

Regn. No.....

Paper Code: BPT- 201...

B.P.T. SECOND YEAR EXAMINATION, JULY - 2018
EXERCISE THERAPY
PAPER - I

[Time allotted: Three hours]

[Max Marks: 70]

Note: Attempt all questions in serial order
Draw suitable diagram wherever necessary

Short answer questions:

(7 x 9= 63)

- Q. 1.** Discuss the principles, types and therapeutic usage of suspension therapy.
- Q. 2.** What do you mean by hydrotherapy? What are the therapeutic principles, effect, indications and contraindications of hydrotherapy?
- Q. 3.** What do you mean by aerobic exercises? When do you prescribe them and what are their therapeutic effects?
- Q. 4.** Write a short note on mat exercises showing progression from supine to standing.
- Q. 5.** Write down the MMT technique for following muscles:
a. Lower abdominals
b. Trapezius
c. Gastrocnemius
- Q. 6.** Discuss active and passive movements, their indications, contraindications and therapeutic effects.
- Q. 7.** Discuss the types of stretching exercises. What are the determinants of stretching?
- Q. 8.** What are the different types of mobilization exercises? Discuss any two techniques of mobilization for the following joints:
a. Elbow
b. Hip
- Q. 9.** Write short notes on:
a. Breathing exercise
b. Chest expansion exercise

Regn. No.....

Paper Code: BPT- 201...

B.P.T. SECOND YEAR EXAMINATION, JULY - 2018

EXERCISE THERAPY

PAPER - I (MCQ)

Time allotted for MCQ - 15 minutes

B : MCQs (Single response type):

(½ x 14= 7)

Select the most appropriate answer and **encircle** the alphabet against it

1. Exercises performed by the patient's own muscular effort without assistance or resistance is known as:
 - a. Assisted exercises
 - b. Active-assisted exercises
 - c. Closed chain exercises
 - d. Free exercises
2. A lateral circular movement of the entire lower limb consisting of abduction, lateral rotation is described as:
 - a. Hip hiking
 - b. Pelvic hiking
 - c. Circumduction
 - d. Waddling
3. While applying spinal traction, identify the factor that does not influence the amount of vertebral separation:
 - a. Spinal position
 - b. Strength of abdominal and back extensor muscles
 - c. Angle of pull
 - d. Amount of force
4. The ability of any force to cause rotation is known as:
 - a. Compression
 - b. Tension
 - c. Muscle pull
 - d. Torque
5. Limb girth increases due to muscle:
 - a. Disuse
 - b. Atrophy
 - c. Paralysis
 - d. Hypertrophy
6. Which of the following gadget will be used to improve hip mobility:
 - a. Finger ladder
 - b. Rope and pulley
 - c. Suspension frame
 - d. Parallel bar
7. PNF was developed by:
 - a. Berta Bobath
 - b. Jean Eiyre
 - c. Herman Kabat
 - d. Carl Shepherd
8. The most stable starting position is:
 - a. Sitting
 - b. Squatting
 - c. Kneeling
 - d. Standing
9. During upright standing the COG lies approximately at:
 - a. L4
 - b. L5
 - c. S2
 - d. S4
10. Bridging is not suitable for:
 - a. Facilitating pelvic motion
 - b. Low back extensor strengthening
 - c. Hip flexor strengthening
 - d. Hip extensor strengthening
11. Picking up is a manipulation classified under:
 - a. Percussions
 - b. Shaking
 - c. Stroking
 - d. Petrissage
12. Which gait is desirable for non weight bearing on one lower extremity:
 - a. Two point gait
 - b. Three point gait
 - c. Swing to
 - d. Swing through
13. Most levers in the human body are designed for:
 - a. Speed
 - b. Power
 - c. Force
 - d. Strength
14. The principal movement at the atlanto-axial joint is:
 - a. Lateral flexion
 - b. Flexion-extension
 - c. Axial rotation
 - d. None of the above

Regn. No.....

Paper Code: BPT- 202

JULY

B.P.T. SECOND YEAR EXAMINATION, - 2018
ELECTRO THERAPY

Paper - II

[Time allotted: Three hours]

[Max Marks: 70]

Note: Attempt all questions

Draw suitable diagrams wherever necessary

A : Short answer questions:

(7 x 9 = 63)

- Q. 1. What is electro diagnosis? Explain various methods of electro diagnosis.
- Q. 2. With the help of circuit diagram , explain the working of short wave diathermy and methods of its application.
- Q. 3. What is reverse piezoelectric effect? Also explain therapeutic effects of ultrasonic therapy.
- Q. 4. Explain types, dosage, technique and indications of UVR.
- Q. 5. What is Lewis hunting reaction? Explain various methods of application of cryotherapy.
- Q. 6. What is the principle of Interferential therapy? Explain its physiological effects along with indications and contraindications.
- Q. 7. Explain pain gate theory given by Melzack and wall.
- Q. 8. Explain types, parameters along with indications of TENS.
- Q. 9. Short notes:
 - a. Hydro collator packs
 - b. Methods of application of wax bath

B.P.T. SECOND YEAR EXAMINATION, JULY - 2018
ELECTRO THERAPY
PAPER - II (MCQ)

Time allotted for MCQ-15 minutes

B : MCQs (Single response type):

($\frac{1}{2} \times 14 = 7$)

Select the most appropriate answer and **encircle** the alphabet against it

1. Which of the following is **not** considered as a superficial heating modality?
 - a. Wax bath
 - b. Hydrocollator packs
 - c. Short wave diathermy
 - d. Heating pads
2. Which amongst the following is a medium frequency current?
 - a. Faradic current
 - b. Galvanic current
 - c. Sinusoidal current
 - d. Russian current
3. During iontophoresis, lidocaine is indicated for:
 - a. Pain
 - b. Hyperhidrosis
 - c. Inflammation
 - d. Infection
4. Laser beam is characterized by:
 - a. Monochromaticity
 - b. Coherence
 - c. Collimation
 - d. All of the above
5. Which of these is **not** a contraindication of wax bath?
 - a. Scars and adhesions
 - b. Infection
 - c. Skin diseases
 - d. Dysesthesia
6. The circuit used to produce faradic type current is:
 - a. Multivibrator circuit
 - b. Surger circuit
 - c. Voltage halving circuit
 - d. Anode circuit
7. What is the approximate period of initial vasoconstriction during Lewis Hunting reaction?
 - a. 5 minutes
 - b. 15 minutes
 - c. 25 minutes
 - d. 35 minutes
8. Chemical released from higher centers during descending pain suppression pathway is:
 - a. Lidocaine
 - b. Acetyl choline
 - c. Endorphin and encephalin
 - d. GABA
9. The smallest current that produces a muscle contraction when the stimulus is of finite duration is:
 - a. Chronaxie
 - b. Rheobase
 - c. Microcurrent
 - d. Pulse duration
10. The shape of curve in strength duration curve indicates:
 - a. The site of lesion
 - b. Onset of lesion
 - c. Proportion of denervation
 - d. All of above
11. Conventional TENS is:
 - a. High intensity, low frequency
 - b. Low intensity, low frequency
 - c. High intensity, high frequency
 - d. High frequency, low intensity
12. The commonly used therapeutic frequency of SWD is:
 - a. 29.17 mhz
 - b. 27.12 mhz
 - c. 30.12 mhz
 - d. 20.19 mhz
13. Microwaves are absorbed more in tissues with:
 - a. More fat content
 - b. More water content
 - c. More osseous in nature
 - d. None of the above
14. The unit of ultrasound is:
 - a. Watts
 - b. Watts/ cm²
 - c. Volts/inch²
 - d. Newton

B.P.T. SECOND YEAR EXAMINATION, JULY - 2018
BIOMECHANICS & KINESIOLOGY
PAPER - III

[Time allotted : Three hours]

[Max Marks : 70]

Note: Attempt all questions

Draw suitable diagrams wherever necessary

A : Short answer questions:

(7 x 9 = 63)

- Q. 1. Diagrammatically explain resolution of forces during elbow flexion and extension.
- Q. 2. Name determinants of gait and explain any two.
- Q. 3. Explain lumbo-pelvic rhythm in open and close kinematic chain.
- Q. 4. Explain trabecule system of hip with diagram.
- Q. 5. Write in detail about the dynamic stability of shoulder joint.
- Q. 6. Write short notes on:
 - a. Synovial joint capsule
 - b. Active insufficiency
- Q. 7. Write short notes on:
 - a. Screw-home mechanism
 - b. Q angle
- Q. 8. Explain stress strain curve for muscle.
- Q. 9. Describe the extensor mechanism of hand.

