL
- D) 5-7 g/dL

Answer:

93. The normal white blood cell (WBC) count is:

- A) 1,000-2,000/ μL
- B) 4,000-11,000/ μL
- C) 50,000-100,000/ μL
- D) 500,000-1,000,000/ μL

Answer:

94. Leukocytosis (increased WBC count) is commonly seen in:

- A) Viral infections
- B) Bacterial infections and inflammation
- C) Anemia
- D) Liver cirrhosis

Answer:

95. The normal platelet count is:

- A) 10,000-50,000/ μL
- B) 150,000-450,000/ μL
- C) 500,000-1,000,000/ μL
- D) 1,000-5,000/ μL

Answer:

96. The erythrocyte sedimentation rate (ESR) is increased in:

- A) Inflammation, infection, autoimmune diseases, and anemia
- B) Polycythemia
- C) Sickle cell disease (usually low)
- D) Dehydration

Answer:

97. The normal serum creatinine level (adult male) is:

- A) 0.2-0.5 mg/dL
- B) 0.6-1.2 mg/dL
- C) 2.0-3.0 mg/dL
- D) 4.0-5.0 mg/dL

Answer:

98. An elevated blood urea nitrogen (BUN) and serum creatinine indicates:

- A) Liver failure
- B) Kidney dysfunction (renal failure)
- C) Anemia
- D) Pancreatitis

Answer:

99. The liver function test that is elevated in hepatocellular injury (e.g., hepatitis) is:

- A) Alanine aminotransferase (ALT)
- B) Alkaline phosphatase (ALP)

- C) Gamma-glutamyl transferase (GGT)
- D) Albumin

Answer:

100. Elevated alkaline phosphatase (ALP) is most suggestive of:

- A) Liver cell damage
- B) Biliary obstruction (cholestasis) or bone disease
- C) Heart attack
- D) Pancreatitis

Answer:

**Community Pharmacy
&
Management**

1. Community pharmacy is best defined as:

- A) A pharmacy located inside a hospital
- B) A retail pharmacy that provides pharmaceutical services to the local population
- C) A pharmaceutical manufacturing unit
- D) A clinical research center

Answer:

2. The primary role of a community pharmacist is:

- A) Only dispensing medications
- B) Patient-centered care, including dispensing, counseling, and health promotion
- C) Manufacturing drugs
- D) Conducting clinical trials

Answer:

3. Which of the following is a key responsibility of a community pharmacist?

- A) Prescribing medications independently
- B) Performing surgery
- C) Ensuring safe and effective use of medications
- D) Managing hospital administration

Answer:

4. A “corner drugstore” is an example of:

- A) Hospital pharmacy
- B) Community pharmacy
- C) Industrial pharmacy
- D) Clinical pharmacy

Answer:

5. The term “retail pharmacy” is synonymous with:

- A) Wholesale pharmacy
- B) Community pharmacy
- C) Hospital pharmacy
- D) Online pharmacy only

Answer:

6. Which of the following is NOT a function of a community pharmacist?

- A) Dispensing prescriptions
- B) Providing health education
- C) Performing major surgeries
- D) Offering smoking cessation counseling

Answer:

7. The concept of “pharmaceutical care” in community pharmacy includes:

- A) Identifying and resolving drug-related problems
- B) Patient counseling and follow-up
- C) Collaborating with other healthcare providers
- D) All of the above

Answer:

8. A community pharmacist can improve medication adherence by:

- A) Simplifying the dosing regimen
- B) Using pill organizers or adherence aids
- C) Providing education and follow-up
- D) All of the above

Answer:

9. Which of the following is a challenge faced by community pharmacies in India?

- A) High patient volume
- B) Competition from online pharmacies
- C) Lack of proper reimbursement for services
- D) All of the above

Answer:

10. The “Good Pharmacy Practice” (GPP) guidelines are issued by:

- A) WHO and FIP (International Pharmaceutical Federation)
- B) Pharmacy Council of India
- C) Both A and B
- D) Ministry of Finance

Answer:

11. The minimum qualification to own a community pharmacy in India is:

- A) 10th pass
- B) Diploma in Pharmacy (D.Pharm) with registration as a pharmacist
- C) Bachelor of Science only
- D) No qualification required

Answer:

12. The drug license for a retail pharmacy is issued under which act?

- A) Pharmacy Act, 1948
- B) Drugs and Cosmetics Act, 1940 and Rules, 1945
- C) NDPS Act, 1985
- D) Poisons Act, 1919

Answer:

13. The prescription should be retained by the pharmacist for a period of:

- A) 1 year
- B) 2 years
- C) 3 years (for Schedule H and X drugs, longer)
- D) 6 months

Answer:

14. Which schedule of the Drugs and Cosmetics Rules specifies the conditions for sale of drugs in a retail pharmacy?

- A) Schedule M
- B) Schedule N
- C) Schedule P
- D) Schedule X

Answer:

15. A retail pharmacy must display a sign board with the words:

- A) "Pharmacy" only
- B) "Registered Pharmacy" or "Retail Sale of Drugs"
- C) "Drug Store" only
- D) "Medical Store" only

Answer:

16. A prescription is a written order from a:

- A) Pharmacist
- B) Registered medical practitioner
- C) Patient
- D) Drug manufacturer

