



BOWEN UNIVERSITY
(OF THE NIGERIAN BAPTIST CONVENTION)
IWO, OSUN STATE.
College of Health Sciences,
Public Health Programme.

**BSc FINAL YEAR PUBLIC HEALTH SCIENCE SECOND SEMESTER EXAMINATIONS 2022/2023
SESSION**

DEPARTMENT: PUBLIC HEALTH

LEVEL: 400

COURSE: PUH 416- PHARMACOLOGY AND THERAPEUTICS

DATE: WEDNESDAY, 21ST JUNE, 2023 TIME: 12.00 NOON- 1.30 PM

DURATION: 1 Hour 30 Mins.

MATRIC NO:

**ANSWER TRUE OR FALSE. ALL QUESTIONS CARRY EQUAL MARKS. ANSWER
INSIDE THE QUESTION PAPER. DO NOT TAKE THE QUESTION PAPER AWAY.**

- 1) The route of administration of a drug is determined primarily by**
 - a) Properties of the drug (for example, water or lipid solubility, ionization)
 - b) Desirability of a rapid onset of action,
 - c) The need for long-term treatment
 - d) Restriction of delivery to a local site
 - e) All the above

- 2) The following are examples of route of drug of administration:**
 - a) Oral
 - b) Sublingual
 - c) Intravenous
 - d) Intramuscular
 - e) Intrathecal

- 3) The following are properties of enteral route of drug administration**
 - a) It is the safest route.
 - b) It is the most common route
 - c) The most convenient.
 - d) The most economical method of drug administration.

- e) None of the above.
- 4) **The following are properties of sublingual route of administration**
- It involves placing the drug under the tongue.
 - It allows a drug to diffuse into the capillary network
 - Drugs does not enter the systemic circulation directly.
 - All the above are correct
 - None of the above are correct
- 5) **The following are advantages of sublingual route of administration**
- It has rapid absorption.
 - It's convenience of administration
 - It has low incidence of infection,
 - It bypass of the harsh gastrointestinal (GI) environment
 - It avoid first-pass metabolism (the drug is absorbed into the superior vena cava).
- 6) **The following are reasons why parenteral route of administration is explored**
- Administration is used for drugs that are poorly absorbed from the GI tract.
 - Agents that are stable in the GI tract.
 - Treatment of unconscious patients.
 - Circumstances that require a rapid onset of action.
 - All of the above
- 7) **The following are not correct regarding parenteral route of drug administration**
- It does not have the highest bioavailability
 - They are subject to first-pass metabolism.
 - Drugs are subject to harsh GI environments.
 - All the above
 - None of the above
- 8) **The following are disadvantages of parenteral route of administration**
- It's irreversible
 - It may cause pain
 - It may cause fear
 - It could cause local tissue damage
 - It can infections.
- 9) **The major parenteral routes are:**
- Intravenous
 - Intra-arterial
 - Intramuscular,
 - Subcutaneous
 - All the above

10) The following could be route of drug administration:

- a) Oral inhalation
- b) Nasal inhalation
- c) Intrathecal/intraventricular
- d) All of the above
- e) None of the above

11) Which of the following statement(s) are correct about drug development?

- a) In the development of a new drug the first steps are the discovery or synthesis of a potential new drug compound.
- b) The safety and efficacy of drugs must be defined before marketing can be legally carried out.
- c) The safety and efficacy of drugs must be defined before marketing can be legally carried out.
- d) Without regulatory approval, human testing may then go forward (usually in three phases) before the drug is considered for approval for general use.
- e) A fourth phase of data gathering and safety monitoring is becoming increasingly important and follows after approval for marketing.

12) Which of the following statement(s) are correct about drug development?

- a) Majority of new drugs that originate in research are carried out in public sector institutions (universities, research institutes).
- b) Majority of new drugs that originate in research are carried out in private sector institutions.
- c) Due to the economic investment required and the need to efficiently access and integrate multiple technologies, most new drugs are then developed in pharmaceutical companies.
- d) Hundred million to several billion, are involved in the development of a single new drug
- e) Only 2 of 10 marketed drugs return their research and development (R&D) investments.