B.P.T. SECOND YEAR EXAMINATION, JULY - 2018
BIOMECHANICS & KINESIOLOGY
PAPER - III (MCQ)

Time allotted for MCQ-15 minutes

B : MCQs (Single response type):

($\frac{1}{2} \times 14 = 7$)

Select the most appropriate answer and **encircle** the alphabet against it:

1. Areas that include only actin filaments are called:
 - a. Isotropic bands
 - b. Anisotropic bands
 - c. H zone
 - d. Sarcomere
2. Coracoacromial arch is also called as:
 - a. Supraclavicular
 - b. Suprahumeral
 - c. Supraglenoid
 - d. None of above
3. Increase in carrying angle beyond average is known as:
 - a. Cubitus valgus
 - b. Cubitus varus
 - c. Cubitus torsion
 - d. None of the above
4. Hook grip is specialized form of:
 - a. Prehension
 - b. Power grip
 - c. Spherical grip
 - d. Cylindrical grip
5. Ratio of scapulothoracic motion to glenohumeral motion is:
 - a. 1:2
 - b. 1:1
 - c. 1:3
 - d. 1:4
6. Name the muscles that help the agonist to perform a desired action:
 - a. Agonist
 - b. Synergists
 - c. Antagonist
 - d. None of these
7. The movement of bones rather than movement of articular surface is termed as:
 - a. Osteokinematic
 - b. Arthrokinematic
 - c. Kinetics
 - d. Kinematics
8. While running the phase of normal gait cycle that disappears is:
 - a. Stance
 - b. Swing
 - c. Double stance
 - d. Weight bearing
9. Metatarsal break distributes weight across the metatarsal head when:
 - a. Plantar flexed
 - b. Heel lifts
 - c. Supinated foot
 - d. None
10. Normal Q angle is:
 - a. 10 - 15 degree
 - b. 8 - 10 degree
 - c. 20 - 25 degree
 - d. 15 - 20 degree
11. Pes anserinus is formed by all of the following **except**:
 - a. Gracilis
 - b. Semitendinosus
 - c. Biceps femoris
 - d. Sartorius
12. Lateral pelvic tilt or pelvic drop occurs in:
 - a. Coronal plane
 - b. Sagittal plane
 - c. Frontal plane
 - d. Transverse plane
13. Identify the basic gait determinant from the following:
 - a. Arm swing
 - b. Shoulder rotation
 - c. Pelvic rotation
 - d. Trunk flexion and extension
14. Normal degree of angle of femoral torsion is:
 - a. 10 - 15
 - b. 8 - 15
 - c. 15 - 20
 - d. 13 - 20

Regn. No.....

Paper Code: BPT-204...

B.P.T. SECOND YEAR EXAMINATION, JULY - 2018
PATHOLOGY & MICROBIOLOGY
PAPER - IV

[Time allotted : Three hours]

[Max Marks : 70]

Note: Attempt all questions in serial order

Draw suitable diagrams wherever necessary

A: Short answer questions:

(7 x 8 = 56)

PATHOLOGY

- Q. 1.** Write briefly about pathogenesis and morphology of rheumatoid arthritis.
- Q. 2.** Write short notes on:
a. Necrosis
b. Pathological calcification
- Q. 3.** Enumerate causes of shock. Discuss pathogenesis and clinical features of septic shock.
- Q. 4.** Classify anemia and discuss lab findings in case of megaloblastic anemia.

MICROBIOLOGY

- Q. 5.** a. Name three pathogens that infect the central nervous system. 3
b. Describe briefly sterilization and disinfection. 3
c. Name one yeast and one mould. 1
- Q. 6.** a. Name two viruses that are transmitted by mosquitoes. 2
b. Name two viral infections that can be prevented by vaccination. 2
c. Name three bacteria which are Gram Positive. 3
- Q. 7.** a. What are dermatophytes? 3
b. Can dermatophytes be transmitted on physiotherapy equipment? 1
c. If yes, what are the different ways you can prevent such spread? 3
- Q. 8.** An HIV +ve gentleman visits your clinic for physiotherapy. He looks completely healthy. His skin is intact and he does not have any bleeding lesion.
a. Is there a risk of getting HIV infection if you touch his intact skin? 1
b. Is there a risk of getting HIV infection if you touch his oral mucosa? 1
c. What can you do to protect yourself before touching his mouth? 3
d. Do you need to perform hand hygiene (alcohol-based hand rub or hand washing with soap and water) before touching the patient? 2

B.P.T. SECOND YEAR EXAMINATION, JULY - 2018
PATHOLOGY & MICROBIOLOGY
PAPER - IV (MCQ)

Time allotted for MCQ-30 minutes

B : MCQs (Single response type):

(½ x 28 = 14)

Select the most appropriate answer and **encircle** the alphabet against it

PATHOLOGY

1. Anemia seen in case of rheumatoid arthritis is:
 - a. Anemia of chronic disorders
 - b. Iron deficiency anemia
 - c. Megaloblastic anemia
 - d. Aplastic anemia
2. Most common cause of iron deficiency anemia in our country is:
 - a. Nutritional deficiency
 - b. Hemolysis
 - c. Drug induced
 - d. Virus induced
3. Hyper-segmented polymorphs are seen in:
 - a. Thalassemia
 - b. Iron deficiency anemia
 - c. Megaloblastic anemia
 - d. Aplastic anemia
4. Marked increase in ESR is seen in cases of:
 - a. Multiple myeloma
 - b. Polycythemia
 - c. Sickle cell anemia
 - d. All of the above
5. Pencil tip cells are pathognomic of which type of anemia?
 - a. Megaloblastic
 - b. Iron deficiency
 - c. Aplastic
 - d. Sickle cell
6. Reticulocytes are.....
 - a. A type of RBC
 - b. Immature RBCs
 - c. Leukocytes
 - d. Platelet precursors
7. Increased FIGLU excretion in urine is seen in:
 - a. Megaloblastic anemia
 - b. Thalassemia
 - c. Iron deficiency anemia
 - d. Sickle cell anemia
8. Raised serum calcium is seen in:
 - a. Dystrophic calcification
 - b. Metastatic calcification
 - c. Both a and b
 - d. None of the above
9. Benign tumor is:
 - a. Fibroadenoma
 - b. Osteosarcoma
 - c. Chondrosarcoma
 - d. Lipoblastoma
10. Malignant tumor have all features **except**:
 - a. They usually metastasize.
 - b. They are usually encapsulated.
 - c. They metastasize through blood or lymphatic vessels.
 - d. They generally carry poor prognosis
11. Liquefactive necrosis is seen in:
 - a. Kidney
 - b. Brain
 - c. Heart
 - d. Lungs
12. Programmed cell death is known as:
 - a. Necrosis
 - b. Gangrene
 - c. Apoptosis
 - d. All of the above
13. Giant cell tumor is also known as:
 - a. Osteoblastoma
 - b. Osteoclastoma
 - c. Osteosarcoma
 - d. Chondrosarcoma
14. Epithelioid cell granuloma is seen in:
 - a. Lipoma
 - b. Chondrosarcoma
 - c. Rheumatic fever
 - d. Tuberculosis

MICROBIOLOGY

15. Which of the following is used to stain acid-fast bacteria such as *Mycobacterium tuberculosis*?
- Gram's stain
 - Z-N stain
 - Albert's stain
 - India ink stain
16. Which of the following agents kills bacteria even in low concentrations?
- Dextrose
 - Potassium chloride
 - Sodium bicarbonate
 - Chlorine
17. Which of the following microbes can be seen only with an electron microscope?
- Bacteria
 - Fungi
 - Viruses
 - Nematodes
18. Which of the following pathogens can be transmitted by blood transfusion?
- Hepatitis B virus
 - Vibrio cholerae*
 - Ascaris lumbricoides*
 - Influenza A virus
19. Almost all culture media contain which of the following?
- Cholesterol
 - Sucrose
 - Peptone
 - Sodium tellurite
20. Which of the following is a Gram-positive bacterium?
- Escherichia coli*
 - Klebsiella pneumoniae*
 - Salmonella typhi*
 - Staphylococcus aureus*
21. Which of the following is transmitted sexually?
- Neisseria gonorrhoeae*
 - Clostridium botulinum*
 - Bacillus anthracis*
 - Vibrio cholera*
22. Which of the following crosses the placenta?
- IgA
 - IgG
 - IgM
 - IgE
23. Which of the following produces a toxin that reaches the central nervous system and causes muscle spasm?
- Streptococcus pyogenes*
 - Salmonella typhi*
 - Pseudomonas aeruginosa*
 - Clostridium tetani*
24. Which of the following is an opportunistic fungus?
- Trichyphyton rubrum*
 - Aspergillus flavus*
 - Trichophyton mentagrophytes*
 - Epidermophyton floccosum*
25. Which of the following viruses is transmitted by blood?
- Polio
 - Influenza virus
 - HIV
 - Hepatitis A
26. The first effective simple microscope was developed by:
- Antonie van Leeuwenhoek
 - Louis Pasteur
 - Robert Koch
 - Joseph Lister
27. Transfer of DNA by bacteriophages from one bacterial cell to another is called:
- Transformation
 - Transduction
 - Transillumination
 - Conjugation
28. Penicillin kills bacteria by acting on:
- Cell membrane
 - RNA
 - Cell wall
 - Ribosomes

