

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY
LONERE-RAIGAD-402 103

Winter Semester Examination- December-2019

Course: B. Pharm

Subject with Subject Code: Human Anatomy and Physiology-I (BP101T)

Date: 16/12/2019

Semester: I

Marks: 75

Duration: 3hrs

Instructions: i) All questions are compulsory

ii) Figures to the right indicate full marks

iii) Draw the diagrams or flow charts wherever necessary.

Q. No.1 Attempt following multiple choice questions:

(20 Marks)

(a) _____ are the fundamental structural and functional unit of the body.

a) Tissues

b) Organs

c) Cells

d) Atoms

(b) _____ is also known as powerhouse of cells.

a) Lysozome

b) Golgi apparatus

c) Ribosome

d) Mitochondria

(c) These are the tiny granules in cell composed of RNA and proteins.

a) Nucleus

b) Mitochondria

c) Ribosomes

d) Cytoplasm

(d) Transfer of particles too large to cross cell membranes occurs by _____.

a) Pinocytosis

b) Diffusion

c) Osmosis

d) Reverse osmosis

(e) _____ are voluntary muscles involved in movement of limbs.

- a) Smooth muscle
- b) Skeletal muscle
- c) Cardiac muscle
- d) Inter costal muscle

(f) The process by which a parent cell divides into two daughter cells is known as _____.

- a) Mitosis
- b) Miosis
- c) Protein synthesis
- d) anabolism

(g) Blood is which type of tissue?

- a) Connective tissue
- b) Epithelial tissue
- c) Nervous tissue
- d) Adipose tissue

(h) Which blood cells does not contain nucleus?

- a) WBCs
- b) RBCs
- c) Platelets
- d) Lymphocytes

(i) Which blood vessels carry oxygenated blood from lungs towards heart?

- a) Pulmonary artery
- b) Pulmonary veins
- c) Superior vena cava
- d) Coronary sinus

(j) Cardiac output is calculated by _____.

- a) Stroke volume X Peripheral resistance
- b) Heart rate X Blood pressure
- c) Heart rate X Peripheral resistance
- d) Stroke volume X Heart rate

(k) Eyes are supplied by the _____ nerve.

- a) Olfactory nerve
- b) Vagus nerve
- c) Optic nerve
- d) Hypoglossal nerve

(l) Bone forming cells are called as _____ .

- a) Osteoblast
- b) Osteoclast
- c) Osteocytes
- d) Osteons

(m) Out of following which is not a part of vertebral column.

- a) Sacrum
- b) Lumbar
- c) Coccyx
- d) Mandible

(n) The eardrum is also called as _____ .

- a) Auditory ossicles
- b) Vestibule
- c) Tympanic membrane
- d) Acoustic meatus

(o) Blood platelet count below $150\,000/\text{mm}^3$ is called _____ .

- a) Leukaemia
- b) Polycythaemia
- c) Thrombocytopenia
- d) Granulocytopenia

(p) The pacemaker of heart is _____ .

- a) SA node
- b) AV node
- c) Bundle of His
- d) Purkinje fibre

(q) Out of following which are the sensory nerves of smell.

- a) Vestibulocochlear nerves
- b) Glossopharyngeal nerves
- c) Trigeminal nerves
- d) Olfactory nerves

(r) Cataracts arise when there is _____.

- a) Increased intraocular pressure
- b) Opacity of lens
- c) Difficulty in night vision
- d) Colour blindness

(s) The point where the nerves communicate with muscles is called _____.

- a) Reflex arc
- b) Neuromuscular junction
- c) Neuroeffector junction
- d) Neuroeffector junction

(t) Which blood group is called as Universal donar?

- a) AB
- b) B
- c) O
- d) A

Q. No.2 Attempt any TWO of the following:

(20 Marks)

a) Explain the structure of nucleus. Describe in detail sequence of events occur during protein synthesis.

b) Discuss anatomy of spinal cord. Explain in detail functional components of reflex arc.

c) Explain the structure of heart with neat labeled diagram. Discuss in detail Cardiac cycle.