13) The following are the sequential stages in drug discovery and development

- a) In-vitro studies, Phase 1, Phase 2, Animal Testing, Phase 3 and Phase 4
- b) Phase 1, Phase 2, Phase 3, In-vitro Studies, Animal Testing and Phase 4
- c) In-vitro studies, Animal Testing, Phase 1, Phase 2, Phase 3 and Phase 4
- d) Animal Testing, In-vitro studies, Phase 1, Phase 2, Phase 3 and Phase 4
- e) Phase 1, Phase 2, Phase 3, Phase 4, In-vitro studies and Animal Testing

14) Which of the following statement is (are) correct?

- a) Phase 1 involves 20-100 subjects.
- b) Phase 2 involves 100-200 patients

- c) Phase 3 involves 1,000-6,000 patients
- d) Phase 4 involves post market surveillance
- e) Animal testing does not involve testing of efficacy, selectivity and mechanism of action.

15) The following tests are involved in safety test.

- a) Acute toxicity
- b) Subacute toxicity
- c) Chronic toxicity
- d) Carcinogenic potential
- e) Mutagenic potential

16) Which of the following is correct about the different phases of clinical trials

- a) Phase 1 involves testing the drug among normal subjects.
- b) Phase 1 involves testing for safety and pharmacokinetic profile of the drug being tested.
- c) Phase 2 involves testing the mechanism of action of the drug being tested.
- d) Phase 3 involves testing the efficacy of the drug being tested.
- e) Phase 3 does not involve the efficacy of the drug being tested.

17) Which of the following statement is correct about adverse drug event.

- a) Adverse drug event (ADE) or reaction to a drug (ADR) is a harmful or unintended response to drug.
- b) Adverse drug reactions are claimed to be the fourth leading cause of death, higher than pulmonary disease, AIDS, accidents, and automobile deaths.
- c) Some adverse reactions, such as overdose, excessive effects, and drug interactions, may occur in anyone
- d) Adverse reactions occurring only in susceptible patients include intolerance, idiosyncrasy (frequently genetic in origin), and allergy (usually immunologically mediated)
- e) Adverse drug event (ADE) or reaction to a drug (ADR) is not a harmful or unintended response to drug.

18) Dietary supplements are products taken as

- A. powder
- B. tablet
- C. capsule
- D. liquid
- E. Injection

19) Products sold as dietary supplement come with the following except

- A. Supplement fact labels
- B. dose
- C. Fillers

E. dosing

20) True or False

- A. Omega 3 fatty acid can help against heart related disease
- B. Calcium and vitamin D can reduce bone loss
- C. Folic acid can help against birth defect
- D. Combination of vitamin C, E, zinc, copper, lutein and zeaxanthin can improve vision
- E. None is false

21) True or False

- A. Vitamin C can slow the effectiveness of antimalarial drugs
- B. Vitamin C and E might also reduce the effect of some cancer chemotherapy
- C. St John's wort can reduce the anticoagulant effect of warfarin
- D. Vitamin K can induce metabolism of oral contraceptives and other drugs
- E. High dose of dietary supplement can increase the risk of adverse effects

22) Herbal products can be formulated as

- A. Liquid extracts
- B. Tea
- C. Oil
- D. Ointment
- E. Tablet and capsules

23) Ginger

- A. Can act as antioxidant
- B. Has been used to relieve nausea and motion sickness
- C. Cannot interfere with blood clotting
- D. Can increase blood cholesterol
- E. Can decrease platelet aggregation

24) Which of the following statements best defines occupational toxicology?

- a) The study of toxic substances in the environment, like air, water, soil
- b) The study of identifying potentially harmful toxins in the workplace
- c) The study of toxins in food and water that we eat in the environment
- d) The study of toxins in medical treatments within the air
- e) Involves surveillance programs to monitor exposure levels within the workplace

25) Which of the following is a primary route of occupational exposure to toxicants?

- a) Inhalation
- b) Ingestion
- c) Injection
- d) Absorption through the skin
- e) Explosion

25) What is the main goal of occupational toxicology?

- a) To assess the risks associated with environmental toxins
- b) To develop new methods of detoxification
- c) To protect workers from toxic exposures in the workplace
- d) To study the effects of toxins on wildlife populations
- e) To provide good drinking water for government workers

26) Which of the following is not an example of a toxic effect?