B.P.T. SECOND YEAR EXAMINATION, JULY - 2018
PHARMACOLOGY
PAPER - V

[Time allotted : Three hours]**[Max Marks : 70]**

Note: Attempt all questions
Draw suitable diagrams wherever necessary

A : Short answer questions:**(7 x 9 = 63)**

- Q. 1. Write about the mechanism of action and uses of lignocaine in different types of anaesthesia.
- Q. 2. Compare the competitive antagonism and non-competitive antagonism.
- Q. 3. Describe the adverse effects of corticosteroids.
- Q. 4. Write a note on teratogenicity.
- Q. 5. Describe the management of status epilepticus.
- Q. 6. Explain the therapeutic uses & contraindications of beta blockers.
- Q. 7. Explain the mechanism of action and adverse effects of phenytoin.
- Q. 8. Describe the management of morphine poisoning.
- Q. 9. Classify antimicrobial agents. Discuss in brief the mechanism of action, uses and adverse effects of aminoglycoside antibiotics.

B.P.T. SECOND YEAR EXAMINATION, JULY - 2018
PHARMACOLOGY
PAPER - V (MCQ)

Time allotted for MCQ-15 minutes

B : MCQs (Single response type):

(½ x 14 = 7)

Select the most appropriate answer and encircle the alphabet against it

1. Bioavailability is:
 - a. Rate of absorption of drug
 - b. Metabolism of drug
 - c. Redistribution of drug
 - d. Elimination of drug
2. Drug used in treatment of anxiety is:
 - a. Atropine
 - b. Dopamine
 - c. Propranolol
 - d. Isoprenaline
3. Which of the following is a bronchodilator?
 - a. Corticosteroids
 - b. Salmeterol
 - c. Sodium cromoglycate
 - d. Ketotifen
4. Which of the following is an ACE inhibitor?
 - a. Furosemide
 - b. Digoxin
 - c. Nifedipine
 - d. Lisinopril
5. Dipivefrine is prodrug of:
 - a. Norepinephrine
 - b. Epinephrine
 - c. Pseudoephedrine
 - d. Ephedrine
6. Antagonists produce:
 - a. Similar effect
 - b. Opposite effect
 - c. Both effects
 - d. No effect
7. Pharmacodynamics is:
 - a. Effects produced by drugs
 - b. What the body does to the drug
 - c. How drugs get metabolized
 - d. Factors effecting drug absorption
8. Which one is a general anesthetic?
 - a. Pancuronium
 - b. Lidocaine
 - c. Halothane
 - d. Dicyclomine
9. Drug used in anaphylactic shock:
 - a. Adrenaline
 - b. Phenytoin
 - c. Imipramine
 - d. Paracetamol
10. Which of the following drug is an SSRI?
 - a. Imipramine
 - b. Morphine
 - c. Fluoxetine
 - d. Metformin
11. Which drug belongs to aminoglycoside group of antibiotics?
 - a. Doxycycline
 - b. Ciprofloxacin
 - c. Streptomycin
 - d. Penicillin
12. Nephrotoxicity is most common with:
 - a. Morphine
 - b. Phenytoin
 - c. Atenolol
 - d. Streptomycin
13. Hoffmann elimination is seen with:
 - a. Atracurium
 - b. Mivacurium
 - c. Succinyl choline
 - d. Dantrolene
14. Which of the following drug is anti-hypertensive?
 - a. Atropine
 - b. Amlodipine
 - c. Alprazolam
 - d. Adrenaline

B.P.T. SECOND YEAR EXAMINATION, AUGUST - 2019
EXERCISE THERAPY
PAPER - I

[Time allotted: Three hours]

[Max Marks: 70]

Note: Attempt all questions in serial order
 Draw suitable diagram wherever necessary

Short answer questions:

- Q. 1.** Define hydrotherapy. Describe the therapeutic properties of water. Explain strengthening techniques for hip muscles in a hydrotherapy pool
- Q. 2.** Define ideal posture. Explain postural maintenance mechanism
- Q. 3.** Define passive movement. What are the indications and contraindications? Which technique is utilized to facilitate proprioception while giving passive movements?
- Q. 4.** Define coordination. Describe the rehabilitation exercise for cerebellar ataxia.
- Q. 5.** Discuss the components of suspension unit. What are the types of suspension? Explain suspension therapy technique for shoulder joint
- Q. 6.** MMT for spine flexors and extensors
- Q. 7.** Discuss the stretching exercises for bed ridden patients
- Q. 8.** Elaborate the principles, diagonals and any two techniques of PNF therapy in detail
- Q. 9.** Which muscles will you strengthen to enable a patient perform sit to stand activity? Give examples of strengthening exercises for these muscles?

B.P.T. SECOND YEAR EXAMINATION, AUGUST - 2019
EXERCISE THERAPY
PAPER - I (MCQ)

Time allotted for MCQ - 15 minutes

B : MCQs (Single response type):

(½ x 14 = 7)

Select the most appropriate answer and **encircle** the alphabet against it.

1. Force may be described as combination of:
 - a. Magnitude
 - b. Point of application
 - c. Line of action
 - d. All the above
2. In flight path of projectile which motion is seen:
 - a. Linear
 - b. Angular
 - c. Curvilinear
 - d. None of the above
3. In springs used in series:
 - a. Weight of two equal springs is same as that of single spring
 - b. Weight of two equal springs is total of both the spring
 - c. Weight of two equal springs is half of single spring
 - d. None of the above
4. A saggital axis lies parallel to skull that is in:
 - a. Anterior direction
 - b. Posterior direction
 - c. Anterior posterior direction
 - d. Transverse direction
5. For unstable equilibrium the:
 - a. Center of gravity should be high and base of support is small
 - b. Vice versa
 - c. Center of gravity should be small
 - d. Base of support should be more
6. In shoulder abduction the outer range will be:
 - a. 0 - 90 degree
 - b. 0 - 60 degree
 - c. 90 - 160 degree
 - d. 60 - 120 degree
7. Medial and lateral rotation of hip takes place in:
 - a. Coronal plane
 - b. Saggital plane
 - c. Saggital axis
 - d. Vertical axis
8. Prime movers are also known as:
 - a. Agonist
 - b. Antagonist
 - c. Synergist
 - d. Fixator
9. Two forces of equal magnitude acting together in opposite direction and displaced from one another are called:
 - a. Force
 - b. Friction
 - c. Resistance
 - d. Force couple
10. The agonist muscle for elbow flexion is:
 - a. Triceps
 - b. Biceps
 - c. Brachialis
 - d. Supinator
11. The atlanto occipital joint is an example of:
 - a. 1st order lever
 - b. 2nd order lever
 - c. 3rd order lever
 - d. 4th order lever
12. Gait is define among which one of the following:
 - a. Upper limb
 - b. Lower limb
 - c. Both a+b
 - d. c+ trunk
13. Which of the following is **not** an indication of hydrotherapy?
 - a. Spasticity
 - b. Balance
 - c. Contracture
 - d. Weakness
14. Which one of the following technique of PNF is used for initiation of movement?
 - a. Rhythmic initiation
 - b. Rhythmic stabilization
 - c. Hold relax
 - d. Contact relax

B.P.T. SECOND YEAR EXAMINATION, AUGUST - 2019
ELECTRO THERAPY
PAPER - II

[Time allotted: Three hours]

[Max Marks: 70]

Note: Attempt all questions

Draw suitable diagrams wherever necessary

A : Short answer questions:

(7 x 9 = 63)

- Q. 1. Define MWD - Technique of application and principles of treatment and dosage.
- Q. 2. Define Infra-Red, its effects on tissue and its indication and contraindication.
- Q. 3. What is LASER? Explain types of LASER, indication and contraindication.
- Q. 4. Define ultrasound therapy, its technique of application and dosage.
- Q. 5. Write short notes on:
 - a. Combination therapy
 - b. Wax bath
- Q. 6. Define iontophoresis. Also explain the agents used for pain and inflammation.
- Q. 7. Write short notes on:
 - a. HVPGS
 - b. Sinusoidal currents
- Q. 8. Explain in detail about pain gate theory. What is the mechanism of pain reduction with the application of TENS.
- Q. 9. Explain physiological effects of therapeutic heat and its absolute contraindications.

