

Multiple Choice Questions :

- (1) Headquarter of Indian Pharmacopoeia Commission is ____ .
(a) Ghaziabad (b) Hyderabad
(c) Delhi (d) Gandhinagar
- (2) Third edition of IP was reconstituted under the chairmanship of ____ .
(a) B. N. Ghosh (b) B. Mukerji
(c) R. N. Chopra (d) Nityanand
- (3) Radiopharmaceutical Monographs are included in ____ edition of Indian Pharmacopoeia.
(a) 2017 (b) 2014
(c) 2010 (d) All of above
- (4) Indian Pharmacopoeia is published by ____ .
(a) Indian Pharmacopoeia Commission
(b) Indian Pharmacopoeia Committee
(c) Indian Pharmacopoeia Council
(d) None of above
- (5) One of the following is not part of monograph ____ .
(a) Assay (b) Molecular formula
(c) Storage (d) None of above

Answers :

- (1) (a) (2) (d) (3) (b) (4) (a)
(5) (d)

Multiple Choice Questions :

- (1) Impurities in pharmaceutical preparation may be due to following sources _____ .
- | | |
|------------------|---------------------------|
| (a) Raw material | (b) Manufacturing process |
| (c) Solvent | (d) All of the above |

- (2) _____ water if free from organic impurities.
- (a) Tap water (b) Demineralized water
(c) Distilled water (d) None of above
- (3) In Indian Pharmacopoeia, the yellow colour standard is prepared using _____.
- (a) Ferric chloride (b) Cobaltous chloride
(c) Cupric sulphate (d) Copper sulphate
- (4) _____ is added in limit test of chloride to prevent precipitation of Ag_2CO_3 .
- (a) NaCl (b) Dil. HNO_3
(c) AgNO_3 (d) Dil. HCl
- (5) One of the following is not a constituent of barium sulphate reagent _____.
- (a) Ethanol (b) K_2SO_4
(c) BaCl_2 (d) Dil. HCl
- (6) _____ is added in preparation of barium sulphate reagent to prevent super saturation.
- (a) Ethanol (b) K_2SO_4
(c) BaCl_2 (d) a & b
- (7) Ferrous thioglycollate is _____ in acidic solution.
- (a) Colourless (b) Pink
(c) Purple (d) Yellow
- (8) Thioglycollic acid used in limit test of iron because _____.
- (a) It provides acidic medium
(b) It reduces ferric iron to ferrous iron
(c) It gives purple colored complex with iron
(d) b & c
- (9) One of following is true for limit test _____.
- (a) It semi-quantitative method
(b) Designed to identify small quantities of impurities
(c) Designed to control small quantities of impurities
(d) All of above

- (10) One of the following limit tests is based on comparison of color.
- (a) Limit test of sulphate
 - (b) Limit test of chloride
 - (c) Limit test of iron
 - (d) a & c
- (11) The arsenic free reagents are designated as _____ .
- (a) AsT
 - (b) ArR
 - (c) ArT
 - (d) None of above
- (12) Structure of arsenic acid is _____ .
- (a) H_3AsO_3
 - (b) AsH_3
 - (c) H_3AsO_4
 - (d) H_2AsO_4
- (13) Potassium cyanide is used in limit test of _____ .
- (a) Iron
 - (b) Lead
 - (c) Heavy metals
 - (d) Arsenic
- (14) Lead-dithizone complex is _____ in color.
- (a) Purple
 - (b) Red
 - (c) Violet
 - (d) Green
- (15) Limit test for Heavy Metals is carried out to identify and control of _____ impurities.
- (a) Mercury
 - (b) Bismuth
 - (c) Cadmium
 - (d) All of above

Answers :

- | | | | | |
|---------|---------|---------|---------|---------|
| 1. (d) | 2. (c) | 3. (a) | 4. (b) | 5. (d) |
| 6. (a) | 7. (a) | 8. (d) | 9. (d) | 10. (d) |
| 11. (a) | 12. (c) | 13. (b) | 14. (b) | 15. (d) |