Q.No. 3 Attempt any SEVEN of the following:

(35 Marks)

- a) Explain active transport across cell membrane.
- b) Describe physiology of vision.
- c) Explain physiology of muscle contraction.
- d) Classify tissue. Give structure and functions of epithelial tissue.
- e) Explain the composition and functions of blood.
- f) Describe cranial nerves with their functions.
- g) Explain Electrocardiogram.
- h) Explain ABO system of blood group.
- i) Explain hemolytic disease of Newborns.

-----END OF PAPER-----

Course: B.Pharm.

Subject: Pharmaceutical Analysis-I (BP102T)

Date: 27/12/2019

Semester: I

Marks: 75

Time: 3hrs

- Instructions: i) All questions are compulsory
ii) Figures to the right indicate full marks
iii) Draw the diagrams or flow charts wherever necessary.

Q.No.1 Attempt the following questions (All Questions Compulsory)

(20 Marks)

- Concentration is not expressed is -----
 - w/v
 - v/w
 - v/v
 - w/w
- Ionic product of water is -----
 - 1×10^{-13}
 - 1×10^{-14}
 - 1×10^{-15}
 - 1×10^{-16}
- Which of the following is primary standard substance?
 - Oxalic acid
 - Sodium Hydroxide
 - Potassium Permanganate
 - All of Above
- Indeterminate error is also called as -----
 - Operational error
 - Instrumental error
 - Error of method
 - Random error
- How many grams of Sodium hydroxide will be required to prepare 250 ml of 0.1N solution?
 - 10
 - 1
 - 0.1
 - 0.01
- What is color change interval of methyl Red (pH Change)?
 - 0.8 - 1.2
 - 1.2 - 2.8
 - 2.8 - 3.6
 - 4.2 - 6.3
- Number of moles of solute per 1000 gm of solvent gives ----- solution.
 - 1 Molar
 - 1 Molal
 - 1 Normal
 - 1 Percent
- In titration of weak base with weak acid, the solution at equivalence point will be -----
 - Neutral
 - Acidic

- C. Basic
D. No change in pH
9. Methanol is ----- solvent used in Non-aqueous titration.
A. Aprotic
B. Protogenic
C. Protophilic
D. Amphiprotic
10. The indicator employed in Volhards method is -----
A. Ferric ammonium sulphate
B. Ferroin
C. Crystal violet
D. None of these
11. Dead stop end point method is also known as -----
A. Potentiometry
B. Conductometry
C. Titration with 2 indicator electrodes
D. Titration with indicator and reference electrode
12. The conductance that changes on dilution is ----- conductance.
A. Molar
B. Equivalent
C. Specific
D. All of these
13. Drop of mercury in DME acts as ----- electrode.
A. Reference
B. Indicator
C. Hydrogen
D. Calomel
14. Titrations with standard solution of Iodine are termed as -----
A. Iodometry
B. Iodimetry
C. Redox
D. All of these
15. EDTA is popularly employed as a -----
A. Multidentate ligand
B. Complexing agent
C. Chelating agent
D. All of these
16. Ferrous sulphate is assayed by ----- titration.
A. Cerimetry
B. Iodimetry
C. Mercurimetry
D. Bromatometry
17. Which of the following Titrant is act as self-indicator?
A. Potassium Permanganate
B. Silver Nitrate
C. Sodium Hydroxide
D. Hydrochloric Acid
18. Diazotization method is carried out for following compound -----
A. Aromatic Amine
B. Phenol
C. Aromatic Aldehyde
D. Aromatic Ketone

19. Glass electrode is example of ----- electrode.

- A. Reference
- B. Ion selective
- C. Indicator
- D. Both B & C

20. What is emf -----.

- A. Electro motive force
- B. Electron motion force
- C. Electro motion force
- D. All of these

Q.No.2 Attempt any TWO questions of the following: (20 Marks)

- A] Explain different types of Acid-Base titration; add a note on neutralization curve.
- B] Explain various steps involved in gravimetric analysis.
- C] Give the theory behind conductometry. Explain different shapes of graphs obtained during acid-base titrations. Define different conductances and add note on effect of dilution on conductances.