- a) Death due to cyanide
- b) Organ damage due to lead
- c) Inhalation of asbestos fibers causing respiratory disease
- d) Skin contact with toxic chemicals
- e) excessive sweating under the sun

27) What is the term for the maximum allowable concentration of a substance in the workplace?

- a) Exposure limit
- b) Threshold level
- c) Lethal dose
- d) Permissible exposure limit
- e) permitted allowable limit

28) Which of the following is an example of a chronic health effect associated with occupational toxicant exposure?

- a) Acute poisoning
- b) Skin rash
- c) Lung cancer
- d) Eye irritation
- e) sweating

29) What is the primary focus of environmental toxicology?

- a) Assessing risks to human health from environmental contaminants
- b) Studying the effects of natural toxins on wildlife
- c) Developing new methods for environmental remediation
- d) Evaluating the impacts of climate change on ecosystems
- e) protecting birds and domestic animals from human wastes

30) What is the term for the study of how chemicals move through and interact with the environment?

- a) Environmental epidemiology
- b) Environmental monitoring
- c) Environmental fate and transport

- d) Environmental risk assessment
- e) Environmental chemical movement

31) Which of the following is an example of a point source of environmental pollution?

- a) Vehicle emissions
- b) Agricultural runoff
- c) Urban air pollution
- d) Industrial wastewater discharge
- e) restaurant wastes

32) Which of the following is an example of a non-point source of environmental pollution?

- a) Oil spill from a tanker
- b) Leaking underground storage tank
- c) Smokestack emissions from a factory
- d) Pesticide runoff from farmland
- e) leakage from overhead storage septic tank

33) What is the term for the process by which toxic substances increase concentration in the environment as a result of environmental persistence leading to accumulation in tissues of organisms?

- a) Bioaccumulation
- b) Biomagnification
- c) Biotransformation
- d) Biodegradation
- e) Bioconglumeration

34) Which of the following is a common health effect of exposure to environmental pollutants?

- a) Occupational asthma
- b) Black lung disease
- c) Mesothelioma
- d) Allergic rhinitis
- e) Pneumonia

35) Which of the following statements about endocrine-disrupting chemicals (EDCs) is true?

- a) EDCs only affect wildlife populations, not humans.
- b) EDCs have no long-term effects on human health.
- c) EDCs can interfere with hormonal systems in the body.
- d) EDCs are exclusively synthetic chemicals.
- e) EDCs are most commonly dietary

- 36) What is the term for the study of the adverse effects of chemicals on reproductive systems?
- a) Teratology
 - b) Mutagenesis
 - c) Carcinogenesis
 - d) Reproductive toxicology
 - e) foetogenesis
- 37) Which of the following is an example of a heavy metal that can contaminate the environment?
- a) Vitamin C
 - b) Iron
 - c) Mercury
 - d) Calcium
 - e) Cadmium
- 38) Which of the following is a common method for monitoring environmental pollution levels?
- a) DNA sequencing
 - b) X-ray imaging
 - c) Air sampling
 - d) Blood pressure measurement
 - e) hair samples
- 39) What is the primary goal of risk assessment in environmental toxicology?
- a) To eliminate all potential risks from the environment
 - b) To identify and quantify potential risks to human health and the environment
 - c) To promote the use of hazardous substances in industrial processes
 - d) To test the safety of consumer products
 - e) To give enough anti-toxins as preventive measures
- 40) Which of the following organizations is responsible for regulating occupational toxicants in the United States?
- a) World Health Organization (WHO)
 - b) Occupational Safety and Health Administration (OSHA)
 - c) Environmental Protection Agency (EPA)
 - d) Centers for Disease Control and Prevention (CDC)
 - e) Toxicological and Environmental Agency (TEA)
- 41) Which of the following statements about exposure to environmental toxins is true?
- a) It is always easy to determine the source and route of exposure.
 - b) The health effects of environmental toxins are always immediate.

- c) Environmental toxins only affect humans, not wildlife.
- d) The effects of environmental toxins can vary depending on the dose, duration, and route of exposure.
- e) Only D is correct

42) Which of the following is an example of a risk management strategy in environmental toxicology?

- a) Developing new methods to detect toxicants in the environment
- b) Establishing regulations and guidelines for pollutant emissions
- c) Studying the effects of toxins on aquatic ecosystems
- d) Conducting research on the toxicology of emerging contaminants
- e) All of the above