Multiple Choice Questions :

- (1) In Bronsted - Lowry concept acid is _____.
(a) proton donor (b) electron donor
(c) proton acceptor (d) electron acceptor
- (2) HSAB categorizes acids and bases according to properties of _____.
(a) size (b) polarizability
(c) charge (d) all of these
- (3) As per HSAB Hard acids have _____.
(a) lower polarizability (b) higher electronegativity
(c) both the above (d) none of the above
- (4) Acidic solution has pOH _____.
(a) between 7 to 14 (b) between 1 to 7
(c) between 1 to 14 (d) none of above
- (5) One of the following is true for boric acid
(a) It is a very weak acid
(b) 1.9 % w/v of boric acid in water is isotonic with body fluids
(c) It readily forms ester with glycerol
(d) All of above
- (6) One of the following is not a synonym of boric acid _____.
(a) Hydrogen borate (b) Borilenic acid
(c) Boracic acid (d) Orthoboric acid
- (7) _____ diluted with 25 to 50 volumes of water may be used as a gastric acidifier in achlorhydria.
(a) Hydrochloric acid (b) Boric acid
(c) Phosphoric acid (d) Nitric acid
- (8) Molecular formula of phosphoric acid is _____.
(a) H_3PO_2 (b) H_3PO_3
(c) H_3PO_5 (d) H_3PO_4
- (9) One of the following is not a use of H_2SO_4 .
(a) Oxidizing agent
(b) Sulfonating agent

(c) in reparation of pyroxylin

(d) Reducing agent

(10) Caustic Potash is a synonym for _____ .

(a) KOH

(b) NaOH

(c) $\text{Ca}(\text{OH})_2$

(d) None of above

(11) Solvay process is the method for preparation of _____ .

(a) KOH

(b) NaOH

(c) NaHCO_3

(d) Na_2CO_3

(12) One of the following is not a method of adjusting isotonicity :

(a) Cryoscopic Method

(b) Sodium Chloride Equivalent (E) Method

(c) White - Vincent Method

(d) Leblanc method

(13) Buffer capacity (?) can be calculated using equation _____ .

(a) $\beta = \frac{\Delta B}{\Delta \text{pH}}$

(b) $\beta = \frac{\Delta B}{\Delta \text{pOH}}$

(c) $\beta = \frac{\Delta \text{pH}}{\Delta B}$

(d) None of above

(14) _____ is used as buffer in ophthalmic preparation.

(a) Sodium bicarbonate (b) Magnesium carbonate

(c) Sodium citrate (d) Borate

(15) One of the following is incorrect for Arrhenius acid base concept _____ .

(a) The presence of water is absolutely necessary for substance to be acid or base.

(b) It cannot explain acidic character of some metal salt like BF_3 , AlCl_3 , FeCl_3

(c) Arrhenius base is a substance that dissociates in water to form hydroxide (OH^-) ions.

(d) None of above

Answers :

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|---------|---------|---------|---------|---------|
| 1. (a) | 2. (d) | 3. (c) | 4. (a) | 5. (d) |
| 6. (b) | 7. (a) | 8. (d) | 9. (d) | 10. (a) |
| 11. (d) | 12. (d) | 13. (a) | 14. (d) | 15. (d) |