Q.No.3 Attempt any SEVEN questions of the following: (35 Marks)

- A] Write a note on theories of indicator.
- B] Explain types of errors and methods to minimize the errors.
- C] Write a note on Diazotization method.
- D] Differentiate between Mohr's and Volhard's method.
- E] Write a note on different types of Complexometric titration.
- F] Write in details about solvents used in non-aqueous titrations with appropriate examples.
- G] Explain principle involved in conductometric titrations and give its applications.
- H] Write short note on reference electrodes.
- I] Give basic principle of Polarography. Explain construction and working of DME with its advantages and disadvantages.

----- END OF PAPER -----

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY

LONERE - RAIGAD - 402 103

Winter Semester Examination - December - 2019

Branch: F. Y. B. Pharm.

Subject: Pharmaceutics-I (BP103T)

Date: 18/12/2019

Semester: I

Marks: 75

Time: 3 hrs

- Instructions:**
- All questions are compulsory
 - Figures to the right indicate full marks
 - Draw the diagrams or flow charts wherever necessary.

Q. No.1 Multiple Choice Questions (MCQs)
(Answer all the questions)

20 x 1 = 20 Marks

- This substance cannot be used as a flavoring agent in salicylate and benzoate containing preparations
 - Simple syrup
 - Lemon syrup
 - Strawberry syrup
 - Invert syrup
- Emulsion containing fixed oil have oil: water : gum in the ratio
 - 4:2:1
 - 2:2:1
 - 2:4:2
 - 3:2:1
- Sweet aromatic preparation - called as---
 - Elixir
 - syrup
 - Lotion
 - Linctuses
- was developed by Hahnemann
 - Materia Medica
 - Merk Index
 - Martindale
 - all of these
- Inscription includes.....
 - Direction to the patient
 - Direction to pharmacist
 - Name of medicaments
 - none of these
- The oldest I. P. was published in the year -----
 - 1955
 - 1966
 - 1985
 - 1945
- Which of this is a dermal preparation?
 - Paste
 - film
 - cream
 - all of these
- If the adult dose of the drug is 50 mg. how much would be the does for 9 months infants.
 - 1 mg
 - 2 mg
 - 3 mg
 - 6 mg
- 1 tablespoonful = ----- ml
 - 5 ml
 - 10 ml
 - 15 ml
 - 20 ml
- Parenteral solutions should be ----- with blood plasma.
 - isotonic
 - hypotonic
 - hypertonic
 - none of these
- Dusting powders are intended for-----
 - Internal use
 - External use
 - both a and b
 - none of these
- syrup is sweeter than simple syrup I.P.
 - Artificial
 - Invert
 - Medicated
 - all of these
- Suspended particles become flocculated in a suspension because
 - Particles are close to each other
 - Attractive forces between particles are appreciable
 - Repulsive forces between particles are appreciable

- d) Particles do not settle quickly
- 14) Emulsion containing volatile oil have oil: water: gum in the ratio
a) 4:2:1 b) 2:2:1 c) 2:4:2 d) 3:2:1
- 15) Which one of the following is natural thickening agent?
a) Methyl cellulose b) sodium CMC c) Gelatin d) None of these
- 16) Separation of two layers of disperse and continuous phase is called as--
a) Creaming b) Cracking c) phase inversion d) none of these
- 17) Lanolin is -----
a) Wool alcohol b) hydrous wool fat c) Wool fat d) none of these
- 18) Vaginal suppositories are called -----
a) Cones b) Pessaries c) Bougies d) none of these
- 19) Microcrystalline cellulose used as-----
a) Diluents b) Disintegrating agents c) both a and b d) none of these
- 20) Weight of nasal suppository is -----
a) 1 g b) 2 g c) 3 g d) 6 g

Q. No.2 Long Answers (Answer 2 out of 3)

2 x 10 = 20 Marks

- A] Summarize different parts of prescription and discuss errors of prescription.
- B] Illustrate emulsion, give its identification tests and explain about stability problem of emulsion.
- C] Define suppository. Classify its bases with example. Write a note on displacement value

Q. No.3 Short Answers (Answer 7 out of 9)

7 x 5 = 35 Marks

- A] Define suspension and differentiate between flocculated and deflocculated suspension.
- B] Elaborate excipients used in liquid dosage form with example and write a note on surfactant.
- C] Write in brief "Role of Pharmacist".
- D] Define and classify dosage form and add short note on need of dosage form.
- E] Define incompatibility and discuss chemical incompatibilities with example.
- F] Define Posology. Calculate the volume of 90%, 60%, 30% of alcohol and water should be mixed to get 500 ml of 50 % alcohol.
- G] Define ointment and explain ointment bases with example.
- H] Explain term ---- i) Synergism ii) Antagonism iii) Idiosyncrasy
iv) Tachyphylaxis v) Additive effect.
- I] What is Geometric dilution? Write about Effervescent and Efflorescent powder.