Answer:

17. The parts of a prescription include:

- A) Superscription, inscription, subscription, signatura
- B) Only the drug name
- C) Only the patient's name
- D) Only the doctor's signature

Answer:

18. The symbol "R" on a prescription stands for:

- A) Take thou
- B) Pharmacy only
- C) Dangerous drug
- D) For external use only

Answer:

19. The "signatura" (Sig.) part of a prescription contains:

- A) Name of the drug
- B) Directions for the patient
- C) Doctor's signature
- D) Date of prescription

Answer:

20. Which of the following is a legal requirement for a valid prescription?

- A) Patient's name and address
- B) Date of issue
- C) Signature of the prescriber
- D) All of the above

Answer:

21. A "generic prescription" is one that:

- A) Prescribes a brand-name drug
- B) Prescribes a drug by its non-proprietary name
- C) Is written in Latin
- D) Is for narcotic drugs only

Answer:

22. When a pharmacist receives a prescription, the first step is to:

- A) Dispense the drug immediately
- B) Check the legality and completeness of the prescription
- C) Ask the patient for payment
- D) Ignore the prescription

Answer:

23. If a prescription contains a drug that the patient is allergic to, the pharmacist should:

- A) Dispense it anyway
- B) Contact the prescriber for an alternative
- C) Change the drug without informing anyone
- D) Give a cheaper substitute

Answer:

24. The term "refill" on a prescription means:

- A) The patient can get a new prescription
- B) The pharmacist can dispense the medication again without a new prescription, as authorized
- C) The drug is expired
- D) The drug is for external use

Answer:

25. A “Schedule H” prescription drug cannot be dispensed without:

- A) A valid prescription from a registered medical practitioner
- B) A pharmacist’s own decision
- C) A patient’s request
- D) A magistrate’s order

Answer:

26. The abbreviation “b.i.d.” on a prescription means:

- A) Three times a day
- B) Twice a day
- C) Four times a day
- D) Once daily

Answer:

27. The abbreviation “p.r.n.” means:

- A) Before meals
- B) After meals
- C) As needed
- D) At bedtime

Answer:

28. The abbreviation “a.c.” means:

- A) After meals
- B) Before meals
- C) With meals
- D) At bedtime

Answer:

29. The abbreviation “h.s.” means:

- A) Every hour
- B) At bedtime
- C) Immediately
- D) Twice daily

Answer:

30. A “Schedule X” drug prescription can be dispensed only:

- A) Once within 7 days of the date of prescription
- B) Three times within a month
- C) Unlimited times
- D) Without any prescription

Answer:

31. The label on a dispensed medicine should include:

- A) Name of the patient
- B) Name and strength of the drug
- C) Directions for use
- D) All of the above

Answer:

32. The auxiliary label “FOR EXTERNAL USE ONLY” should be affixed to:

- A) Oral tablets
- B) Topical creams, lotions, liniments
- C) Injections
- D) Eye drops

Answer:

33. Which of the following is a high-alert medication that requires extra caution in community pharmacy?

- A) Multivitamins
- B) Warfarin (anticoagulant)
- C) Vitamin C
- D) Calcium tablets

Answer:

34. The “five rights” of dispensing include:

- A) Right patient, right drug, right dose, right route, right time
- B) Right profit, right price, right place
- C) Right packaging, right color, right shape
- D) None of the above

Answer:

35. A “dispensing error” occurs when:

- A) The wrong drug is given
- B) The wrong strength is given
- C) The wrong patient receives the medication
- D) All of the above

Answer:

36. OTC drugs are those that:

- A) Require a prescription
- B) Can be sold without a prescription
- C) Are illegal
- D) Are only for hospital use

Answer:

37. Which of the following is an example of an OTC drug?

- A) Amoxicillin
- B) Paracetamol (low strength)
- C) Morphine
- D) Warfarin

Answer:

38. The pharmacist's role in self-medication includes:

- A) Recommending appropriate OTC products
- B) Warning about possible side effects
- C) Advising when to see a doctor
- D) All of the above

Answer:

39. A patient with a severe headache and vomiting should be:

- A) Given an OTC painkiller and sent home
- B) Advised to see a doctor immediately
- C) Given an antibiotic
- D) Given a sleeping pill

Answer:

40. The "red flag" symptoms that require referral to a physician include:

- A) Fever with stiff neck
- B) Chest pain with shortness of breath
- C) Unexplained weight loss
- D) All of the above

Answer:

41. Which OTC drug is commonly used for heartburn and acid reflux?

- A) Antacids (e.g., calcium carbonate, aluminum hydroxide)
- B) Antibiotics
- C) Antihypertensives
- D) Antidepressants

Answer:

42. A patient with a common cold can be advised to take:

- A) Antihistamines (e.g., chlorpheniramine) and decongestants (e.g., pseudoephedrine)
- B) Antibiotics
- C) Anticancer drugs
- D) Anticoagulants

Answer:

43. Which of the following OTC products should NOT be given to a child with flu-like symptoms due to the risk of Reye's syndrome?