- (4) One of the following is not a function of magnesium _____ .
- (a) it is required for release of neurotransmitters
 - (b) it participates in bone formation
 - (c) it is the components of many coenzymes as cofactor
 - (d) it plays an important role in protein synthesis
- (5) _____ is assayed by modified volhard's method.
- (a) Sodium chloride
 - (b) Potassium chloride
 - (c) Calcium chloride
 - (d) None of above
- (6) _____ is not a electrolyte used in Acid-Base Therapy.
- (a) Sodium Acetate
 - (b) Sodium chloride
 - (c) Potassium Citrate
 - (d) Sodium bicarbonate
- (7) Ringer's lactate solution does not contains _____ .
- (a) sodium ion
 - (b) chloride ion
 - (c) potassium ion
 - (d) zinc
- (8) One of the following is incorrect for potassium chloride _____ .
- (a) Prepared by the action of hydrochloric acid on a solution of potassium carbonate
 - (b) An aqueous solution is neutral to litmus
 - (c) Its assay is based on Mohr's method
 - (d) It is yellow colored crystalline powder
- (9) Calcium Pantothenate _____ .
- (a) is also known as Vitamin B5
 - (b) is determined by non-aqueous method of titration
 - (c) has molecular formula $C_{18}H_{32}CaN_2O_{10}$
 - (d) all of above
- (10) Which of the following set of ingredients is correct for Oral rehydration salt _____ .
- (a) Sodium chloride, Potassium chloride, Calcium chloride
Calcium, lactate
 - (b) Sodium chloride, Potassium chloride, Sodium bicarbonate,
Sodium citrate

- (c) Sodium chloride, Potassium chloride, Sodium bicarbonate, Magnesium chloride
- (d) Sodium chloride, Potassium chloride, Calcium lactate, Sodium citrate
- (11) Control of pH is not carried out by following mechanism _____.
(a) Buffering Systems (b) Liver
(c) Respiratory Centre (d) Kidneys
- (12) Metabolic alkalosis is treated with _____.
(a) Sodium bicarbonate (b) Sodium acetate
(c) Sodium citrate (d) Ammonium chloride
- (13) _____ is officially used as an anticoagulant for whole blood.
(a) Potassium citrate (b) Calcium chloride
(c) Sodium citrate (d) None of above
- (14) _____ can be used as an expectorant, as a systemic acidifier and as an electrolyte replenisher.
(a) NH_4Cl (b) NaCl
(c) NaHCO_3 (d) All of above
- (15) Peritoneal dialysis fluid does not contain _____.
(a) Sodium chloride (b) Sodium lactate
(c) Sodium acetate (d) Magnesium chloride

Answers :

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|---------|---------|---------|---------|---------|
| 1. (a) | 2. (d) | 3. (d) | 4. (a) | 5. (a) |
| 6. (b) | 7. (d) | 8. (d) | 9. (d) | 10. (b) |
| 11. (b) | 12. (d) | 13. (c) | 14. (a) | 15. (c) |

◆ **Multiple Choice Questions :**

- (1) NaF is prepared by interaction of 40% w/v hydrogen fluoride with an equimolar amount of ____ .
- (a) Sodium hydroxide (b) Sodium bicarbonate
(c) A and b both (d) None of above
- (2) Molecular formula of Tin fluoride is ____ .
- (a) SnF_2 (b) SrF_2
(c) StF_2 (d) SnF
- (3) ____ is contraindicated in patients with renal disease, a history of urinary calculi and hypertension.
- (a) SnF_2 (b) NaF
(c) CaCO_3 (d) $\text{Na}_2\text{PO}_3\text{F}$
- (4) ____ is a substance of volcanic origin.
- (a) Pumice (b) Zinc Chloride
(c) Eugenol (d) White Rosin
- (5) One of the following is not a polishing agent ____ .
- (a) CaHPO_4 (b) NaF
(c) CaCO_3 (d) NaPO_3
- (6) Graham's Salt is a synonym for ____ .
- (a) Sodium Monofluorophosphate
(b) Sodium Meta Phosphate
(c) Calcium carbonate
(d) Dibasic Calcium Phosphate
- (7) Which of the following is not a constituent of Zinc Oxide-Eugenol Cement ____ .
- (a) Zinc acetate (b) Zinc stearate
(c) Zinc oxide (d) Zinc chloride
- (8) Strontium Chloride is ____ .
- (a) dentifrice (b) polishing and cleaning agent
(c) desensitizing agent (d) all of above

(9) Calcium carbonate can be determined by _____ .