----- END OF PAPER -----

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY
LONERE – RAIGAD – 402 103

Winter Semester Examination- Winter – 2019

Branch: B. Pharm. (First Year)

Semester: I

Subject: Pharmaceutical Inorganic Chemistry

Subject code: BP104T

Marks: 75

Date: 20/12/2019

Time: 3 Hrs

- Instructions: i) All questions are compulsory.
ii) Figure to the right indicate full marks.
iii) Draw the diagram or flow charts wherever necessary.

Q. No. 1. Multiple Choice Questions (MCQs)

20 marks

Each of the following questions has four alternatives. Only one of them is correct. Choose the correct answer.

- 1) 0.9% W/V solution of sodium chloride contain.....mEq/L of sodium and chloride.
A) 273.50 B) 153.8 C) 136.75 D) 102.56
- 2) Fluoride inhibits caries formation via
A) Increase acid solubility of enamel B) Bacterial inhibition
C) Decrease acid solubility of enamel D) both B & C
- 3) The resistance of solution to change in PH upon addition of small amount of acid or alkali is termed as
A) Buffer action B) Buffer capacity C) Both a & b D) Buffer
- 4) is the synonym of ferrous sulphate?
A) White vitriol B) blue vitriol C) Green vitriol D) Muriatic acid
- 5) The principle function of astringent compound is ...
A) Contraction of capillary and small blood vessel by coagulation
B) Anti-inflammatory action by decreasing blood supply
C) anti-microbial action by protein precipitation
D) All of above
- 6) Ammonium chloride is used as.....
A) Expectorant B) Diuretics C) Acidifying agent D) All of the above
- 7) One of the following compounds is used as desensitizing agent.
A) Sodium fluoride B) calcium carbonate C) Zinc chloride D) Zinc eugenol cemen

8)is the principle anion of intra cellular fluid

- A) Phosphate B) bicarbonate C) sulphate D) Chloride

9) One of the following is correct for acid as per Lewis concept.

- A) Gives hydrogen ion in aqueous solution B) donate proton
C) Accept proton D) Accept share in pair of electron

10) Following are the function of hydrochloric acid except

- A) Treat hyperacidity B) Soften fibrous food
C) Activate proteolytic enzyme pepsin D) Kill bacteria in ingested food

11) The source of impurity in pharmaceuticals is due to

- A) Raw material B) Manufacturing process C) Improper storage
D) All of the above

12) Which of the following class of antacid cause constipation as side effect

- A) Aluminium containing antacid B) Magnesium containing antacid
C) Calcium containing antacid D) Both A & C

13) The group of GI agent commonly used to treat diarrhea is called as -----

- A) Adsorbent and protective B) Saline cathartics C) Both A&B D) antacid

14) Hydrogen peroxide acts as antimicrobial agent by ----- mechanism.

- A) Halogenations B) Oxidation C) Protein precipitation D) All of the above.

15) Epsom salt is synonym of ----- compound

- A) Magnesium sulphate B) Sodium bicarbonate C) Calcium Carbonate D) Kaoline

16) -----is used to dissolve the precipitate of phosphate and carbonate impurity in limit test for chloride

- A) Barium chloride B) Nitric acid C) Silver nitrate D) All of above

17) Current edition of IP is published in-----

- A) 2017 B) 2018 C) 2019 D) 2016

18) Unit of radioactivity is-----

- A) Calorie B) Curie C) Joule D) Newton

19) Which of the following radiation have highest penetration power?

- A) Alfa B) Beta C) Gamma D) All of above

20) Radio Isotopes I^{131} used as

- A) Treatment of Hyperthyroidism
- B) Treatment of Hypothyroidism
- C) Diagnosis of thyroid gland
- D) all of the above

Q. No. 2. Long Answers (Answer 2 out of 3)

20 marks

- A) Define and classify antidote with suitable example. Explain properties, uses and mechanism of action of physiological and chemical antidotes used in cyanide poisoning.
- B) What is purity of Pharmaceuticals? Explain in detail sources of impurity in pharmaceuticals with suitable examples.
- C) What are radiopharmaceuticals? Give therapeutic and diagnostic application of Radiopharmaceuticals.

Q. No. 3. Short Answers (Answer 7 out of 9)

35Marks

- A) Explain the Principle and apparatus for the Limit test for Arsenic.
- B) Discuss synonym, method of preparation, properties, assay and uses of sodium bicarbonate
- C) What are haematinics? Give method of preparation, properties and medicinal uses of ferrous Sulphate.
- D) What are Anticaries agents? Explain role of fluoride in tooth decay.
- E) Write a note on astringent.
- F) What are expectorant? Explain properties, method of preparation, assay and uses of Ammonium Chloride.
- G) Define and classify topical agents. Write mechanism of antimicrobial agents with examples.
- H) Write a note on Physiological acid base balance
- I) What are buffer? Write Importance of Buffer solution in Pharmacy

Paper End

**DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY LONERE-
RAIGAD-422103**

Winter Semester Examination-December-2019

Course: - B. Pharm

Semester:- I

Subject with Subject Code:- Communication skills (BP105T)

Marks:- 35

Date:- 23/12/2019

Time:-10:30 to 12:00 noon

Instructions:- i) All questions are compulsory
ii) Figures to the right indicate full marks
iii) Draw the diagrams or flow charts wherever necessary

Q. No. 1 Attempt any one of the following.

10 Marks

- a) Explain in detail barriers to communication.
- b) Write in detail about communication styles with examples.

Q. No. 2 Attempt any five of the following.

25 Marks

- a) Define interview. Explain various types of interview.
- b) Discuss in detail about effective writing.
- c) Give factors affecting for prescriptive.
- d) Describe Communication style matrix.
- e) Differentiate moderated group discussion from non moderated group discussion.
- f) What are the things and points that should be avoided in group discussion?
- g) Write a note on body language?

******* END OF PAPER *******

**DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY LONERE-
RAIGAD-42103**

Winter Semester Examination-December-2019

Course: - B. Pharm

Semester:- I

Subject with Subject Code:- Remedial Mathematics (BP106RMT)

Marks:- 35

Date:- 28/12/2019

Time:- 10:30am To 12:00noon

Instructions:- i) All questions are compulsory
ii) Figures to the right indicate full marks
iii) Draw the diagrams or flow charts wherever necessary

Q. No. 1 Attempt any one of the following.

10 Marks

i) Solve differential equation: $(x^2 + y^2) dx - 2xy dy = 0$.

ii) If $A = \begin{pmatrix} 2 & -3 & 3 \\ 2 & 3 & 3 \\ 3 & -2 & 2 \end{pmatrix}$ then find A^{-1}

Q. No. 2 Attempt any five of the following.

25 Marks

i) Evaluate $\lim_{x \rightarrow 0} \frac{x^3 + x^2 - 5x + 3}{x^2 - 1}$

ii) Evaluate $\int \frac{x+1}{x^2+5x+6} dx$.

iii) Find $\frac{dy}{dx}$ if $y = e^{3x} \sin^2 x \log x$.

iv) Evaluate $\int 7^{x \log x} (1 + \log x) dx$.

v) Differentiate the following $\cos r + x \tan^{-1} x$.

vi) find the joint equation of the pair of lines passing through $(-1, 2)$, one is parallel to $2x - 3y - 1 = 0$ and other is perpendicular to $2x - 3y - 1 = 0$

vii) Examine the continuity of the functions.

$$F(x) = \frac{e^{5x} - e^{2x}}{\sin 3x}, \text{ for } x \neq 0 \\ = 1, \text{ for } x = 0 \text{ at } x = 0$$

***** END OF PAPER *****