- A) Paracetamol
- B) Ibuprofen
- C) Aspirin (acetylsalicylic acid)
- D) Loratadine

Answer:

44. The maximum daily dose of paracetamol for an adult is:

- A) 1000 mg
- B) 2000 mg
- C) 3000 mg (generally 4000 mg as absolute maximum, but lower safer)
- D) 5000 mg

Answer:

45. A patient taking warfarin should avoid which OTC drug because it increases bleeding risk?

- A) Paracetamol
- B) Aspirin
- C) Loratadine
- D) Calcium supplements

Answer:

46. Patient counseling is defined as:

- A) Giving the patient the medication without any explanation
- B) Providing verbal and written information about the medication and its use
- C) Selling the drug at a higher price
- D) Advertising the pharmacy

Answer:

47. The "teach-back" method in counseling involves:

- A) The pharmacist teaching the patient and then asking the patient to repeat the instructions in their own words
- B) The patient teaching the pharmacist
- C) Writing a prescription
- D) Ignoring the patient's questions

Answer:

48. Which of the following is a barrier to effective patient counseling?

- A) Language differences
- B) Low health literacy
- C) Time constraints
- D) All of the above

Answer:

49. A patient prescribed an antibiotic should be counseled to:

- A) Stop taking it when symptoms improve
- B) Complete the full course even if feeling better
- C) Share it with family members
- D) Take it with alcohol

Answer:

50. A patient using an inhaler for asthma should be counseled to:

- A) Shake the inhaler before use (if required)
- B) Breathe out fully before inhaling
- C) Rinse mouth after using steroid inhalers
- D) All of the above

Answer:

51. A patient on metformin for diabetes should be counseled to:

- A) Take it with meals to reduce GI upset
- B) Monitor for signs of lactic acidosis (rare)
- C) Not take it if they have severe kidney disease
- D) All of the above

Answer:

52. A patient on warfarin should be counseled to:

- A) Avoid sudden changes in intake of vitamin K-rich foods (green leafy vegetables)
- B) Watch for signs of bleeding (bruising, blood in urine/stool)
- C) Have regular INR monitoring
- D) All of the above

Answer:

53. A patient on nitroglycerin sublingual tablets should be counseled to:

- A) Swallow the tablet
- B) Place under the tongue and allow to dissolve; not swallow
- C) Chew the tablet
- D) Take with a full glass of water

Answer:

54. Which of the following is a sign of poor medication adherence?

- A) Patient can name all their medications
- B) Patient has many leftover pills
- C) Patient brings all medications to the appointment
- D) Patient asks questions about side effects

Answer:

55. “Motivational interviewing” is a technique used to:

- A) Force the patient to take medication
- B) Help the patient resolve ambivalence and improve adherence
- C) Increase the price of drugs
- D) Reduce the number of drugs

Answer:

56. The “ASK ME 3” program encourages patients to ask:

- A) What is my main problem? What do I need to do? Why is it important?
- B) How much does it cost? Can I get a discount? Is it covered?
- C) Who made this drug? Where was it manufactured? When will it expire?
- D) None of the above

Answer:

57. A patient with low health literacy may:

- A) Ask many questions
- B) Not understand written instructions
- C) Bring a list of medications
- D) Read the label carefully

Answer:

58. The pharmacist should use the following when counseling a patient with visual impairment:

- A) Large print labels
- B) Verbal instructions
- C) Tactile markers (e.g., Braille)
- D) All of the above

Answer:

59. A patient prescribed a liquid medication should be counseled to:

- A) Use a household teaspoon for dosing
- B) Use the measuring device provided (e.g., dosing cup, syringe)
- C) Guess the dose
- D) Drink directly from the bottle

Answer:

60. Which of the following is an example of effective communication with a patient?

- A) Using medical jargon
- B) Speaking very quickly
- C) Using simple language and checking understanding
- D) Avoiding eye contact

Answer:

61. Inventory management in a pharmacy refers to:

- A) Only buying drugs
- B) The process of ordering, storing, and controlling stock to ensure availability while minimizing costs
- C) Selling drugs at a loss
- D) Disposing of expired drugs

Answer:

62. The “ABC analysis” categorizes inventory based on:

- A) Alphabetical order
- B) Cost and consumption value
- C) Expiry date
- D) Manufacturer name

Answer:

63. In ABC analysis, “A” category items are those that:

- A) Constitute 70-80% of the total inventory value but only 10-20% of items
- B) Constitute 10-20% of the value and 70-80% of items
- C) Are of moderate value
- D) Are slow-moving

Answer:

64. The “Economic Order Quantity” (EOQ) is the order size that:

- A) Maximizes total cost
- B) Minimizes the total of ordering cost and carrying cost
- C) Is always the maximum possible
- D) Is always the minimum possible

Answer:

65. “Lead time” in inventory management is:

- A) The time taken to sell the product
- B) The time between placing an order and receiving it
- C) The time a drug remains on the shelf
- D) The time taken to manufacture the drug

Answer:

66. “Re-order level” (ROL) is calculated as:

- A) Average daily usage × lead time (plus safety stock)
- B) Maximum stock – minimum stock
- C) Annual demand / order quantity
- D) Ordering cost × carrying cost

Answer:

67. “Safety stock” is additional inventory kept to:

- A) Increase costs
- B) Prevent stockouts due to variability in demand or lead time
- C) Reduce storage space
- D) Increase expiry