- (a) Complexometric titration
- (b) Mohr's method
- (c) Volhard's method
- (d) Non aqueous titration

(10) Molecular formula for Calcium Pyrophosphate is _____ .

- (a) $\text{Ca}_2\text{P}_3\text{O}_7$
- (b) $\text{Ca}_2\text{P}_2\text{O}_5$
- (c) $\text{Ca}_2\text{P}_2\text{O}_7$
- (d) $\text{Ca}_3\text{P}_2\text{O}_7$

Answers :

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|----|-----|----|-----|----|-----|----|-----|-----|-----|
| 1. | (c) | 2. | (a) | 3. | (c) | 4. | (a) | 5. | (b) |
| 6. | (b) | 7. | (d) | 8. | (c) | 9. | (a) | 10. | (c) |



◆ **Multiple Choice Questions :**

(1) One of the following is not true for antacid ____ .

- (a) It should be a laxative
- (b) It should give rapid onset of action and the effect should be for longer duration
- (c) It should have buffer action between pH ranges of 4 to 6
- (d) It should be stable for longer period and readily available

(2) One of the following is not an antacid ____ .

- (a) Sodium bicarbonate
- (b) Aluminium hydroxide gel
- (c) Calcium carbonate
- (d) Milk of bismuth

- (3) The molecular formula for Kaolin is ____ .
- (a) $\text{Al}_2\text{O}_3 \cdot 2\text{SiO}_2 \cdot 2\text{H}_2\text{O}$ (b) $\text{Al}_2\text{O}_3 \cdot 3\text{SiO}_2 \cdot 2\text{H}_2\text{O}$
(c) $\text{Al}_2\text{O}_3 \cdot 4\text{SiO}_2 \cdot 2\text{H}_2\text{O}$ (d) None of above
- (4) Sodium Potassium Tartarate is used as ____ .
- (a) cathartic (b) antacid
(c) antidote (d) antimicrobial agent
- (5) One of following is not correct for milk of magnesia ____ .
- (a) It is an aqueous suspension of hydrated magnesium oxide
(b) It should not be kept in a refrigerator
(c) It is used as an antacid
(d) None of above
- (6) Precipitated chalk is a synonym for ____ .
- (a) MgCO_3 (b) CaCO_3
(c) $\text{Al}_2(\text{CO}_3)_2$ (d) ZnCO_3
- (7) One of the following is the use of magnesium oxide ____ .
- (a) It is used as an antacid and laxative.
(b) It is an ingredient of universal antidote along with tannic acid and charcoal
(c) used as an ingredient of tooth powder due to its mild abrasive action
(d) All of above
- (8) Simethicone is ____ .
- (a) antacid (b) defoaming agents
(c) astringent (d) none of the above
- (9) One of the following is true for aluminium containing antacids ____ .
- (a) Is classes of non systemic antacids.
(b) Are widely used and are buffer in the pH range 3 - 5.
(c) Due to the presence of aluminium ion produce astringent effect which tends to constipation
(d) All of above

- (10) Example of Emollient Laxatives is _____.
- (a) Liquid paraffin
 - (b) Disodium Hydrogen Phosphate
 - (c) Senna extract
 - (d) None of above
- (11) One of the following is an example of systemic antacid _____.
- (a) Sodium bicarbonate
 - (b) Aluminium hydroxide gel
 - (c) Milk of magnesia
 - (d) Magnesium trisilicate
- (12) _____ is prepared by interaction of sodium silicate and magnesium sulphate.
- (a) Magnesium trisilicate
 - (b) Magnesium oxide
 - (c) Sodium trisilicate
 - (d) Sodium sulphate
- (13) _____ acts is an weak antacid and also used as a protective in lotions and ointments.
- (a) Bismuth nitrate
 - (b) Magnesium oxide
 - (c) Disodium Hydrogen Phosphate
 - (d) Bismuth subcarbonate
- (14) _____ are drugs which bring about defaecation.
- (a) Cathartics
 - (b) Purgatives
 - (c) Laxatives
 - (d) All of above
- (15) Heavy and light magnesium oxide differ from each other by _____.
- (a) Density
 - (b) Solubility
 - (c) Melting point
 - (d) All of above