B.P.T. SECOND YEAR EXAMINATION, AUGUST - 2019
ELECTRO THERAPY
PAPER - II (MCQ)

Time allotted for MCQ - 15 minutes

B : MCQs (Single response type):

(½ x 14 = 7)

Select the most appropriate answer and **encircle** the alphabet against it.

1. During iontophoresis, glycopyrronium bromide is used for:
 - a. Anhidrosis
 - b. Hyperhidrosis
 - c. Inflammation
 - d. Infection
2. Which of these laminae act as substantia gelatinosa?
 - a. Lamina I
 - b. Lamina II
 - c. Lamina III
 - d. Lamina IV
3. Which of these produces the counterirritant effect?
 - a. Conventional TENS
 - b. AL TENS
 - c. Intense TENS
 - d. Burst TENS
4. Ratio of paraffin:wax used for therapeutic purpose:
 - a. 1:7
 - b. 7:1
 - c. 1:3
 - d. 3:1
5. After nerve injury, which therapeutic current is preferred for first 14 days:
 - a. Continuous galvanic
 - b. Intermittent galvanic
 - c. Continuous faradic
 - d. Intermittent faradic
6. In case of denervated muscle, the motor point shifts:
 - a. Upwards
 - b. Downwards
 - c. Medial
 - d. Lateral
7. Which of these is not a contraindication of hydrocollator packs?
 - a. Chronic inflammation
 - b. Infection
 - c. Skin diseases
 - d. Dysesthesia
8. The effective depth of penetration of MWD is:
 - a. 3 cm
 - b. 5 cm
 - c. 4.3 cm
 - d. 1 cm
9. The half value depth of 1 mhz U.S is:
 - a. 1 cm
 - b. 3 cm
 - c. 5.6 cm
 - d. 6.5 cm
10. The depth of penetration of luminous infrared is:
 - a. 15 mm
 - b. 3 cm
 - c. 2 mm
 - d. 5-10 mm
11. In physiotherapy the class of laser used is:
 - a. Class 1
 - b. Class 4
 - c. Class 2
 - d. Class 3
12. The wave length of UVA is:
 - a. 280 nm - 315 nm
 - b. 260 nm - 280 nm
 - c. 315 nm - 400 nm
 - d. 220 nm - 260 nm
13. Vit-D is produced by the effect of:
 - a. UVB
 - b. UVA
 - c. UVE
 - d. None of the above
14. The frequency of microwave are:
 - a. 300 mhz - 300ghz
 - b. 200 mhz
 - c. 10 mhz - 100mhz
 - d. None of the above

B.P.T. SECOND YEAR EXAMINATION, AUGUST - 2019
BIOMECHANICS & KINESIOLOGY
PAPER - III

[Max Marks: 70]

[Time allotted: Three hours]

Note: Attempt all questions

Draw suitable diagrams wherever necessary

(7 x 9 = 63)

A : Short answer questions:

- Q. 1. Discuss the anatomical configuration of the humerus and the glenoid fossa as they relate to glenohumeral joint stability. What is the role of the glenoid labrum and joint capsule in joint stability?
- Q. 2. Name the bones of the wrist complex; describe the articulation that occur between these bones and the functional joints that are formed.
- Q. 3. Describe why using a cane on the side opposite hip joint pain or weakness is more effective than using the cane on the same side?
- Q. 4. Describe the patella femoral articulation.
- Q. 5. What is the Q angle of the knee joint? How is it measured, and what implication does it have for patella femoral problems?
- Q. 6. Describe the ligaments that support the ankle joints, including the names of the components when relevant?
- Q. 7. What is the closed pack position for subtalar joint? Which motion of the tibia will lock the weight bearing subtalar joint?
- Q. 8. Describe the carrying angle and explain why it is present and why females have been found to have larger angle than males
- Q. 9. Compare medial and lateral collateral ligaments of elbow joint on the basis of structure and function.

B.P.T. SECOND YEAR EXAMINATION, AUGUST - 2019
BIOMECHANICS & KINESIOLOGY
PAPER - III (MCQ)

Time allotted for MCQ - 15 minutes

B : MCQs (Single response type):

(½ x 14 = 7)

Select the most appropriate answer and **encircle** the alphabet against it:

1. Normal centre edge angle present in hip joint:
 - a. 35
 - b. 50
 - c. 45
 - d. 25
2. Normal carrying angle in female:
 - a. 10 degree
 - b. 12 degree
 - c. 15 degree
 - d. None of the above
3. Deltoid ligament present in:
 - a. Ankle joint
 - b. Elbow joint
 - c. Hip joint
 - d. None of the above
4. Long thoracic nerve supply of:
 - a. Latissimus dorsi muscle
 - b. Serratus anterior muscle
 - c. Biceps muscle
 - d. None of the above
5. The effort arm is always larger than the resistance arm is known as:
 - a. Second class lever
 - b. Third class lever
 - c. First class lever
 - d. All of the above
6. The effort arm is always smaller than resistance arm is known as:
 - a. Second class lever
 - b. Third class lever
 - c. First class lever
 - d. All of the above
7. Intervertebral disc are composed of:
 - a. Annulus fibrosus
 - b. Nucleus pulposus
 - c. Vertebral end plate
 - d. All of the above
8. Lower cervical spine includes:
 - a. C3 - C7
 - b. C5 - C7
 - c. C6 - C7
 - d. C1 - C2
9. Supraspinous ligament of spine is absent at the level of:
 - a. L5- S1
 - b. L4-L5
 - c. L3-L4
 - d. None of the above
10. Centre of gravity acts in the body:
 - a. S2
 - b. D2
 - c. C3
 - d. None of the above
11. Avascular necrosis of the lunate, is known as:
 - a. Kienbocks disease
 - b. Scaphoid disease
 - c. Neck of femur
 - d. None of above
12. Maximum rotation in vertebral column is present in:
 - a. Cervical
 - b. Thoracic
 - c. Lumbar
 - d. Sacral
13. Extensor carpi radialis brevis muscle is affected in case of:
 - a. Tennis elbow
 - b. Golfers elbow
 - c. Carpal tunnel syndrome
 - d. All of the above
14. Gait is defined as:
 - a. Locomotion
 - b. Locomotive
 - c. Progression
 - d. All of above

Regn. No. DD.....

Paper Code: BPT204

B.P.T. SECOND YEAR EXAMINATION, AUGUST - 2019
PATHOLOGY & MICROBIOLOGY
PAPER - IV

[Max Marks: 70]

[Time allotted: Three hours]

Note: Attempt all questions in serial order
Draw suitable diagrams wherever necessary

(7 x 8 = 56)

A: Short answer questions:

PATHOLOGY

- Q. 1. What are chronic obstructive pulmonary diseases? Describe any one of them
- Q. 2. Enumerate the difference between benign and malignant tumors
- Q. 3. What are different types of anemia? Describe iron deficiency anemia
- Q. 4. Write short note on chronic granulomatous inflammation

MICROBIOLOGY

- Q. 5. Write short notes on:
a. Sterilisation and its classification
b. Koch's postulates
- Q. 6. Write short notes on:
a. Lab diagnosis of hepatitis infection
b. Lab diagnosis of mycobacterium tuberculosis
- Q. 7. Write short notes on:
a. Candida infection
b. Modes of gene transfer
- Q. 8. Write short notes on:
a. Biomedical waste management
b. Structure and classes of antibody

B.P.T. SECOND YEAR EXAMINATION, AUGUST - 2019
PATHOLOGY & MICROBIOLOGY
PAPER - IV (MCQ)

Time allotted for MCQ - 30 minutes

(½ x 28 = 14)

B : MCQs (Single response type):

Select the most appropriate answer and **encircle** the alphabet against it.

PATHOLOGY

1. Increase in leukocyte count is termed:
 - a. Leucopenia
 - b. Leucocytosis
 - c. Polycythemia
 - d. Thrombocytopenia
2. Anemia seen in case of folic acid deficiency is:
 - a. Anemia of chronic disorders
 - b. Iron deficiency anemia
 - c. Megaloblastic anemia
 - d. Aplastic anemia
3. Zeihl Neelson staining is done for:
 - a. Parasitic infection
 - b. Gram positive bacteria
 - c. Gram negative bacteria
 - d. Mycobacterium
4. Marked increase in ESR seen in cases of:
 - a. Multiple myeloma
 - b. Polycythemia
 - c. Sickle cell anemia
 - d. All of the above
5. Acute inflammatory cells include:
 - a. Polymorphs
 - b. Lymphocytes
 - c. Plasma cells
 - d. Macrophages
6. Myeloblasts are:
 - a. An immature RBC
 - b. Precursor of leukocyte
 - c. Platelet precursors
 - d. Precursor of osteocyte
7. Malignant epithelial tumor is:
 - a. Thalassemia
 - b. Lipoma
 - c. Liposarcoma
 - d. Carcinoma
8. Benign epithelial tumor is:
 - a. Adenoma
 - b. Carcinoma
 - c. Sarcoma
 - d. Seminoma
9. Malignant tumor have all features **except**:
 - a. They usually metastasize
 - b. They are usually encapsulated
 - c. They metastasize through blood or lymphatic vessels
 - d. They generally carry poor prognosis
10. Liquefactive necrosis seen in:
 - a. Kidney
 - b. Brain
 - c. Heart
 - d. Lungs
11. Programmed cell death is known as:
 - a. Necrosis
 - b. Gangrene
 - c. Apoptosis
 - d. Anemia
12. Dystrophic calcification is associated with:
 - a. Increased serum calcium level
 - b. Decreased serum calcium level
 - c. Normal serum calcium level
 - d. Increased potassium level
13. Epithelioid cell granuloma seen in:
 - a. Gangrene
 - b. Anemia
 - c. Tuberculosis
 - d. Osteosarcoma
14. Epithelioid cells are modified:
 - a. Macrophages
 - b. Lymphocytes
 - c. Eosinophils
 - d. Neutrophils

MICROBIOLOGY

15. Commonest cause of sore throat is:
 - a. *S. pyogenes*
 - b. *S. pneumoniae*
 - c. *S. agalactiae*
 - d. *Viridans streptococci*
16. Which of the following is water borne pathogen?
 - a. Hepatitis A virus
 - b. Hepatitis C
 - c. Hepatitis B
 - d. HIV
17. VDRL test is used for diagnosis of:
 - a. Enteric fever
 - b. HIV infection
 - c. Tuberculosis
 - d. Syphilis
18. Hospital-associated infection can occur by:
 - a. Contact spread
 - b. Airborne spread
 - c. Oral route
 - d. All of the above
19. ELISA kits are commercially available for detection of:
 - a. Anti-HIV antibodies
 - b. Hepatitis B surface antigen
 - c. Rotavirus
 - d. All of the above
20. Which pathogen can be transmitted by needle stick injury?
 - a. Staphylococcus
 - b. E. coli
 - c. Hepatitis B
 - d. M. tuberculosis
21. Causative agent of gas gangrene is:
 - a. *Clostridium tetani*
 - b. *Clostridium perfringens*
 - c. *Clostridium botulinum*
 - d. *Clostridium difficile*
22. Which of the following is a Gram positive bacilli?
 - a. *Staphylococcus*
 - b. *Escherichia coli*
 - c. *Streptococcus*
 - d. *Corynebacterium*
23. Chocolate agar medium is an example of:
 - a. Basal media
 - b. Enriched media
 - c. Selective media
 - d. Enrichment media
24. Which of the following diseases has been recently eradicated from India?
 - a. Hepatitis B
 - b. Rabies
 - c. Polio
 - d. Diphtheria
25. Which of the following media is most suitable for antibiotic sensitivity testing?
 - a. Mueller-Hinton medium
 - b. Nutrient agar
 - c. Blood agar
 - d. MacConkey agar
26. Which of the following is **not** a method of bacterial genetic transfer?
 - a. Conjugation
 - b. Transformation
 - c. Transduction
 - d. Conversion
27. Who is called Father of antiseptic surgery?
 - a. Robert Koch
 - b. Louis Pasteur
 - c. Joseph Lister
 - d. Edward Jenner
28. Selenite F is an example of:
 - a. Basal media
 - b. Enriched media
 - c. Selective media
 - d. Enrichment media

B.P.T. SECOND YEAR EXAMINATION, AUGUST - 2019
PHARMACOLOGY
PAPER - V

[Time allotted: Three hours]**[Max Marks: 70]**

Note: Attempt all questions
Draw suitable diagrams wherever necessary

A : Short answer questions:**(7 x 9 = 63)**

- Q. 1.** Classify antimicrobial agents(AMAs) based on their mechanism of action. Enumerate the problems associated with the use of AMAs.
- Q. 2.** Write a note on diazepam.
- Q. 3.** Explain and discuss centrally acting muscle relaxants.
- Q. 4.** Enumerate the anti-anginal medications. Write in brief about nitrates.
- Q. 5.** Classify the various routes of drug administration. Write in brief about topical route giving suitable examples.
- Q. 6.** Write a note on lignocaine.
- Q. 7.** Classify NSAIDs. Write in brief about the therapeutic uses & adverse effects of aspirin.
- Q. 8.** Discuss drug antagonism.
- Q. 9.** Describe the therapeutic uses and adverse effects of corticosteroids.

B.P.T. SECOND YEAR EXAMINATION, AUGUST - 2019
PHARMACOLOGY
PAPER - V (MCQ)

Time allotted for MCQ - 15 minutes

B : MCQs (Single response type):

(½ x 14 = 7)

Select the most appropriate answer and encircle the alphabet against it.

1. Diffusion hypoxia is seen with:
 - a. Nitrous oxide
 - b. Halothane
 - c. Thiopentone
 - d. Ketamine
2. Pharmacokinetics is the study of:
 - a. Biological and therapeutic effects of drugs
 - b. Development of new drugs
 - c. Absorption, distribution, metabolism and excretion of drugs
 - d. Mechanism of drug action
3. Postural hypotension is commonly seen with:
 - a. Beta blockers
 - b. ACE inhibitors
 - c. Calcium channel blockers
 - d. Alpha blockers
4. Example of a drug given by sublingual route is:
 - a. Paracetamol
 - b. Glyceryl trinitrate
 - c. Carbamazepine
 - d. Succinylcholine
5. Which of the following drugs is a selective COX-2 inhibitor:
 - a. Aspirin
 - b. Diclofenac
 - c. Celecoxib
 - d. Indomethacin
6. Therapeutic index is a measure of:
 - a. Safety
 - b. Potency
 - c. Selectivity
 - d. Efficacy
7. Which of the following is a bactericidal agent?
 - a. Penicillin
 - b. Tetracycline
 - c. Chloramphenicol
 - d. Streptomycin
8. Hoffmann elimination is seen with:
 - a. Morphine
 - b. Atracurium
 - c. Succinylcholine
 - d. Selegiline
9. Ototoxicity and nephrotoxicity is seen with:
 - a. Streptomycin
 - b. Erythromycin
 - c. Ciprofloxacin
 - d. Amoxycillin
10. The preferred treatment of status epilepticus is intravenous administration of:
 - a. Chlorpromazine
 - b. Lorazepam
 - c. Succinylcholine
 - d. Tranlycypromine
11. Drug of choice in myasthenia gravis is:
 - a. Neostigmine
 - b. Atropine
 - c. Succinylcholine
 - d. Adrenaline
12. Which of the following is a potassium sparing diuretic?
 - a. Furosemide
 - b. Spironolactone
 - c. Acetazolamide
 - d. Mannitol
13. Drug contraindicated in narrow angle glaucoma:
 - a. Atropine
 - b. Timolol
 - c. Adrenaline
 - d. Pilocarpine

Regn. No.....

Paper Code: BPT202

BACHELOR OF PHYSIOTHERAPY
SECOND YEAR EXAMINATION, NOVEMBER - 2019
ELECTRO THERAPY
PAPER - II

Lib

[Time allotted: Three hours]

[Max Marks: 70]

Note: Attempt all questions

Draw suitable diagrams wherever necessary

A : Short answer questions:

(7 x 9 = 63)

- Q. 1. Summarize the common uses and contraindications of LASER therapy.
- Q. 2. Define the mechanism behind heat production in tissues by SWD.
- Q. 3. Explain some therapeutic uses of ultrasonic massage therapy and how will you dosage it?
- Q. 4. Describe SD curve testing, method and interpretation.
- Q. 5. Explain in brief the pain gate theory and its application in alleviating pain by various electrotherapy modalities.
- Q. 6. Name indications and contraindications for therapeutic currents.
- Q. 7. Classify nerve injuries and explain propagation of action potential in nerves.
- Q. 8. Explain 'PRICE' therapy and physiological effects of cryotherapy.
- Q. 9. Explain combination therapy.

BACHELOR OF PHYSIOTHERAPY
SECOND YEAR EXAMINATION, NOVEMBER - 2019
ELECTRO THERAPY
PAPER - II
(MCQ)

Time allotted for MCQ - 15 minutes

B : MCQs (Single response type):

(½ x 14 = 7)

Select the most appropriate answer and **encircle** the alphabet against it.

1. Which of the following conditions is a contraindication for application of SWD?
 - a. Tumors
 - b. Osteoarthritis of knee
 - c. Acute ankle injuries
 - d. Pelvic inflammatory disorder
2. Which of the following is produced in the body due to absorption of the UVB by the skin?
 - a. Vitamin C
 - b. Vitamin B
 - c. Vitamin D
 - d. Vitamin A
3. Which of the following erythema doses cause powdery desquamation and slight pigmentation of the skin?
 - a. E1
 - b. E2
 - c. E3
 - d. E4
4. Lewis Hunting reaction is in response to:
 - a. Local physiological effect of cold
 - b. A biological effect of hot pack
 - c. A physiological effect of paraffin wax bath
 - d. A physiological effect of hot air bath
5. Paraffin bath contains and paraffin wax and mineral oil in a ratio of:
 - a. 9:1
 - b. 1:6
 - c. 9:1
 - d. 6:1
6. The following are true contraindications to cryotherapy **except**:
 - a. Peripheral vascular disease
 - b. Loss of sensation
 - c. Edema and swelling
 - d. Hypersensitivity to cold
7. On application of hot packs, heat is transferred by:
 - a. Convection
 - b. Conduction
 - c. Evaporation
 - d. Radiation
8. It is the smallest dose of UVR needed to result in erythema that is just detectable by eye at between 8 and 24 hours after exposure:
 - a. MED
 - b. E1
 - c. E2
 - d. E3
9. The following is a deep heating modality:
 - a. IRR
 - b. SWD
 - c. Hot packs
 - d. UVR
10. For osteoarthritis of knee joint which one of the following method is appropriate for the application of SWD:
 - a. Cross fire method
 - b. Contra planar method
 - c. Coplanar method
 - d. All of the above
11. Ultrasound heating of soft tissues depends upon:
 - a. Density of the tissue
 - b. Length of the tissue
 - c. Depth of the tissue
 - d. Both a and c above
12. During application of SWD the distance between SWD electrodes and the patient is:
 - a. 2.5 cm
 - b. 4.5 cm
 - c. 6.5 cm
 - d. 8.5 cm
13. The following is **not** a method of application of paraffin wax:
 - a. Capacitor field method
 - b. Glove method
 - c. Dip and immersion method
 - d. Brushing method
14. True indication to SWD:
 - a. Loss of sensation
 - b. Osteoarthritis
 - c. Impaired circulation
 - d. Hemorrhage

Regn. No.....

Paper Code: BPT204

**BACHELOR OF PHYSIOTHERAPY
SECOND YEAR EXAMINATION, NOVEMBER - 2019
PATHOLOGY & MICROBIOLOGY
PAPER - IV**

[Time allotted: Three hours]

[Max Marks: 70]

Note: Attempt all questions in serial order
Draw suitable diagrams wherever necessary

A : Short answer questions:

(7 x 8 = 56)

PATHOLOGY

- Q. 1. Write a short note on fracture healing.
- Q. 2. Classify anemias. Discuss megaloblastic anemia and its lab investigations.
- Q. 3. Short note on necrosis and its types.
- Q. 4. Pathophysiology of edema.

MICROBIOLOGY

- Q. 5. Write a note on segregation and management of biomedical waste.
- Q. 6. Write short notes on:
 - a. Bacterial growth curve
 - b. Autoclave
- Q. 7. Classify hepatitis viruses. Write briefly on blood-borne hepatitis viruses.
- Q. 8. Discuss briefly:
 - a. Mode of transmission of HIV
 - b. Candida albicans

BACHELOR OF PHYSIOTHERAPY
SECOND YEAR EXAMINATION, NOVEMBER - 2019
PATHOLOGY & MICROBIOLOGY
PAPER - IV
(MCQ)

Time allotted for MCQ - 30 minutes

B : MCQs (Single response type):

(½ x 28 = 14)

Select the most appropriate answer and **encircle** the alphabet against it.

PATHOLOGY

1. Blood sample for doing Arterial Blood Gas analysis should be collected in which vial?
 - a. Fluoride
 - b. EDTA
 - c. Heparin
 - d. Oxalate
2. Bloom-Richardson scoring is used for which tumor:
 - a. Lung
 - b. Brain
 - c. Prostate
 - d. Breast
3. Dystrophic calcification is commonly seen in:
 - a. Thyroid
 - b. Brain
 - c. Skeletal muscles
 - d. Nerves
4. The enzyme involved in xenobiotic metabolism:
 - a. Cytochrome P224
 - b. Cytochrome P450
 - c. Cytochrome P53
 - d. Cytochrome P115
5. Which of the following is **not** a tumor suppressor gene?
 - a. P 53
 - b. APC
 - c. BCL 2
 - d. RB
6. Massive splenomegaly is seen in:
 - a. CLL
 - b. CML
 - c. Infectious mononucleosis
 - d. Aplastic anemia
7. Which of the following is **not** a cause of macrocytic anemia?
 - a. Liver cirrhosis
 - b. Folic acid deficiency
 - c. Thalassemia minor
 - d. Malaria
8. Which immunoglobulin can cross the placenta?
 - a. Ig A
 - b. Ig G
 - c. Ig M
 - d. Ig E
9. Which of the following is a malignant round cell tumor of bone?
 - a. Osteoclastoma
 - b. Giant cell tumor
 - c. Ewings sarcoma
 - d. Osteogenic sarcoma
10. Which of the following hormone is **not** secreted by the pancreas?
 - a. Insulin
 - b. Glucagon
 - c. Renin
 - d. Somatostatin
11. Left ventricular hypertrophy is caused by:
 - a. Systemic hypertension
 - b. Mitral stenosis
 - c. Pulmonary hypertension
 - d. Syphilis
12. Most common complication of RHD is:
 - a. Aortic stenosis
 - b. Mitral stenosis
 - c. Endocarditis
 - d. Pericarditis
13. Haemophilia is due to deficiency of:
 - a. Factor VII
 - b. Factor VIII
 - c. Factor IX
 - d. Factor V
14. Which sample is **not** needed in investigating transfusion reaction:
 - a. Blood of patient
 - b. CSF of patient
 - c. Urine of patient
 - d. Blood in blood bag

....PTO/-

MICROBIOLOGY

15. Delayed hypersensitivity reaction is mediated by:
- T lymphocytes
 - B lymphocytes
 - Killer cells
 - Natural killer cells
16. Which of the following is a Gram negative bacilli?
- Mycobacterium tuberculosis*
 - Escherichia coli*
 - Streptococcus*
 - Staphylococcus*
17. Which class of immunoglobulins can cross the placenta?
- Ig G
 - Ig M
 - Ig D
 - Ig A
18. Which of the following bacteria is acid fast?
- Escherichia coli*
 - Salmonella*
 - Mycobacterium tuberculosis*
 - Vibrio*
19. Germ tube test is diagnostic test for:
- Candida glabrata*
 - Candida albicans*
 - Cryptococcus neoformans*
 - Coccidioides immitis*
20. BCG vaccine is a:
- Live attenuated preparation
 - Killed preparation
 - Toxoid preparation
 - Preparation recombinant
21. Which of the following is an example of capsulated yeast?
- Albicans*
 - Cryptococcus neoformans*
 - Aspergillus*
 - C. krusei*
22. Which of the following viruses is a RNA virus?
- Hepatitis A virus
 - Herpes simplex virus
 - Parvo virus
 - Adenovirus
23. Which of the following viruses is a DNA virus?
- Hepatitis C virus
 - Picorna virus
 - Measles virus
 - Epstein-Barr virus
24. Causative organism of syphilis is:
- Mycoplasma*
 - Salmonella*
 - Mycobacterium tuberculosis*
 - Treponema pallidum*
25. The widal test is a type of:
- Precipitation reaction
 - Agglutination reaction
 - Complement fixation test
 - Immunofluorescence
26. The organ of locomotion of bacteria is:
- Capsule
 - Slime
 - Flagella
 - Fimbriae
27. Type I hypersensitivity is mediated by:
- T lymphocytes
 - Ig G
 - Ig E
 - Natural killer cells
28. All of the following hepatitis viruses are DNA viruses **except**:
- Pox virus
 - Hepatitis B virus
 - Hepatitis E virus
 - Adenovirus

1/ Lib
Regn. No. DD.....

Paper Code: BPT201

B.P.T.
SECOND YEAR EXAMINATION, AUGUST - 2020
EXERCISE THERAPY
PAPER - I

[Time allotted: Two hours]

[Max Marks: 70]

Note: Attempt all questions in serial order
Draw suitable diagrams wherever necessary

Short answer questions:

(06 x 10 = 60)

- Q. 1.** Define passive movements. Explain in detail about its classification, principles, indications and contraindications.
- Q. 2.** Define PNF and explain in detail about emphasis techniques.
- Q. 3.** Write in a detailed note on the origin and history of massage.
- Q. 4.** Write about the importance and principles of re-education of in co-ordination and about Frenkel's exercises.
- Q. 5.** Describe indication for joint mobilization and demonstrate the techniques of knee joint mobilization.
- Q. 6.** What is suspension therapy? Explain and write down the therapeutic effects.

B.P.T.
SECOND YEAR EXAMINATION, AUGUST - 2020
EXERCISE THERAPY
PAPER - I
(MCQ)

Time allotted for MCQ - 15 minutes

B : MCQs (Single response type):

(01 x 10 = 10)

Select the most appropriate answer and **encircle** the alphabet against it

1. During postural observation of scoliosis can be observed in:
 - a. Anterior view
 - b. Posterior view
 - c. Lateral view
 - d. None of the above
2. In lateral view, at the level of feet, plumb line falls at:
 - a. Subtalar joint
 - b. Calcaneonavicular joint
 - c. Calcaneocuboid joint
 - d. Talocrural joint
3. Fullform of MRC grading:
 - a. Manual research council grading
 - b. Medical research council grading
 - c. Medical rose council grading
 - d. None of the above
4. In lordosis; tightness commonly occurs in which muscle?
 - a. Iliopsoas
 - b. Hamstring
 - c. Quadriceps
 - d. Erector spinae
5. Full form of PNF:
 - a. Proprioceptive neuromuscular facilitation
 - b. Programed neuromuscular facilitation
 - c. Passive neuromuscular facilitation
 - d. All of the above
6. Hand dynamometer is used for _____ purpose:
 - a. Diagnostic
 - b. Prognostic
 - c. Both the above
 - d. None of the above
7. To measure shoulder flexion using goniometer, the fulcrum is kept at:
 - a. Greater tubercle
 - b. Coracoid process
 - c. Acromion process
 - d. None of the above
8. Among these, which is **not** an indication of traction:
 - a. Prolapsed intervertebral disc
 - b. Muscle tightness
 - c. Osteoporosis
 - d. Radiculopathy
9. If the weight of the patient is 40. What is the maximum weight (approx) that can be applied for cervical traction?
 - a. 4 kg
 - b. 8 kg
 - c. 9 kg
 - d. 10 kg
10. Reflex movement is:
 - a. Voluntary
 - b. Involuntary
 - c. Accessory
 - d. Sensory

Regn. No DD.....

Paper Code: BPT202

B.P.T.
SECOND YEAR EXAMINATION, AUGUST - 2020
ELECTRO THERAPY
PAPER - II

[Time allotted: Two hours]

[Max Marks: 70]

Note: Attempt all questions

Draw suitable diagrams wherever necessary

A : Short answer questions:

(06 x 10 = 60)

- Q. 1. Discuss the characteristics, parameters, indications and contraindications of faradic and galvanic currents.
- Q. 2. What is FG test? Explain its role in electro diagnosis. Write short note on chronaxie and rheobase.
- Q. 3. Discuss the mechanism of pain relief by TENS therapy. Discuss the indications and contraindication of TENS therapy.
- Q. 4. Write down the physiological and therapeutic effects of SWD. Explain the methods of application and indication and contraindication of usage.
- Q. 5. Write short notes on:
 - a. Phonophoresis
 - b. Iontophoresis
- Q. 6. Define biofeedback. Discuss the technique of application, principles and therapeutic advantages of using biofeedback.

B.P.T.
SECOND YEAR EXAMINATION, AUGUST - 2020
ELECTRO THERAPY
PAPER - II
(MCQ)

Time allotted for MCQ - 15 minutes

B : MCQs (Single response type):

(01 x 10= 10)

Select the most appropriate answer and **encircle** the alphabet against it

1. When an ultrasonic beam is applied to a cell membrane, it causes unidirectional flow of tissue components. It is termed as:
 - a. Cavitation
 - b. Attenuation
 - c. Adsorption
 - d. Acoustic streaming
2. In UVR lamp, the heat produced in the burner changes the quartz to:
 - a. Silicone
 - b. Boron
 - c. Tridymite
 - d. Silicone oxide
3. The wavelength of UVA is:
 - a. 280 nm – 315 nm
 - b. 260 nm – 280 nm
 - c. 315 nm – 400 nm
 - d. 220 nm – 260 nm
4. Unidirectional current are also termed as:
 - a. Bipolar
 - b. Monopolar
 - c. Faradic currents
 - d. Alternating current
5. While applying SWD with the inductive method to high impedance structures, which part of the cable should be used?
 - a. Middle part
 - b. End parts
 - c. Flat spiral coil
 - d. Both a and b above
6. Conventional TENS stimulation is:
 - a. High intensity, low frequency
 - b. Low intensity, low frequency
 - c. High Intensity, high frequency
 - d. Low intensity, high frequency
7. The shape of the curve in SD curve indicates:
 - a. Site of lesion
 - b. Onset
 - c. Proportion of de-nervation
 - d. All of the above
8. The rate at which LASER energy is produced or absorbed is measured in:
 - a. Joules
 - b. Joules/sec
 - c. Joules/metre square
 - d. Joule/cm square
9. Decrease in the temperature due to cooling leads to decrease in the metabolic rate of the tissues. This is according to:
 - a. Joule's law
 - b. Vant Hoff's law
 - c. Grotthus law
 - d. Eddy's law
10. The number of ions transferred during iontophoresis are proportional to the cube root of the product of:
 - a. Current x time
 - b. Current x resistance
 - c. Current density x time
 - d. Concentration of ions x molarity

B.P.T.
SECOND YEAR EXAMINATION, AUGUST - 2020
BIOMECHANICS & KINESIOLOGY
PAPER - III

[Time allotted: Two hours]

[Max Marks: 70]

Note: Attempt all questions

Draw suitable diagrams wherever necessary

A : Short answer questions:

(06 x 10 = 60)

Q. 1. Define posture. Explain about postural deformities in detail.

Q. 2. Define Gait. Write about determinants of gait and kinematics of walking.

Q. 3. Write short notes on:

- a. Close kinematic chain exercises
- b. Open kinematic chain exercises

Q. 4. Write short notes on:

- a. Elasticity
- b. Angle of pull

Q. 5. Explain about osteokinematics and arthokinematics.

Q. 6. Write in detail about bucket handle and pump handle movement in detail.

B.P.T.
SECOND YEAR EXAMINATION, AUGUST - 2020
BIOMECHANICS & KINESIOLOGY
PAPER - III
(MCQ)

Time allotted for MCQ - 15 minutes

B : MCQs (Single response type):

(01 x 10 = 10)

Select the most appropriate answer and **encircle** the alphabet against it:

1. Rotatory motion is movement of segment around:
 - a. Straight line
 - b. Fixed axis
 - c. Two dimension
 - d. Three dimension
2. A shear force is any force that has an action line in the direction of attempted movement and is..... to contacting surfaces.
 - a. Vertical
 - b. Horizontal
 - c. Parallel
 - d. Opposing
3. Two force that are equal in magnitude, opposite in direction and applied to same object at different points are known as:
 - a. Force couple
 - b. Torque
 - c. Moment arm
 - d. Angle of pull
4. The relative deformation of the structure material that accompanies the stress is referred to as:
 - a. Elasticity
 - b. Strain
 - c. Elongation
 - d. Plasticity
5. If the slope of curve is steep and the modulus of elasticity is high, the material will exhibit a:
 - a. High degree of stiffness and low compliance
 - b. Low degree of stiffness and a large compliance
 - c. High degree of stiffness and large compliance
 - d. Low degree of stiffness and low compliance
6. Condylod and saddle are:
 - a. Uniaxial variety of joints
 - b. Biaxial variety of joints
 - c. Triaxial variety of joints
 - d. Plane joints
7. In convex-concave rule:
 - a. Rolling and gliding are in same direction
 - b. Rolling in one direction and gliding in opposite direction
 - c. Rolling and gliding one above the other
 - d. None of the above
8. About close- packed position, which one of the following is **false**:
 - a. Greatest stability
 - b. No joint play possible
 - c. Ligament and capsule are taut
 - d. Position of flexion is eg for close packed in knee
9. A decrease in torque is produced by the muscle is encountered when full ROM is attempted simultaneously at all joints is termed as:
 - a. Active insufficiency
 - b. Passive insufficiency
 - c. Muscle shortening
 - d. None of the above
10. An angle of inclination of humerus:
 - a. 125 degree
 - b. 130-150 degree
 - c. More than 150 degree
 - d. 110-130 degree

Regn. No. DD.....

Paper Code: BPT204

B.P.T.
SECOND YEAR EXAMINATION, AUGUST - 2020
PATHOLOGY & MICROBIOLOGY
PAPER - IV

[Time allotted: Two hours]

[Max Marks: 70]

Note: Attempt all questions in serial order
Draw suitable diagrams wherever necessary

A: Short answer questions:

(06 x 10 = 60)

PATHOLOGY

- Q. 1.** Write short note on chronic inflammation.
- Q. 2.** Write briefly about pathogenesis and morphology of Tuberculosis.
- Q. 3.** Write a short note on haemophilia

MICROBIOLOGY

- Q. 4.** Enumerate and write briefly on:
- Two acid fast bacteria.
 - Three differences between gram positive and gram negative cell wall.
- Q. 5.** Write short notes on:
- Sterilization and disinfection
 - Bacterial flagella.
- Q. 6.** Draw and write on bacterial growth curve.

B.P.T.
SECOND YEAR EXAMINATION, AUGUST - 2020
PATHOLOGY & MICROBIOLOGY
PAPER - IV
(MCQ)

Time allotted for MCQ - 15 minutes

B : MCQs (Single response type):

(01 x 10 = 10)

Select the most appropriate answer and **encircle** the alphabet against it

PATHOLOGY

1. Features of malignant tumor is:
 - a. Metastasis
 - b. Low mitotic activity
 - c. Usually encapsulated
 - d. All of the above
2. Thalassemia is a type of:
 - a. Anemia
 - b. Necrosis
 - c. Gangrene
 - d. Neoplastic lesion
3. Features of acute inflammation:
 - a. Redness
 - b. Temperature
 - c. Pain
 - d. All of the above
4. Tuberculosis is an example of:
 - a. Acute inflammation
 - b. Chronic inflammation
 - c. Allergy
 - d. None of the above
5. All are types of necrosis **except**:
 - a. Caseous
 - b. Coagulative
 - c. Apoptosis
 - d. Liquefactive

MICROBIOLOGY

6. Who discovered Mycobacterium tuberculosis and Vibrio cholerae?
 - a. Loeffler
 - b. Alexander Fleming
 - c. Joseph Lister
 - d. Robert Koch
7. Which class of immunoglobulins can cross the placenta?
 - a. IgG
 - b. IgM
 - c. IgD
 - d. IgA
8. First antibody to appear following stimulation by an antigen is:
 - a. IgG
 - b. IgM
 - c. IgD
 - d. IgA
9. Delayed hypersensitivity reaction is mediated by:
 - a. T lymphocytes
 - b. B lymphocytes
 - c. Killer cells
 - d. Natural killer cells
10. Which of the following species of Candida is most frequently associated with human infections?
 - a. C. albicans
 - b. C. tropicalis
 - c. C. glabrata
 - d. C. krusei

Regn. No. DD.....

Paper Code: BPT205

B.P.T.
SECOND YEAR EXAMINATION, AUGUST - 2020
PHARMACOLOGY
PAPER - V

[Time allotted: Two hours]

[Max Marks: 70]

Note: Attempt all questions
Draw suitable diagrams wherever necessary

A : Short answer questions:

(06 x 10 = 60)

Write notes on all of the following:

- Q. 1.** Mechanism of action, uses and adverse effects of phenytoin
- Q. 2.** Compare the competitive antagonism and non-competitive antagonism
- Q. 3.** Therapeutic uses of corticosteroids
- Q. 4.** Teratogenicity
- Q. 5.** Management of anaphylactic shock
- Q. 6.** Therapeutic uses and contraindications of beta blockers

B.P.T.
SECOND YEAR EXAMINATION, AUGUST - 2020
PHARMACOLOGY
PAPER - V
(MCQ)

Time allotted for MCQ - 15 minutes

B : MCQs (Single response type):

(01 x 10 = 10)

Select the most appropriate answer and encircle the alphabet against it

1. Drug of choice for the treatment of acute organophosphate poisoning is:
 - a. Atropine
 - b. Pralidoxime
 - c. Neostigmine
 - d. Tubocurarine
2. Dopamine is used in shock because:
 - a. Increase cardiac output
 - b. Decrease peripheral resistance
 - c. Decreases GFR
 - d. Renovascular dilatation
3. Lignocaine acts by inhibition of:
 - a. GABA
 - b. Sodium channels
 - c. Calcium channels
 - d. NMDA receptors
4. Which of the following drugs can commonly cause hypotension by release of histamine from mast cells?
 - a. Aspirin
 - b. Lignocaine
 - c. Morphine
 - d. Sulfadiazine
5. Most important receptor involved in action of morphine is:
 - a. Histamine H1 receptor
 - b. Serotonin 5-HT3 receptor
 - c. Dopamine D2 receptor
 - d. Opioid μ receptor
6. Which of the following antibiotic is ineffective when administered with milk?
 - a. Amoxicillin
 - b. Cefclor
 - c. Tetracycline
 - d. Ampicillin
7. Group of antibiotics which inhibit DNA-gyrase:
 - a. Penicillin
 - b. Sulphonamide
 - c. Fluoroquinolones
 - d. Tetracyclin
8. Bactericidal inhibitors of protein synthesis are:
 - a. Tetracyclines
 - b. Aminoglycosides
 - c. Macrolides
 - d. Lincosamides
9. Teeth discoloration is associated with which of the following antimicrobial?
 - a. Tetracycline
 - b. Cotrimoxazole
 - c. Cephalixin
 - d. Ethambutol
10. First drug to be used in absence seizures:
 - a. Phenytoin
 - b. Benzodiazepines
 - c. Valproate
 - d. Carbamazepine

B.P.T.
SECOND YEAR EXAMINATION, JANUARY – 2021
EXERCISE THERAPY
PAPER - I

[Time allotted: Two hours]

[Max Marks: 70]

Note: Attempt all questions in serial order
Draw suitable diagrams wherever necessary

Short answer questions:

(06 x 10 = 60)

- Q. 1.** Describe different techniques of general relaxation, explain in detail.
- Q. 2.** Write down the grades of MMT and explain grade 2 for quadriceps muscle.
- Q. 3.** Define posture & its types, explain sway back posture.
- Q. 4.** Explain limb length measurement and its types.
- Q. 5.** Write down the principles of hydrotherapy. Name any two hydrotherapy unit.
- Q. 6.** Write down the principles of PNF techniques and explain them in brief.

B.P.T.
SECOND YEAR EXAMINATION, JANUARY - 2021
EXERCISE THERAPY
PAPER - I
(MCQ)

Time allotted for MCQ - 15 minutes

B : MCQs (Single response type):

(01 x 10 = 10)

Select the most appropriate answer and **encircle** the alphabet against it.

1. Inclinometer is used for measurement of:
 - a. Lumbosacral joint.
 - b. Pelvic tilt
 - c. Knee joint
 - d. None of the above
2. Which is the type of active posture?
 - a. Static posture
 - b. Dynamic
 - c. Both of the above
 - d. None of the above
3. Which is type of goniometer?
 - a. Universal
 - b. Gravity dependent
 - c. Bubble
 - d. All of the above
4. PH of water is:
 - a. 7
 - b. 8
 - c. 1
 - d. 0
5. Forces existing in water is:
 - a. Buoyancy
 - b. Hydrostatic pressure
 - c. Viscosity
 - d. All of the above
6. GRF is:
 - a. Ground rate force
 - b. Ground ratio force
 - c. Ground reaction force
 - d. None of the above
7. POC stands for:
 - a. Point of circle
 - b. Point of centre
 - c. Point of contact
 - d. None
8. Number of steps per min in gait is termed as:
 - a. Base of support
 - b. Step length
 - c. Toe out angle
 - d. Cadence
9. During mmt, palpation of muscle contraction is necessary skill to evaluate:
 - a. Grade 1
 - b. Grade 2
 - c. Grade 3
 - d. Grade 4
10. Maximum support in assisted device is provided by:
 - a. Cane
 - b. Tripod
 - c. Elbow crutches
 - d. Axillary crutches