Answer:

68. The “FEFO” method of stock rotation means:

- A) First Expired, First Out
- B) First Entered, First Out
- C) Fast Expiry, Fast Out
- D) Free Entry, Free Out

Answer:

69. The “two-bin system” is a simple method for:

- A) Patient counseling
- B) Inventory control (reordering when one bin is empty)
- C) Drug dispensing
- D) Waste disposal

Answer:

70. “Just-in-time” (JIT) inventory aims to:

- A) Keep large amounts of stock
- B) Receive goods only as they are needed to reduce holding costs
- C) Increase carrying costs
- D) Stock expired goods

Answer:

71. The “stock turnover rate” is calculated as:

- A) Cost of goods sold / average inventory value
- B) Total sales / number of items
- C) Profit / cost
- D) Number of prescriptions / number of pharmacists

Answer:

72. A high stock turnover rate indicates:

- A) Slow-moving inventory
- B) Fast-moving inventory and efficient management
- C) Overstocking
- D) Expired drugs

Answer:

73. The “perpetual inventory system” involves:

- A) Counting stock once a year
- B) Continuous real-time recording of inventory levels
- C) No recording
- D) Only physical count at the end of the year

Answer:

74. “Slow-moving” drugs are those that:

- A) Sell very quickly
- B) Have a low turnover rate and may approach expiry
- C) Are very expensive
- D) Are controlled substances

Answer:

75. The pharmacist should check expiry dates of drugs:

- A) Only when buying
- B) Periodically (e.g., monthly) and remove expired items
- C) Never
- D) Only when a customer complains

Answer:

76. The term “gross profit” in a pharmacy is:

- A) Total sales – total expenses
- B) Total sales – cost of goods sold (COGS)
- C) Net profit + tax
- D) Total sales – rent

Answer:

77. “Net profit” is:

- A) Gross profit – operating expenses
- B) Total sales – COGS
- C) Only the cost of goods sold
- D) Total sales – taxes

Answer:

78. The “break-even point” is the point where:

- A) Total revenue equals total costs (no profit, no loss)
- B) Profit is maximum
- C) Loss is maximum
- D) Sales are zero

Answer:

79. Which of the following is a fixed cost in a pharmacy?

- A) Rent
- B) Cost of drugs sold
- C) Pharmacist’s salary (if salaried)
- D) Both A and C

Answer:

80. Which of the following is a variable cost in a pharmacy?

- A) Rent
- B) Purchase price of drugs
- C) Insurance
- D) Property tax

Answer:

81. The “markup” on a drug is calculated as:

- A) Selling price – cost price
- B) Cost price – selling price
- C) (Selling price – cost price) / cost price × 100
- D) Both A and C

Answer:

82. The “margin” (profit margin) is usually calculated on:

- A) Cost price
- B) Selling price
- C) Both A and B depending on context
- D) None of the above

Answer:

83. A pharmacy’s “cash flow” refers to:

- A) The profit earned
- B) The movement of money in and out of the business
- C) The inventory value
- D) The number of employees

Answer:

84. Which of the following is a current asset?

- A) Cash in hand
- B) Inventory
- C) Accounts receivable (money owed by customers)
- D) All of the above

Answer:

85. “Accounts payable” represents:

- A) Money owed to the pharmacy by customers
- B) Money owed by the pharmacy to suppliers
- C) Profit
- D) Rent

Answer:

86. A “daily cash memo” (DCM) is used to:

- A) Record all sales transactions for the day
- B) Record purchases
- C) Record employee attendance
- D) Record patient allergies

Answer:

87. The “bill of materials” (or purchase order) is used to:

- A) Order drugs from a supplier
- B) Dispense drugs to a patient
- C) Counsel a patient
- D) Record adverse drug reactions

Answer:

88. “GST” on pharmaceutical products in India is currently (as of 2024) generally:

- A) 0%
- B) 5% or 12% (most drugs at 5% or 12% depending on category)
- C) 28%
- D) 18%

Answer:

89. “Inventory carrying cost” includes:

- A) Storage space cost
- B) Insurance
- C) Opportunity cost of capital
- D) All of the above

Answer:

90. The “return on investment” (ROI) is calculated as:

- A) $\text{Net profit} / \text{total investment} \times 100$
- B) $\text{Total sales} / \text{total assets}$
- C) $\text{Gross profit} / \text{net sales}$
- D) $\text{Current assets} / \text{current liabilities}$

Answer:

91. A community pharmacy must obtain a license from:

- A) Pharmacy Council of India
- B) State Drug Control Authority (State FDA)
- C) Medical Council of India
- D) Local municipality

Answer:

92. The retail drug license (Form 21) is valid for:

- A) 1 year
- B) 3 years
- C) 5 years
- D) 10 years

Answer:

93. A pharmacist cannot sell Schedule X drugs to a patient without:

- A) A valid prescription and maintaining a separate register
- B) Any prescription
- C) A magistrate’s order
- D) A police permit

Answer:

94. Which of the following is NOT allowed in a community pharmacy?

- A) Selling Schedule H drugs on prescription
- B) Selling OTC drugs
- C) Selling poisons without a license
- D) Maintaining patient medication records

Answer:

95. The “Code of Ethics” for pharmacists includes:

- A) Maintaining patient confidentiality
- B) Not advertising professional services in an unethical manner
- C) Providing emergency services when possible
- D) All of the above

Answer:

96. A pharmacist who breaches patient confidentiality may be subject to:

- A) Legal action
- B) Disciplinary action by the Pharmacy Council
- C) Both A and B
- D) No consequences

Answer:

97. The “Drug Price Control Order” (DPCO) regulates:

- A) The quality of drugs
- B) The prices of essential medicines
- C) The advertising of drugs
- D) The import of drugs

Answer:

98. A “no objection certificate” (NOC) from the local municipality is required for:

- A) Opening a pharmacy
- B) Dispensing a prescription
- C) Selling OTC drugs
- D) Patient counseling

Answer:

99. The pharmacist is legally required to:

- A) Dispense only on the prescription of a registered medical practitioner for Schedule drugs
- B) Provide counseling
- C) Maintain records for narcotic drugs
- D) All of the above

Answer:

100. The penalty for selling expired drugs is:

- A) Only a warning
- B) Fine and/or imprisonment under the Drugs and Cosmetics Act
- C) No penalty
- D) Only suspension of license

Answer:

Pharmacology

1. The term “Pharmacology” is derived from Greek words “Pharmakon” meaning drug and “Logos” meaning:

- A) Study
- B) Poison
- C) Cure
- D) Disease

Answer:

2. Pharmacokinetics is the study of:

- A) What the drug does to the body
- B) What the body does to the drug (absorption, distribution, metabolism, excretion)
- C) The adverse effects of drugs
- D) The therapeutic uses of drugs

Answer:

3. Pharmacodynamics is the study of:

- A) What the body does to the drug
- B) What the drug does to the body (mechanism of action, effects)
- C) Drug dosage forms
- D) Drug pricing

Answer:

4. The route of administration that provides the fastest absorption is:

- A) Oral
- B) Intramuscular
- C) Intravenous (directly into bloodstream)
- D) Subcutaneous

Answer:

5. The “first-pass effect” is associated with which route of administration?

- A) Intravenous
- B) Intramuscular
- C) Oral
- D) Sublingual

Answer:

6. Bioavailability refers to:

- A) The amount of drug that reaches the systemic circulation unchanged
- B) The rate of drug excretion
- C) The volume of distribution
- D) The half-life of the drug

Answer:

7. The volume of distribution (Vd) is:

- A) The apparent volume into which a drug distributes in the body
- B) The actual blood volume
- C) The volume of the liver
- D) The volume of the kidneys

Answer:

8. The half-life ($t_{1/2}$) of a drug is the time required for:

- A) The drug to be completely eliminated
- B) The plasma concentration of the drug to decrease by 50%
- C) The drug to be absorbed completely
- D) The drug to reach steady state

Answer:

9. Which of the following is a phase I metabolic reaction?

- A) Oxidation
- B) Reduction
- C) Hydrolysis
- D) All of the above

Answer:

10. The primary organ for drug metabolism is the:

- A) Kidney
- B) Liver
- C) Lung
- D) Intestine

Answer:

11. The primary organ for drug excretion (most drugs) is the:

- A) Liver
- B) Kidney
- C) Lung
- D) Skin

Answer:

12. A drug that is a weak acid (e.g., aspirin) will be more ionized and less reabsorbed in:

- A) Alkaline urine ($\text{pH} > 7$)
- B) Acidic urine ($\text{pH} < 7$)
- C) Neutral urine
- D) All conditions

Answer:

13. The term “steady state” refers to:

- A) The point at which drug absorption equals drug elimination
- B) The point at which drug concentration is zero
- C) The maximum drug concentration after a single dose
- D) The time of peak effect

Answer:

14. A drug with a narrow therapeutic index (e.g., digoxin) requires:

- A) No monitoring
- B) Therapeutic drug monitoring (TDM) to avoid toxicity
- C) Only once-daily dosing
- D) Only topical application

Answer:

15. The “therapeutic window” of a drug is:

- A) The range between the minimum effective concentration and the minimum toxic concentration
- B) The time to peak effect
- C) The duration of action
- D) The volume of distribution

Answer:

16. The neurotransmitter released by cholinergic nerves (parasympathetic) at the effector organ is:

- A) Norepinephrine
- B) Acetylcholine
- C) Dopamine
- D) Serotonin

Answer:

17. The neurotransmitter released by adrenergic nerves (sympathetic) at the effector organ is:

- A) Acetylcholine
- B) Norepinephrine (noradrenaline)
- C) Epinephrine
- D) Histamine

Answer:

18. Pilocarpine is a:

- A) Parasympathomimetic (cholinergic agonist)
- B) Parasympatholytic (anticholinergic)
- C) Sympathomimetic
- D) Sympatholytic

Answer:

19. Atropine is a:

- A) Cholinergic agonist
- B) Anticholinergic (parasympatholytic)
- C) Adrenergic agonist
- D) Beta-blocker

Answer:

20. The action of atropine on the eye includes:

- A) Miosis (pupil constriction)
- B) Mydriasis (pupil dilation) and cycloplegia (loss of accommodation)
- C) No effect
- D) Decreased intraocular pressure

Answer:

21. Physostigmine is a:

- A) Direct-acting cholinergic agonist
- B) Cholinesterase inhibitor (indirect-acting cholinergic agonist)
- C) Anticholinergic
- D) Adrenergic antagonist

Answer:

22. Which of the following is a beta-1 selective adrenergic agonist used in heart failure?

- A) Salbutamol
- B) Dobutamine
- C) Clonidine
- D) Phenylephrine

Answer:

23. Salbutamol (albuterol) is a:

- A) Beta-2 selective agonist (bronchodilator)
- B) Beta-1 selective agonist
- C) Alpha-1 agonist
- D) Beta-blocker

Answer:

24. Propranolol is a:

- A) Selective beta-1 blocker
- B) Non-selective beta-blocker (beta-1 and beta-2)
- C) Alpha-blocker
- D) Cholinergic agonist

Answer:

25. Metoprolol is a:

- A) Non-selective beta-blocker
- B) Selective beta-1 blocker (cardioselective)
- C) Alpha-blocker
- D) Calcium channel blocker

Answer:

26. Prazosin is an:

- A) Alpha-1 adrenergic blocker (used in hypertension and BPH)
- B) Beta-blocker
- C) Cholinergic agonist
- D) Anticholinergic

Answer:

27. Clonidine is a:

- A) Beta-2 agonist
- B) Centrally acting alpha-2 agonist (antihypertensive)
- C) Alpha-1 blocker
- D) Cholinesterase inhibitor

Answer:

28. Which of the following is used as an antidote for organophosphate poisoning?

- A) Atropine + pralidoxime
- B) Neostigmine
- C) Edrophonium
- D) Pilocarpine

Answer:

29. Neostigmine is used to treat:

- A) Glaucoma
- B) Myasthenia gravis
- C) Hypertension
- D) Asthma

Answer:

30. Epinephrine (adrenaline) is the drug of choice for:

- A) Anaphylactic shock
- B) Hypertension
- C) Bradycardia
- D) Asthma prophylaxis

Answer:

31. The most commonly used benzodiazepine for anxiety is:

- A) Diazepam
- B) Alprazolam
- C) Lorazepam
- D) All of the above

Answer:

32. The antidote for benzodiazepine overdose is:

- A) Naloxone
- B) Flumazenil
- C) N-acetylcysteine
- D) Protamine sulfate

Answer:

33. Phenobarbital is a:

- A) Benzodiazepine
- B) Barbiturate
- C) Antipsychotic
- D) Antidepressant

Answer:

34. Phenytoin is used as a/an:

- A) Antiepileptic
- B) Antidepressant
- C) Antipsychotic
- D) Analgesic

Answer:

35. Valproate (sodium valproate) is effective in:

- A) Generalized tonic-clonic seizures
- B) Absence seizures
- C) Myoclonic seizures
- D) All of the above

Answer:

36. The drug of choice for status epilepticus (acute) is:

- A) Oral phenytoin
- B) Intravenous lorazepam or diazepam
- C) Oral valproate
- D) Intramuscular phenobarbital

Answer:

37. Levodopa is used in the treatment of:

- A) Epilepsy
- B) Parkinson's disease
- C) Depression
- D) Schizophrenia

Answer:

38. Levodopa is always given with carbidopa to:

- A) Increase peripheral conversion to dopamine
- B) Decrease peripheral conversion and increase brain availability
- C) Reduce the dose of levodopa only
- D) Cause more side effects

Answer:

39. Which of the following is an atypical antipsychotic?

- A) Haloperidol
- B) Chlorpromazine
- C) Risperidone
- D) All of the above (risperidone is atypical; haloperidol and chlorpromazine are typical)

Answer:

40. The most common side effect of typical antipsychotics (e.g., haloperidol) is:

- A) Weight gain
- B) Extrapyramidal symptoms (EPS)
- C) Sedation
- D) Hyperglycemia

Answer:

41. Which of the following is a selective serotonin reuptake inhibitor (SSRI) antidepressant?

- A) Amitriptyline
- B) Fluoxetine
- C) Imipramine
- D) Phenzelzine

Answer:

42. The drug of choice for bipolar disorder (maintenance) is:

- A) Lithium
- B) Fluoxetine
- C) Diazepam
- D) Haloperidol

Answer:

43. Morphine is a:

- A) Non-opioid analgesic
- B) Opioid analgesic (mu receptor agonist)
- C) NSAID
- D) Antidepressant

Answer:

44. The antidote for morphine overdose is:

- A) Flumazenil
- B) Naloxone
- C) N-acetylcysteine
- D) Atropine

Answer:

45. Aspirin (acetylsalicylic acid) is used as an analgesic, antipyretic, and anti-inflammatory. It also has:

- A) Antiplatelet effect (low dose)
- B) Anticoagulant effect (high dose only)
- C) Antihypertensive effect
- D) Antidiabetic effect

Answer:

46. The first-line drug for essential hypertension in most guidelines is:

- A) Thiazide diuretic, ACE inhibitor, ARB, or CCB
- B) Beta-blocker only
- C) Alpha-blocker only
- D) Loop diuretic

Answer:

47. The most common adverse effect of ACE inhibitors (e.g., lisinopril) is:

- A) Dry cough
- B) Hypoglycemia
- C) Bradycardia
- D) Hair loss

Answer:

48. Losartan is an:

- A) ACE inhibitor
- B) Angiotensin receptor blocker (ARB)
- C) Beta-blocker
- D) Calcium channel blocker

Answer:

49. Amlodipine is a:

- A) Beta-blocker
- B) Calcium channel blocker (dihydropyridine)
- C) Diuretic
- D) ACE inhibitor

Answer:

50. Furosemide is a:

- A) Thiazide diuretic
- B) Loop diuretic
- C) Potassium-sparing diuretic
- D) Osmotic diuretic

Answer:

51. Spironolactone is a:

- A) Loop diuretic
- B) Potassium-sparing diuretic (aldosterone antagonist)
- C) Thiazide diuretic
- D) Carbonic anhydrase inhibitor

Answer:

52. Digoxin is used in:

- A) Hypertension only
- B) Heart failure and atrial fibrillation
- C) Asthma
- D) Diabetes

Answer:

53. The antidote for digoxin toxicity is:

- A) Digoxin immune Fab (antibody fragments)
- B) Flumazenil
- C) Naloxone
- D) Atropine

Answer:

54. Atorvastatin is a:

- A) Fibrate
- B) Statin (HMG-CoA reductase inhibitor)
- C) Bile acid sequestrant
- D) Niacin

Answer:

55. The main adverse effect of statins is:

- A) Muscle pain and myopathy
- B) Hypoglycemia
- C) Weight gain
- D) Diarrhea

Answer:

56. Nitroglycerin is used for:

- A) Angina pectoris (acute relief and prophylaxis)
- B) Hypertension only
- C) Heart failure only
- D) Arrhythmias

Answer:

57. Heparin is an anticoagulant that acts by:

- A) Inhibiting vitamin K-dependent clotting factors
- B) Activating antithrombin III
- C) Directly inhibiting thrombin
- D) Blocking platelet aggregation

Answer:

58. Warfarin is an anticoagulant that acts by:

- A) Inhibiting vitamin K-dependent clotting factors (II, VII, IX, X)
- B) Activating antithrombin III
- C) Directly inhibiting factor Xa
- D) Blocking platelet GP IIb/IIIa receptors

Answer:

59. The antidote for warfarin overdose is:

- A) Protamine sulfate
- B) Vitamin K (phytonadione)
- C) Naloxone
- D) Flumazenil

Answer:

60. The antidote for heparin overdose is:

- A) Vitamin K
- B) Protamine sulfate
- C) Naloxone
- D) Atropine

Answer:

61. The most commonly used short-acting beta-2 agonist (SABA) for acute asthma is:

- A) Salbutamol (albuterol)
- B) Salmeterol
- C) Formoterol
- D) Ipratropium

Answer:

62. Inhaled corticosteroids (e.g., beclomethasone) are used in asthma for:

- A) Acute relief of bronchospasm
- B) Long-term prevention and control of inflammation
- C) Treating pneumonia
- D) Cough suppression

Answer:

63. Theophylline is a bronchodilator that acts by:

- A) Beta-2 agonism
- B) Phosphodiesterase inhibition and adenosine antagonism
- C) Muscarinic antagonism
- D) Corticosteroid activity

Answer:

64. Ipratropium bromide is a:

- A) Beta-2 agonist
- B) Anticholinergic (muscarinic antagonist) bronchodilator
- C) Corticosteroid
- D) Leukotriene antagonist

Answer:

65. Montelukast is a:

- A) Beta-2 agonist
- B) Leukotriene receptor antagonist used in asthma and allergic rhinitis
- C) Corticosteroid
- D) Mast cell stabilizer

Answer:

66. The first-line drug for allergic rhinitis (seasonal allergies) is:

- A) Oral antihistamines (e.g., cetirizine, loratadine) and intranasal corticosteroids
- B) Antibiotics
- C) Decongestants alone
- D) Antitussives

Answer:

67. Dextromethorphan is a:

- A) Expectorant
- B) Antitussive (cough suppressant)
- C) Mucolytic
- D) Decongestant

Answer:

68. Guaifenesin is a:

- A) Antitussive
- B) Expectorant (increases sputum production and clearance)
- C) Mucolytic
- D) Decongestant

Answer:

69. Acetylcysteine is a:

- A) Expectorant
- B) Mucolytic (breaks down mucus)
- C) Antitussive
- D) Decongestant

Answer:

70. Pseudoephedrine is a:

- A) Decongestant (alpha-1 agonist)
- B) Antitussive
- C) Expectorant
- D) Mucolytic

Answer:

71. Omeprazole is a:

- A) H2 receptor antagonist
- B) Proton pump inhibitor (PPI)
- C) Antacid
- D) Prokinetic agent

Answer:

72. Ranitidine is a:

- A) PPI
- B) H2 receptor antagonist
- C) Antacid
- D) Prokinetic

Answer:

73. The drug of choice for peptic ulcer disease caused by H. pylori (triple therapy) includes:

- A) PPI + amoxicillin + clarithromycin
- B) Only antacids
- C) Only sucralfate
- D) Only misoprostol

Answer:

74. Ondansetron is a:

- A) Prokinetic agent
- B) 5-HT₃ antagonist (antiemetic)
- C) Antidiarrheal
- D) Laxative