Answers :

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|---------|---------|---------|---------|---------|
| 1. (a) | 2. (d) | 3. (a) | 4. (a) | 5. (d) |
| 6. (b) | 7. (a) | 8. (b) | 9. (d) | 10. (a) |
| 11. (a) | 12. (a) | 13. (d) | 14. (d) | 15. (a) |

Multiple Choice Questions :

- (1) Inorganic antimicrobial agents do not act by ____ .
(a) Oxidation (b) Halogenation
(c) Protein precipitation (d) Sulphonation
- (2) ____ is used to stabilize hydrogen peroxide solution.
(a) Acetanilide (b) Phenacetin
(c) Hydroxyquinoline (d) all of above
- (3) One of the following is not true for Potassium Permanganate ____ .
(a) It occurs as odourless, dark purple, prismatic crystals
(b) It is a strong oxidizing agent
(c) It has different equivalent weight in different medium
(d) It is determined by complexometric titration
- (4) One of the following is not a synonym for Calcium Hypochlorite ____ .
(a) Chlorinated Lime (b) Bleaching Powder
(c) Chloride of lime (d) Milk of chloride
- (5) Lunar caustic ____ .
(a) AgNO_3 (b) H_3BO_3
(c) KMnO_4 (d) KOH
- (6) Lugol's solution contains ____ .
(a) 5 % w/v I_2 and 10 % KI in water
(b) 1.25 % w/v Iodine in glycerin
(c) 10 % w/v I_2 and 6 % KI in alcohol
(d) 2.5 % w/v I_2 , 2.5 % w/v KI in alcohol

- (7) One of the following is incorrect for Iodine _____ .
- (a) It is obtained from sea weeds
 - (b) It is volatile at ordinary temperature
 - (c) Its assay is based on acid base titration
 - (d) It should be stored in an amber coloured container
- (8) AgNO_3 act as antimicrobial by _____ .
- (a) Halogenation
 - (b) Oxidation
 - (c) Protein precipitation
 - (d) a and b
- (9) Molecular formula of borax is _____ .
- (a) $\text{Na}_2\text{B}_4\text{O}_6, 10\text{H}_2\text{O}$
 - (b) $\text{Na}_2\text{B}_4\text{O}_7, 10\text{H}_2\text{O}$
 - (c) $\text{Na}_3\text{B}_4\text{O}_7, 10\text{H}_2\text{O}$
 - (d) $\text{Na}_2\text{B}_3\text{O}_7, 10\text{H}_2\text{O}$
- (10) The only difference between yellow and red mercuric oxide is _____ .
- (a) the state of subdivision
 - (b) density
 - (c) molecular weight
 - (d) solubility

Answers :

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|----|-----|----|-----|----|-----|----|-----|-----|-----|
| 1. | (d) | 2. | (d) | 3. | (d) | 4. | (d) | 5. | (a) |
| 6. | (a) | 7. | (c) | 8. | (c) | 9. | (b) | 10. | (a) |

◆ **Multiple Choice Questions :**

- (1) Antimony Potassium tartrate is _____.
(a) emetic (b) expectorant
(c) antidote (d) a and b
- (2) NH_4Cl is used as _____.
(a) Systemic acidifier
(b) Electrolyte replenisher, when chloride is needed but sodium is not indicated
(c) Expectorant
(d) All of above
- (3) Molecular formula of Blue vitriol is _____.
(a) $\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$ (b) $\text{CoSO}_4 \cdot 5\text{H}_2\text{O}$
(c) $\text{FeSO}_4 \cdot 5\text{H}_2\text{O}$ (d) $\text{Na}_2\text{SO}_4 \cdot 5\text{H}_2\text{O}$
- (4) One of the following is not a haematinic _____.
(a) Iron (b) Folic acid
(c) Vitamin B_{12} (d) Vitamin B_2
- (5) One of the following is an Iron in storage protein _____.
(a) Transferrin (b) Ferritin
(c) Cytochrome (d) None of above
- (6) Alum is prepared from _____.
(a) Potassium sulphate and aluminum sulphate
(b) Potassium chloride and aluminum sulphate
(c) Potassium sulphate and aluminum chloride
(d) Potassium carbonate and aluminum sulphate

- (7) One of the following is not true for Sodium thiosulphate _____ .
(a) Assay is based on iodimetric redox titration
(b) Used as antioxidant
(c) Used as antidote in cyanide poisoning
(d) Molecular formula is $\text{Na}_2\text{S}_3\text{O}_2 \cdot 5\text{H}_2\text{O}$
- (8) What are the product A and B in following reaction _____ .
$$2\text{Na}_2\text{CO}_3 + 4\text{NO} + \text{O}_2 \longrightarrow \text{A and B}$$

(a) 3NaNO_2 and 2CO_2 (b) 4NaNO_2 and 2CO_2
(c) 2NaNO_2 and 3CO_2 (d) 2NaNO_2 and 2CO_2
- (9) One of the following is not used in iron deficiency anaemia _____ .
(a) Ferrous Fumarate (b) Ferrous Gluconate
(c) Ferrous Sulphate (d) Ferrous succinate
- (10) One of the following is a protein precipitant _____ .
(a) Activated charcoal (b) ZnSO_4
(c) FeSO_4 (d) NaNO_2

◆ **Answers :**

1. (d) 2. (d) 3. (a) 4. (d) 5. (b)
6. (a) 7. (d) 8. (b) 9. (d) 10. (b)

◆ **Multiple Choice Questions :**

- (1) The amount of material that produces 3.7×10^{10} nuclear decays per second, equivalent to the activity of 1 g of radium is known as _____ .
- (a) Roentgen (b) 1 Curie
(c) 1 Becquerel (d) 1 RAD
- (2) 1 Becquerel is equivalent to _____ .
- (a) 2.7×10^{-11} curie (b) 2.7×10^{-10} curie
(c) 2.7×10^{-8} curie (d) 2.7×10^{-5} curie
- (3) Which of the following has lowest tissue penetration power _____ .
- (a) α -particle (b) β -particle
(c) x-rays (d) γ -rays
- (4) ${}_{88}\text{Ra}^{226} \longrightarrow {}_{86}\text{Rn}^{222} + \underline{\hspace{1cm}}$.
- (a) α (b) β
(c) $\alpha + \beta$ (d) γ
- (5) Geiger-Muller counter can detect _____ .
- (a) α and β (b) β and γ
(c) α , β and γ (d) γ
- (6) _____ is used for the measurement of absorption of vitamin B12 in the diagnosis of pernicious anaemia.
- (a) Co^{57} and Co^{58} (b) Co^{59} and Co^{60}
(c) Co^{58} (d) Co^{57}
- (7) The SI unit for absorbed dose is _____ .
- (a) gray (Gy) (b) rad
(c) erg (d) None of above
- (8) 1 curie = _____ D.P.S.
- (a) 3.7×10^{12} (b) 2.7×10^{10}
(c) 3.7×10^{10} (d) 3.7×10^{11}

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- (9) One of the following is not true for β particle _____ .
- (a) They are affected by strong magnetic fields
 - (b) Can penetrate aluminum sheet up to 3 mm thickness.
 - (c) They have negative charge
 - (d) All of above

(10) _____ is not an isotope of hydrogen.

- (a) ${}_1\text{H}^1$
- (b) ${}_1\text{H}^2$
- (c) ${}_1\text{H}^3$
- (d) None of above

Answers :

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|----|-----|----|-----|----|-----|----|-----|-----|-----|
| 1. | (b) | 2. | (a) | 3. | (a) | 4. | (a) | 5. | (c) |
| 6. | (a) | 7. | (a) | 8. | (c) | 9. | (d) | 10. | (d) |