Answer:

75. Loperamide is used as:

- A) Laxative
- B) Antidiarrheal (opioid agonist, no CNS effect)
- C) Antiemetic
- D) Antacid

Answer:

76. Which of the following is a bulk-forming laxative?

- A) Bisacodyl
- B) Psyllium (isabgol)
- C) Lactulose
- D) Senna

Answer:

77. Lactulose is an:

- A) Stimulant laxative
- B) Osmotic laxative
- C) Bulk-forming laxative
- D) Emollient laxative

Answer:

78. Domperidone is a:

- A) Antiemetic and prokinetic (dopamine antagonist)
- B) Antidiarrheal
- C) Laxative
- D) Antacid

Answer:

79. Misoprostol is a prostaglandin analog used to:

- A) Treat constipation
- B) Prevent NSAID-induced gastric ulcers
- C) Treat diarrhea
- D) Reduce gastric acid secretion (also used in medical abortion)

Answer:

80. Sulfasalazine is used in:

- A) Inflammatory bowel disease (ulcerative colitis)
- B) Peptic ulcer
- C) GERD
- D) Constipation

Answer:

81. Insulin is used in the treatment of:

- A) Type 1 diabetes mellitus (and type 2 when oral agents fail)
- B) Type 2 diabetes only
- C) Hypertension
- D) Hyperthyroidism

Answer:

82. The first-line oral antidiabetic drug for type 2 diabetes is:

- A) Metformin
- B) Glimepiride
- C) Pioglitazone
- D) Sitagliptin

Answer:

83. The most common adverse effect of metformin is:

- A) Hypoglycemia
- B) Gastrointestinal upset (nausea, diarrhea)
- C) Weight gain
- D) Lactic acidosis

Answer:

84. Glimepiride is a:

- A) Biguanide
- B) Sulfonylurea (insulin secretagogue)
- C) DPP-4 inhibitor
- D) SGLT2 inhibitor

Answer:

85. Levothyroxine is used to treat:

- A) Hyperthyroidism
- B) Hypothyroidism
- C) Goiter due to iodine deficiency only
- D) Thyroid cancer only

Answer:

86. Methimazole and propylthiouracil are used to treat:

- A) Hypothyroidism
- B) Hyperthyroidism (Graves' disease)
- C) Diabetes
- D) Cushing's syndrome

Answer:

87. Prednisolone is a:

- A) Mineralocorticoid
- B) Glucocorticoid (anti-inflammatory and immunosuppressant)
- C) Sex hormone
- D) Thyroid hormone

Answer:

88. The most common adverse effect of long-term glucocorticoid use is:

- A) Weight loss
- B) Osteoporosis, hyperglycemia, immunosuppression
- C) Hypoglycemia
- D) Hypotension

Answer:

89. Allopurinol is used in the treatment of:

- A) Gout (chronic – reduces uric acid production)
- B) Acute gout attack
- C) Hyperthyroidism
- D) Diabetes

Answer:

90. Colchicine is used for:

- A) Chronic gout prevention
- B) Acute gout attack (reduces inflammation)
- C) Osteoporosis
- D) Hypothyroidism

Answer:

91. Penicillins act by:

- A) Inhibiting cell wall synthesis (bactericidal)
- B) Inhibiting protein synthesis
- C) Inhibiting nucleic acid synthesis
- D) Disrupting cell membrane

Answer:

92. The most common adverse effect of penicillin is:

- A) Nephrotoxicity
- B) Hypersensitivity (allergic reaction)
- C) Hepatotoxicity
- D) Ototoxicity

Answer:

93. Amoxicillin is a:

- A) Broad-spectrum penicillin
- B) Aminoglycoside
- C) Tetracycline
- D) Macrolide

Answer:

94. Cephalosporins are:

- A) Cell wall synthesis inhibitors (beta-lactam antibiotics)
- B) Protein synthesis inhibitors
- C) Folate synthesis inhibitors
- D) DNA synthesis inhibitors

Answer:

95. Tetracyclines are contraindicated in children under 8 years because they cause:

- A) Nephrotoxicity
- B) Tooth discoloration and bone growth suppression
- C) Hepatotoxicity
- D) Ototoxicity

Answer:

96. Gentamicin is an:

- A) Aminoglycoside (protein synthesis inhibitor, bactericidal)
- B) Penicillin
- C) Macrolide
- D) Quinolone

Answer:

97. The most serious adverse effect of aminoglycosides (e.g., gentamicin) is:

- A) Nephrotoxicity and ototoxicity
- B) Hepatotoxicity
- C) Cardiotoxicity
- D) Skin rash

Answer:

98. Azithromycin is a:

- A) Macrolide antibiotic (protein synthesis inhibitor)
- B) Beta-lactam antibiotic
- C) Aminoglycoside
- D) Tetracycline

Answer:

99. Fluconazole is an:

- A) Antifungal (azole, inhibits ergosterol synthesis)
- B) Antibacterial
- C) Antiviral
- D) Antiprotozoal

Answer:

100. Metronidazole is used to treat:

- A) Bacterial vaginosis, trichomoniasis, amoebiasis, anaerobic infections
- B) Viral infections
- C) Fungal infections
- D) Hypertension

Answer: