

**B.P.T. SECOND YEAR EXAMINATION, JUNE/JULY - 2013**  
**EXERCISE THERAPY**  
**PAPER FIRST**

**[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.** Define concave- convex rule. Also differentiate between manipulation and mobilization.
- Q. 2.** Define proprioceptive neuromuscular facilitation. Also explain about history and principles.
- Q. 3.** Define aerobic exercise along with physiological response; also explain about determination of exercise heart rate.
- Q. 4.** Define gait ; Explain different types of gait training using assistive devices.
- Q. 5.** Define SAID principle of strengthening exercise. Also explain types of isometric exercise.
- Q. 6.** Differentiate between muscle tone and postural tone. Also explain about progressive muscle relaxation.
- Q. 7.** Differentiate between impairment and disability. Also explain their prevention measures.
- Q. 8.** Describe MMT for the following muscles:
- a.** Soleus
  - b.** Brachioradialis
- Q. 9.** Explain different types of breathing exercises with their indications and contraindications

**B.P.T. SECOND YEAR EXAMINATION, JUNE/JULY - 2013****EXERCISE THERAPY****PAPER FIRST (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. In talocrural joint; anterior glide is given to increase:
  - a. Plantar flexion
  - b. Dorsi flexion
  - c. Inversion
  - d. Eversion
2. The ability to resist fatigue is called:
  - a. Strength
  - b. Endurance
  - c. Conditioning
  - d. Exercise tolerance
3. Karvonen's formula determines:
  - a. Normal heart rate
  - b. Maximum heart rate
  - c. Exercise heart rate
  - d. Resting heart rate
4. Archimedes' principle best correlates:
  - a. Hydrostatic pressure
  - b. Surface tension
  - c. Buoyancy
  - d. Viscosity
5. Which PNF tech will be preferred during difficulty while beginning movement?
  - a. Slow reversal
  - b. Rhythmic stabilization
  - c. Rhythmic initiation
  - d. Hold relax
6. Increase in tension of hamstring take place during:
  - a. High sitting
  - b. Long sitting
  - c. Cross sitting
  - d. Crook lying
7. Breathing is easier in which position:
  - a. Supine lying
  - b. Prone lying
  - c. Half lying
  - d. Crook lying
8. Due to weakness of gluteus maximus, type of gait occurring is:
  - a. Lurching gait
  - b. Trendelenberg gait
  - c. Waddling gait
  - d. Antalgic gait
9. A rapid, forceful , intermittent stretch represents:
  - a. PNF stretch
  - b. Ballistic stretch
  - c. Cyclic stretch
  - d. Mechanical stretch
10. The method of physiological relaxation was given by:
  - a. Edmund Jacobson
  - b. Laura Mitchell
  - c. James Cyriax
  - d. David Butler
11. During postural observation of spine, lateral deviation can be observed in;
  - a. Anterior view
  - b. Posterior view
  - c. Lateral view
  - d. None of these
12. In sway back posture; tightness occurs in:
  - a. Iliopsoas muscle
  - b. Hamstring muscle
  - c. Rectus femoris muscle
  - d. Erector spinae muscle
13. Extension of MCP joint is an example of firm end feel due to;
  - a. Muscular stretch
  - b. Capsular stretch
  - c. Ligamentous stretch
  - d. All of them
14. The starting position for MMT for sternal fibers of Pectoralis major muscle in grade 3,
  - a. 135 degree flexion
  - b. 135 degree abduction
  - c. 90 degree flexion
  - d. 90 degree abduction

**B.P.T. SECOND YEAR EXAMINATION, JUNE/JULY - 2013**  
**ELECTROTHERAPY & ACTINOTHERAPY**  
**PAPER TWO**

**[Time allotted: Three hours]**

**[Max Marks: 70]**

**Note:** Attempt all questions

Draw suitable diagram wherever necessary

**A : Short answer questions:**

**(7 x 9 = 63)**

- Q. 1.** Physiological effect and indication of cold therapy.
- Q. 2.** Write in detail about Tens, its classification and indication
- Q. 3.** Explain the Biofeedback and uses of Biofeedback in Spinal cord injury.
- Q. 4.** Physiological effect of SWD and electrode placement in peri arthritis shoulder in SWD.
- Q. 5.** Write short notes on:
  - a.** Methods of application of Ultrasound.
  - b.** Production of IRR
- Q. 6.** Describe Moist heat.
- Q. 7.** Production, indications of MWD.
- Q. 8.** Write about techniques and application of IFT on a 50 year old women suffering from LBA?
- Q. 9.** If acne requires treatment of an E2 dose at 50 cm and the known E1 for lamp is 1 min at 100cm. then what will be the duration of exposure required?

**B.P.T. SECOND YEAR EXAMINATION, JUNE/JULY - 2013**  
**ELECTROTHERAPY & ACTINOTHERAPY**  
**PAPER TWO (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. In tissue heating by SWD, complex permittivity is dependent upon.
  - a. Frequency
  - b. Intensity
  - c. Duration of application
  - d. None of above
2. The term decimeter wave applies to:
  - a. Infrared
  - b. Shortwave
  - c. Microwave
  - d. None of above
3. The effective depth of penetration of MWD is:
  - a. 3 cm
  - b. 4.3 cm
  - c. 5 cm
  - d. 1 cm
4. UVR reacts with oxygen in air to produce:
  - a. Neon
  - b. Argon
  - c. Ozone
  - d. Helium
5. Vitamin D is produced by effect of :
  - a. UVB
  - b. UVA
  - c. UVC
  - d. None of these
6. S-D curve was used to investigate human nerve injuries by :
  - a. Adrian
  - b. Erb
  - c. Duchenne
  - d. None of these
7. Cold pack is made by:
  - a. Gel pack
  - b. Heat pack
  - c. Ice pack
  - d. None of above
8. In cases of diffuse area of pathology, the IFT mode select is :
  - a. Scanning mode
  - b. Frequency sweep mode
  - c. Quadripolar mode
  - d. None of above
9. Laser promotes wound healing by:
  - a. Cell proliferation
  - b. Increase in RNA production
  - c. Increase in collagen formation
  - d. All of the above
10. The unit of ultrasound dosage is:
  - a. Watts
  - b. Watts/ square cm
  - c. volts/square inch
  - d. Newton
11. The amount of ultrasound reflected at the bone interface is:
  - a. 30%
  - b. 20%
  - c. 70%
  - d. 100%
12. The number of layers of towel between the moist pack and skin should have atleast.
  - a. 4 layers
  - b. 16 layers
  - c. 8 layers
  - d. 6 layers
13. Accommodation is seen in:
  - a. Nerves
  - b. Muscles
  - c. Skin
  - d. Bones
14. In paraffin wax treatment, there should be atleast.
  - a. 2-3 mm thickness of wax on the part
  - b. 5 mm of thickness of wax on the part
  - c. 6 mm of thickness of wax on the part
  - d. 9mm of thickness of wax on the part



**B.P.T. SECOND YEAR EXAMINATION, JUNE/JULY - 2013**  
**BIOMECHANICS & KINESIOLOGY**  
**PAPER THREE**

[Time allotted: Three hours]

[Max Marks: 70]

**Note:** Attempt all questions

Draw suitable diagram wherever necessary

**A : Short answer questions:**

(7 x 9 = 63)

- Q. 1. Explain frontal Plane mal- alignment with diagram and lumbopelvic motion?
- Q. 2. Explain role of menisci with their blood and nerve supply?
- Q. 3. Explain Trabaculae system of femoral head and explain pelvic tilts with diagram?
- Q. 4. Explain Scapulothoracic and Glenohumeral contributions?
- Q. 5. Describe the “carrying angle” and explain its importance.
- Q. 6. Describe the active and passive elements that make up the extensor mechanism?
- Q. 7. What is the Q-angle of knee joint? How is it measured, and what implications does it have for patello femoral problems?
- Q. 8. Explain pronation and supination of wrist?
- Q. 9. Name any three pathological gait and name parameters of gait?

**B.P.T. SECOND YEAR EXAMINATION, JUNE/JULY - 2013**  
**BIOMECHANICS & KINESIOLOGY**  
**PAPER THREE (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. The horns of the menisci and the peripheral vascularised portion of the meniscal bodies are well Innervated with free nerve endings:
  - a. Mechanoreceptors
  - b. Golgi tendon organs
  - c. Both
  - d. None
2. Infrapatellar bursae is called:
  - a. Hoffa's fat pad.
  - b. Gerdys bursae
  - c. Prepatellar bursae
  - d. None
3. Calcaneovalgus:
  - a. >180
  - b. >100
  - c. < 100
  - d. none
4. The primary function of the AC joint is to allow the scapula additional range of rotation on
  - a. Thorax
  - b. Shoulder
  - c. Spine
  - d. All of above
5. The coracoacromial arch is formed by
  - a. The coracoid process
  - b. The acromion
  - c. The coracoacromial ligament
  - d. All of above
6. Medial Collateral Ligament stabilizes the elbow against
  - a. Valgus torques
  - b. Varus torques
  - c. Vertical stress
  - d. a & c
7. Median nerve compression can lead to atrophy of the median nerve innervated muscles in the thenar eminence, a presentation known as
  - a. Claw hand
  - b. "ape hand"
  - c. Paralytic Hand
  - d. None
8. Activity of the extrinsic finger flexors and extensors without any activity of intrinsic finger muscles produces the .....position of the hand.
  - a. Intrinsic plus
  - b. Intrinsic minus
  - c. Both
  - d. None
9. ....angle of the acetabulum is formed between a vertical line through the center of the femoral head and a line connecting the center of the femoral head and the bony edge of the acetabulum :
  - a. The center edge
  - b. Angle of Wiberg
  - c. Both
  - d. None
10. The angle of inclination of the femur averages ranging from .... in the unimpaired adult:
  - a. 110- 150 degree
  - b. 110-120 degree
  - c. 110-140 degree
  - d. none
11. The actions of the gluteus maximus and soleus muscles can influence ..... motion in weight-bearing
  - a. Knee
  - b. Foot
  - c. Ankle
  - d. Hip
12. With the knee close to full extension, a forceful quadricepscontraction is capable of inducing
  - a. Ant. Tibial translation
  - b. Post. Tibial translation
  - c. Both
  - d. None
13. The interphalangeal (IP) joints of the toes are synovial hinge joints with.....of freedom:
  - a. 2 degree
  - b. 1 degree
  - c. 3 degree
  - d. None
14. Parkinsonism has..... gait
  - a. Short step
  - b. Antalgic
  - c. Waddling
  - d. None of the above

**B.P.T. SECOND YEAR EXAMINATION, JUNE/JULY - 2013**  
**PATHOLGOY & MICROBIOLOGY**  
**PAPER FOUR**

[Time allotted: Three hours]

[Max Marks: 70]

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

**A: Short answer questions:**

(7 x 8 = 56)

**PATHOLOGY**

- Q. 1.** Write short note on necrosis.
- Q. 2.** Enumerate differences between benign and malignant tumor.
- Q. 3.** Write short note on bone tumors and describe any one of them.
- Q. 4.** Write short note on chronic inflammation.

**MICROBIOLOGY**

- Q. 5.** Define sterilization and disinfection. Discuss various methods of sterilization by heat.
- Q. 6.** Write briefly about laboratory diagnosis of : (4+3=7)
  - a.** Pulmonary tuberculosis
  - b.** Hepatitis B viral infection
- Q. 7.** Draw a labeled diagram of bacterial growth curve. Write down the differences between cell wall of Gram positive and Gram negative bacteria.
- Q. 8.** Write short notes on: (4+3=7)
  - b.** Hypersensitivity reactions
  - c.** Structure of antibody

**B.P.T. SECOND YEAR EXAMINATION, JUNE/JULY - 2013**  
**PATHOLGOY & MICROBIOLOGY**  
**PAPER FOUR (MCQ)**

**Time allotted for MCQ- 15 minutes**

**B : MCQs (Single response type):**

(½ x 28= 14)

Select the most appropriate answer and encircle the alphabet against it

**PATHOLOGY**

1. Feature of malignant tumor is
  - a. Metastasis
  - b. No mitotic activity
  - c. Usually encapsulated
  - d. No vascular invasion
2. Thalassemia is type of
  - a. Anemia
  - b. Necrosis
  - c. Gangrene
  - d. Neoplasm
3. Liposarcoma is
  - a. Benign epithelial tumor
  - b. Malignant epithelial tumor
  - c. Benign mesenchymal tumor
  - d. Malignant mesenchymal tumor
4. Chronic obstructive pulmonary disease includes all except
  - a. Emphysema
  - b. Bronchiectasis
  - c. Asthma
  - d. Tuberculosis
5. Tuberculosis is an example of:
  - a. Acute inflammation
  - b. Chronic inflammation
  - c. Gangrene
  - d. Allergy
6. Pancarditis occurs in:
  - a. Myocardial infarction
  - b. Rheumatic heart disease
  - c. Hypertension
  - d. Cancer
7. All are types of necrosis except:
  - a. Caseous
  - b. Coagulative
  - c. Apoptosis
  - d. Liquefactive
8. Acute inflammation includes:
  - a. Anemia
  - b. Leprosy
  - c. Redness
  - d. Osteosarcoma

9. Metastasis is seen in benign / malignant tumor. Tick the correct answer.

**Fill in the blanks :**

10. Osteosarcoma is malignant tumor of -----.
11. Ziehl Nelsen stain is used for staining ----- bacteria.
12. Tuberculosis is caused by -----.
13. Tuberculosis shows ----- necrosis.
14. Leprosy is caused by -----.

P.T.O.



## **MICROBIOLOGY**

15. Who is known as "Father of Microbiology"?
- Robert Koch
  - Louis Pasteur
  - Edward Jenner
  - Joseph Lister
16. All are methods of transfer of genetic material EXCEPT:
- Transformation
  - Transcription
  - Conjugation
  - Transduction
17. Which one of the following is used for cultivation of anaerobic bacteria?
- Chocolate agar
  - Blood agar
  - Robertson's cooked meat broth
  - MacConkey agar
18. Which of the following organism is/are acid fast?
- Tubercle bacilli
  - Lepra bacilli
  - Nocardia
  - All of the above
19. Type -I hypersensitivity reaction is mediated by:
- IgE
  - IgG
  - IgM
  - IgD
20. Which class of immunoglobulin has maximum molecular weight?
- IgG
  - IgD
  - IgM
  - IgA
21. All are DNA viruses EXCEPT:
- Polio virus
  - Hepatitis virus
  - Herpes virus
  - Small pox virus
22. Causative agent of dysentery is:
- Klebsiella
  - Shigella
  - Vibrio
  - Pseudomonas
23. Primary lymphoid organ is:
- Bone marrow
  - Lymph nodes
  - Spleen
  - Liver
24. Infected soiled dressings are discarded in:
- Yellow bin
  - Blue bin
  - Black bin
  - Metal container
25. Which one of the following is dermatophyte?
- Candida
  - Aspergillus
  - Trichophyton
  - Cryptococcus
26. Recent pandemic of "Swine flu" is caused by:
- Polio virus
  - HIV
  - Influenza virus
  - Dengue virus
27. Chemical nature of an antigen is:
- Protein
  - Lipid
  - Lipopolysaccharide
  - All of the above
28. Sample not to be refrigerated for bacterial culture:
- Urine
  - Pus
  - CSF
  - Blood

**B.P.T. SECOND YEAR EXAMINATION, JUNE/JULY - 2013**  
**PHARMACOLOGY**  
**PAPER FIVE**

**[Time allotted: Three hours]**

**[Max Marks: 70]**

**Note:** Attempt all questions

Draw suitable diagram wherever necessary

**A : Short answer questions:**

**(7 x 9 = 63)**

Write short notes on:

- Q. 1.** Therapeutic uses and adverse effects of Heparin
- Q. 2.** Morphine dependence
- Q. 3.** Mechanism of action and adverse effects of Sodium valproate
- Q. 4.** Uses and adverse effects of Corticosteroids
- Q. 5.** Sublingual route of drug administration
- Q. 6.** Therapeutic uses and adverse effects of Aspirin
- Q. 7.** Adrenaline
- Q. 8.** ACE inhibitors
- Q. 9.** Therapeutic uses and adverse effects of Aminoglycosides

**B.P.T. SECOND YEAR EXAMINATION, JUNE/JULY - 2013****PHARMACOLOGY  
PAPER FIVE (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. Agranulocytosis is an adverse effect of:
  - a. Risperidone
  - b. Clozapine
  - c. Chlorpromazine
  - d. Ciprofloxacin
2. The Antiparkinsonian drug which acts by inhibiting degradation of Dopamine in brain is:
  - a. Carbidopa
  - b. Levodopa
  - c. Selegiline
  - d. Bromocriptine
3. Which of the following is 4<sup>th</sup> generation cephalosporin?
  - a. Ceftriaxone
  - b. Cefaclor
  - c. Cefuroxime
  - d. Cefepime
4. Drug of choice of malaria in pregnancy is:
  - a. Quinine
  - b. Primaquine
  - c. Chloroquine
  - d. Mefloquine
5. All of the following drugs can cross placenta **except**:
  - a. Phenytoin
  - b. Diazepam
  - c. Morphine
  - d. Heparin
6. Longest acting muscle relaxant is:
  - a. Mivacurium
  - b. Atracurium
  - c. Doxacurium
  - d. Vecuronium
7. Fluoroquinolones act by:
  - a. Inhibiting cell wall synthesis
  - b. Inhibiting DNA gyrase
  - c. Inhibiting protein synthesis
  - d. Interfering with intermediary metabolism
8. Which of the following is a proton pump inhibitor?
  - a. Pantoprazole
  - b. Metronidazole
  - c. Ranitidine
  - d. Albendazole
9. All of the following are Antiemetics **except**:
  - a. Metoclopramide
  - b. Domperidone
  - c. Haloperidol
  - d. Ondansetron
10. All of the following are bronchodilators **except**:
  - a. Salbutamol
  - b. Ipratropium
  - c. Propranolol
  - d. Terbutaline
11. Which of the following calcium channel blockers is **not** a dihydropyridine?
  - a. Nifedipine
  - b. Verapamil
  - c. Amlodipine
  - d. Nimodipine
12. Which Antitubercular drug causes optic neuritis?
  - a. Isoniazid
  - b. Rifampicin
  - c. Ethambutol
  - d. Pyrazinamide
13. Therapeutic index is a measure of:
  - a. Safety
  - b. Efficacy
  - c. Potency
  - d. Selectivity
14. Postural hypotension is a most common side effect of?
  - a. Beta blockers
  - b. CCBs (Ca channel blocker)
  - c. Prazosin
  - d. Methyldopa

Regn. No.....

Paper Code: BP- 201...

**B.P.T. SECOND YEAR EXAMINATION, JUNE/JULY - 2015**  
**EXERCISE THERAPY**  
**PAPER FIRST**

**[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.** Explain the principles and grades of manual muscle testing.
- Q. 2.** Explain lumbar traction along with indications & contraindications.
- Q. 3.** Write down the physiological changes during aerobic exercise.
- Q. 4.** Define good posture. Explain scoliosis in terms of deviation occurring in frontal and sagittal plane.
- Q. 5.** What is stretching & define types of stretching.
- Q. 6.** What are mat exercises? What are indication and contraindication of mat exercises?
- Q. 7.** Explain the following:
  - a.** Forward neck posture
  - b.** Hydrotherapy
- Q. 8.** Explain the following:
  - a.** Hook Grip
  - b.** Kneading Manipulation
- Q. 9.** Explain the following:
  - a.** Principle of Passive movements
  - b.** MMT of Upper limb (Group Muscles)



**B.P.T. SECOND YEAR EXAMINATION, JUNE/JULY - 2015**  
**EXERCISE THERAPY**  
**PAPER FIRST (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. Any these, which is not an indication of traction:
  - a. PIVD
  - b. Muscle spasm
  - c. Radiculopathy
  - d. Osteoporosis
2. In sports person, use of stretching:
  - a. Ballistic stretching
  - b. Slow stretching
  - c. Both
  - d. None
3. Savasan is also known as
  - a. Jacobson
  - b. Passive movement
  - c. Mat exercise
  - d. None
4. Concentration, prevision and repetition are principles of :
  - a. Passive movement
  - b. Gait
  - c. Relaxation
  - d. Co-ordination
5. Which one of following is time parameter of gait?
  - a. Step length
  - b. Cadence
  - c. Toe out angle
  - d. Base of support
6. Which is the characteristic of dominant side?
  - a. Depressed shoulder
  - b. Raised pelvis
  - c. Both of these
  - d. None of these
7. Which one of the following is partial weight bearing gait?
  - a. Two point gait
  - b. Passive movement
  - c. Gait training
  - d. Mat
8. If the weight of the patient is 60 kg what is the maximum weight approx that can be applied for lumbar traction:
  - a. 30 kg
  - b. 20 kg
  - c. 40 kg
  - d. 10 kg
9. Line of gravity passes through
  - a. Front of thoracic vertebra
  - b. Back of thoracic vertebra
  - c. Both thoracic vertebra
  - d. None
10. C.O.G of human body in anatomical position passes through:
  - a. S1
  - b. S2
  - c. C2
  - d. None of these
11. -----is usually expressed a percentage:
  - a. Efficiency
  - b. Energy
  - c. Activities
  - d. None
12. -----is the conditioning part of the exercise programs:
  - a. Aerobic exercise period
  - b. Continuous training
  - c. Cool down period
  - d. None of these
13. In flat back posture: tightness commonly occur in which muscles
  - a. Iliopsoas
  - b. Hamstring
  - c. Rectus femoris
  - d. Erector spinae
14. The -----is the muscle's ability of generate tension (intramuscular tension):
  - a. Strength of muscle contraction
  - b. Motor unit
  - c. Group action of muscle
  - d. None

Regn. No.....

Paper Code: BP- 202

**B.P.T. SECOND YEAR EXAMINATION, JUNE/JULY - 2015**  
**ELECTROTHERAPY**  
**PAPER TWO**

**[Time allotted: Three hours]**

**[Max Marks: 70]**

**Note:** Attempt all questions

Draw suitable diagram wherever necessary

**A : Short answer questions:**

**(7 x 9 = 63)**

- Q. 1.** What is electro diagnosis? Explain various methods of electro diagnosis.
- Q. 2.** Explain the working of short wave diathermy with the help of circuit diagram and methods of its application.
- Q. 3.** What is reverse piezoelectric effect? Also explain therapeutic effects of ultrasonic therapy.
- Q. 4.** Explain types, dosage, techniques 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.** Faradism under pressure

**B.P.T. SECOND YEAR EXAMINATION, JUNE/JULY - 2015**  
**ELECTROTHERAPY**  
**PAPER TWO (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 among 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 these 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. Dyasesthesia
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
  - 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:
  - a. Chronaxie
  - b. Rheo base
  - c. Micro current
  - d. Pulse duration
10. The shape of curve in strength duration curve indicates:
  - a. The site of lesion
  - b. Onset
  - 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 more absorbed 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/ cm<sup>2</sup>
  - c. Volts/inch<sup>2</sup>
  - d. Newton

**B.P.T. SECOND YEAR EXAMINATION, JUNE/JULY - 2015**  
**BIOMECHANICS & KINESIOLOGY**  
**PAPER THREE**

[Time allotted: Three hours]

[Max Marks: 70]

Note: Attempt all questions

Draw suitable diagram wherever necessary

**A : Short answer questions:**

(7 x 9 = 63)

- Q. 1. Explain phases of the gait cycle.
- Q. 2. Write a short note on ligaments of knee joint.
- Q. 3. Write a short note on :
- a. Lumbar pelvic rhythm
  - b. Locking and unlocking of knee joint
- Q. 4. Draw diagrammatical presentation of :
- a. The flexor mechanism of hand
  - b. Short note on Q - angle
- Q. 5. Explain dynamic stability of GH joint with diagram.
- Q. 6. Write a short note on ligaments of vertebral joints.
- Q. 7. Explain differential characteristics of tonic and phasic muscle.
- Q. 8. Write a short note on :
- a. Concave convex rule
  - b. Nucleus pulposus
- Q. 9. Write a short note on :
- a. Cadence
  - b. Stride length
  - c. Name determinants of gait



**B.P.T. SECOND YEAR EXAMINATION, JUNE/JULY - 2015**  
**BIOMECHANICS & KINESIOLOGY**  
**PAPER THREE (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. The degree of toe out angle for normal men is
  - a. 7 degree
  - b. 10 degree
  - c. 5 degree
  - d. 15 degree
2. The distance measured from heel strike of one extremity to heel of opposite extremity is called as
  - a. Stride duration
  - b. Step length
  - c. Stance time
  - d. Stride length
3. A line that connects the lateral rim of acetabulum and centre of femoral head forms an angle with vertical is known as
  - a. Angle of wiberg
  - b. Angle of torsion
  - c. Coxa valga
  - d. None of the above
4. Ratio of scapulothoracic motion to glenohumeral motion is .
  - a. 1:2
  - b. 1:1
  - c. 1:3
  - d. 1:4
5. The disc thickness in the lumbar region is
  - a. 3 mm
  - b. 9 mm
  - c. 10 mm
  - d. 5 mm
6. The movement of bones rather than movement of articular surface is termed as.
  - a. Osteokinematic
  - b. Arthrokinematics
  - c. Kinetics
  - d. Kinematics
7. Curves that have posterior convexity are termed-
  - a. Kyphotic curve
  - b. Lordotic curve
  - c. Scoliotic curve
  - d. None of the above
8. Among which levers the effort arm (EA) is always greater than resistance arm (RA)
  - a. First class lever
  - b. Second class lever
  - c. Third class lever
  - d. None of the above
9. The MCL ligaments in foot is most commonly termed as
  - a. Deltoid ligament
  - b. Calcaneofibular ligament
  - c. Talofibular ligament
  - d. Interosseous ligament
10. The functional position of hand is
  - a. 20° extension, 10° ulnar deviation, MCP 45° flexion, PIP joint 30° flexion
  - b. 10° extension, 5° ulnar deviation, MCP 50° flexion, PIP joint 20° flexion
  - c. 12° extension, 25° ulnar deviation, MCP 55° flexion, PIP joint 30° flexion
  - d. 40° extension, 25° ulnar deviation, MCP 40° flexion, PIP joint 10° flexion
11. The average carrying angle in men is
  - a. 15 degree
  - b. 5 degree
  - c. 10 degree
  - d. 20 degree
12. In shoulder joint the capsule is weak from
  - a. Superiorly
  - b. Inferiorly
  - c. Anteriorly
  - d. Posteriorly
13. The IT band provides .....support to the knee joint.
  - a. Lateral
  - b. Medial
  - c. Rotation
  - d. None
14. Coronal suture is an example of
  - a. Fibrous joint
  - b. Cartilaginous joint
  - c. Synovial joint
  - d. None of the above

Regn. No.....

Paper Code: BP- 204...

**B.P.T. SECOND YEAR EXAMINATION, JUNE/JULY - 2015**  
**PATHOLGOY & MICROBIOLOGY**  
**PAPER FOUR**

[Time allotted: Three hours]

[Max Marks: 70]

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

**A: Short answer questions:**

(7 x 8 = 56)

**PATHOLOGY**

- Q. 1. Write differences between benign and malignant neoplasm.
- Q. 2. Write briefly about Emphysema.
- Q. 3. Write a short note on Chronic inflammation and its fate.
- Q. 4. Write briefly about shock and its pathophysiology.

**MICROBIOLOGY**

- Q. 5. Write short notes on: (3+2+2=07)
  - a. Sterilization & its methods.
  - b. Time, temperature and pressure used in an autoclave.
  - c. Holding time and temperature of hot air oven.
- Q. 6. Write short notes on: (2+2+3=07)
  - a. Differences between gram positive and gram negative cell wall.
  - b. Two Gram positive bacilli.
  - c. Bacterial growth curve.
- Q. 7. Write short notes on: (3+4=07)
  - a. Antigenic structure of Streptococcus pyogenes with a labeled diagram.
  - b. Blood agar and MacConkey's agar.
- Q. 8. Write short notes on: (3+4=7)
  - a. Modes of transmission of HIV.
  - b. Post exposure prophylaxis of HIV.

**B.P.T. SECOND YEAR EXAMINATION, JUNE/JULY - 2015**  
**PATHOLGOY & MICROBIOLOGY**  
**PAPER FOUR (MCQ)**

**Time allotted for MCQ- 15 minutes**

**B : MCQs (Single response type):**

(½ x 28= 14)

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. Emphysema is
  - a. Type of Restrictive lung disease
  - b. Neoplasm
  - c. COPD
  - d. Benign Tumor
6. Pancarditis occurs in
  - a. Myocardial Infarction
  - b. Rheumatic Heart Disease
  - c. Hypertension
  - d. Cancer
7. Swan neck deformity seen in
  - a. Rheumatic Heart disease
  - b. Rheumatoid arthritis
  - c. Tuberculosis
  - d. Hypertension
8. Tuberculosis is caused by.....
9. Ziehl -Neelsen staining is used for staining of.....
10. Megaloblastic anemia caused due to deficiency of
  - a. Vit B<sub>12</sub>
  - b. Folate
  - c. Both
  - d. None
11. Microcytic Hypochromic blood picture seen in
  - a. Iron deficiency anemia
  - b. Thalassemia
  - c. Anemia of chronic Disorders
  - d. All of the above
12. Macro-ovalocytes, and Hyper segmented polymorphs seen in
  - a. Iron deficiency anemia
  - b. Megaloblastic anemia
  - c. Thalassemia
  - d. Blood loss
13. Multiple Myeloma is a disorder of
  - a. RBCs
  - b. Polymorphs
  - c. Plasma cells
  - d. Platelets
14. Myeloblasts are seen in case of
  - a. Iron deficiency anemia
  - b. Acute Myeloid Leukemia
  - c. Thalassemia
  - d. Lymphoma

P.T.O...



## MICROBIOLOGY

15. Who is the father of Microbiology?
- Paul Ehrlich
  - Joseph Lister
  - Louis Pasteur
  - Kitasato
16. Who introduced the techniques of sterilization?
- Paul Ehrlich
  - Joseph Lister
  - Louis Pasteur
  - Robert Koch
17. Who discovered Mycobacterium tuberculosis and Vibrio cholerae?
- Paul Ehrlich
  - Alexander Fleming
  - Joseph Lister
  - Robert Koch
18. Which class of immunoglobulins can cross the placenta?
- IgG
  - IgM
  - IgD
  - IgA
19. Peptidoglycan layer of cell wall is thicker in :
- Gram positive bacteria
  - Gram negative bacteria
  - Fungi
  - Parasites
20. First antibody to appear following stimulation by an antigen is:
- IgG
  - IgM
  - IgD
  - IgA
21. Indian ink staining is used to demonstrate:
- Cell wall
  - Bacterial flagella
  - Bacterial capsule
  - Bacterial spore
22. Delayed hypersensitivity reaction is mediated by:
- T lymphocytes
  - B lymphocytes
  - Killer cells
  - Natural killer cells
23. Which of the following species of Candida is most frequently associated with human infections?
- Candida albicans
  - Candida tropicalis
  - Candida glabrata
  - Candida krusei
24. What is the shape of the rabies virus?
- Spherical
  - Polygonal
  - Bullet shaped
  - Tubular
25. All of the following hepatitis viruses are RNA viruses EXCEPT :
- Hepatitis A virus
  - Hepatitis B virus
  - Hepatitis E virus
  - Hepatitis G virus
26. Which of the following bacteria is acid fast:
- Mycoplasma pneumoniae*
  - Salmonella typhi*
  - Mycobacterium leprae*
  - Vibrio cholerae*
27. Causative organism of syphilis is :
- Mycoplasma pneumoniae*
  - Salmonella typhi*
  - Mycobacterium tuberculosis*
  - Treponema pallidum*
28. The Widal test is a type of
- Precipitation reaction
  - Agglutination reaction
  - Complement fixation test
  - Immunofluorescence



Regn. No.....

Paper Code: BP- 205...

**B.P.T. SECOND YEAR EXAMINATION, JUNE/JULY - 2015**  
**PHARMACOLOGY**  
**PAPER FIVE**

**[Time allotted: Three hours]**

**[Max Marks: 70]**

**Note:** Attempt all questions

Draw suitable diagram wherever necessary

**A : Short answer questions:**

**(7 x 9 = 63)**

- Q. 1.** Enumerate various routes of drug administration. Write advantages of transdermal route of drug administration.
- Q. 2.** Discuss the management of Organophosphorous poisoning.
- Q. 3.** Write mechanism of action and adverse effects of Phenytoin.
- Q. 4.** Describe the pharmacotherapy of Pulmonary TB.
- Q. 5.** Write therapeutic uses and adverse effects of ACE-Inhibitors.
- Q. 6.** Write therapeutic uses & adverse effects of Corticosteroids.
- Q. 7.** Enumerate the drugs used in
- a. Type-II Diabetes mellitus
  - b. Peptic ulcer
- Q. 8.** Write therapeutic uses and adverse effects of ACE-Inhibitors.
- Q. 9.** Write the adverse effects of Aminoglycosides.

**B.P.T. SECOND YEAR EXAMINATION, JUNE/JULY - 2015**  
**PHARMACOLOGY**  
**PAPER FIVE (MCQ)**

Time allotted for MCQ- 15 minutes

(½ x 14= 7)

**B : MCQs (Single response type):**

Select the most appropriate answer and encircle the alphabet against it

1. Antidote for morphine poisoning is
  - a. Pentazocine
  - b. Buprenorphine
  - c. Naloxone
  - d. Tramadol
2. Ranitidine is
  - a. Anticholinergic
  - b. H<sub>2</sub> antihistaminics
  - c. Proton pump inhibitor
  - d. Prostaglandin analogue
3. β Lactum antibiotics act by inhibiting the
  - a. Cell Membrane
  - b. Nucleic Acid
  - c. Cell Wall
  - d. Protein Synthesis
4. Which of the following drugs is a ACE Inhibitors
  - a. Nitroglycerin
  - b. Enalapril
  - c. Sodium nitroprusside
  - d. Nifedipine
5. Which of the following is a MAO inhibitor:
  - a. Morphine
  - b. Carbidopa
  - c. Naltrexone
  - d. Selegiline
6. Which of the following agent is potassium sparing diuretic:
  - a. Furosemide
  - b. Torsemide
  - c. Spironolactone
  - d. Captopril
7. Which of the following is a Tricyclic antidepressant (TCA)?
  - a. Bromocriptine
  - b. Selegiline
  - c. Fluoxetine
  - d. Imipramine
8. Which of following is a local anaesthetic agent
  - a. Betadine
  - b. Timolol
  - c. Acyclovir
  - d. Lignocaine
9. Drug of choice for absence seizure is
  - a. Ethosuximide
  - b. Phenobarbital
  - c. Vigabatrin
  - d. Valproic acid
10. Which of the following is selective COX-2 inhibitor
  - a. Ketorolac
  - b. Etoricoxib
  - c. Indomethacin
  - d. Diclofenac
11. Dry cough is associated with use of which of the following
  - a. ACE Inhibitors
  - b. Beta Blockers
  - c. Thiazide Diuretics
  - d. Nitrates
12. Drug induced Parkinsonism is best treated by
  - a. Centrally acting anticholinergics
  - b. Lithium
  - c. Levodopa
  - d. Carbidopa
13. The first line drugs used in treatment of Tb are all except
  - a. Isoniazid
  - b. Pyrazinamide
  - c. Rifampicin
  - d. Ethionamide
14. Short half-life of thiopentone is due to:
  - a. Excretion
  - b. Spontaneous degradation
  - c. Metabolism
  - d. Redistribution

Regn. No.....

Paper Code: BP- 201...

**B.P.T. SECOND YEAR EXAMINATION, JUNE/JULY - 2016**  
**EXERCISE THERAPY**  
**PAPER FIRST**

**[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 relaxation techniques.
- Q. 2.** Define ideal posture. How will you assess standing posture in frontal plane?
- Q. 3.** What do you mean by PNF? Discuss the indications, contraindications and uses of any two PNF techniques.
- Q. 4.** Define coordination. How do you assess it? Discuss the therapeutic exercises you can give to treat in-coordination.
- Q. 5.** Write down a short note on goniometry, its principles and assessment technique for shoulder joint.
- Q. 6.** What do you mean by true and apparent limb length? How do you assess them? What therapeutic measures can you take to correct a true limb length discrepancy?
- Q. 7.** Define normal gait. Mention any three abnormal gaits. Write a short note on walking aids and their usage.
- Q. 8.** Provide one stretching and one strengthening exercise for the following muscles:
  - a.** Hamstring,
  - b.** Iliopsoas,
  - c.** Pectoralis major,
  - d.** Trapezius.
- Q. 9.** Discuss any two massage techniques in detail. Mention their therapeutic usage, indications and contraindication.



**B.P.T. SECOND YEAR EXAMINATION, JUNE/JULY - 2016**  
**EXERCISE THERAPY**  
**PAPER FIRST (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. Frenkel's exercise is used to improve:
  - a. Muscular weakness
  - b. Mobility of peripheral joints
  - c. Co-ordination
  - d. Voluntary control over a movement
2. Exercises performed by patients own muscular efforts without assistance or resistance of any external force, other than that of gravity, are classified as:
  - a. Assisted exercises
  - b. Active-assisted exercises
  - c. Closed chain exercises
  - d. Free exercises
3. Passive movement is used to improve all of the following except:
  - a. ROM
  - b. Strength
  - c. Blood flow
  - d. Sensation of joint motion
4. Frontal analysis of posture will reveal all of the following except:
  - a. Head and neck lateral deviation
  - b. Shoulder depression/ elevation
  - c. Kyphotic spine
  - d. Lateral pelvic tilting
5. Which of the following is not an indication for hydrotherapy?
  - a. Spasticity
  - b. Muscular weakness
  - c. Balance disorder
  - d. Contracture
6. Posterior pelvic tilting will lead to the following postural abnormality:
  - a. Hyperlordotic spine
  - b. Hypolordotic spine
  - c. Scoliotic spine
  - d. None of the above
7. Amongst the four rotator cuff muscles the only medial rotator is:
  - a. Subscapularis
  - b. Supraspinatus
  - c. Infraspinatus
  - d. Teres minor
8. Pushing a car is an example of:
  - a. Closed kinetic chain
  - b. Open kinetic chain
  - c. Pure gliding motion
  - d. Pure rocking motion
9. one of the muscle that is not a thoracopelvic group trunk flexor:
  - a. Rectus abdominis
  - b. Iliacus
  - c. Internal oblique
  - d. External oblique
10. The principle extensor of the thigh in the upright position is:
  - a. Gluteus medius
  - b. Gluteus minimus
  - c. Gluteus maximus
  - d. Hamstring
11. The flexor contracture of the right hip joint will lead to:
  - a. Obliteration of lumbar lordosis
  - b. Compensatory lumbar kyphosis
  - c. Compensatory lumbar lordosis
  - d. None of the above
12. The inversion movement at the subtalar joint is a combination of :
  - a. adduction, supination and plantar flexion
  - b. adduction, supination and dorsiflexion
  - c. abduction, pronation and dorsiflexion
  - d. abduction, pronation and plantar flexion
13. when standing on one leg the principal stabiliser of pelvis is:
  - a. gluteus maximus
  - b. gluteus minimus
  - c. tensor fasciae latae
  - d. Psoas
14. The basic gait determinant concerned with vertical displacement of the COG during normal gait cycle is:
  - a. Pelvic rotation
  - b. Shoulder rotation
  - c. Lateral pelvic motion
  - d. Trunk flexion and extension



Regn. No.....

Paper Code: BP- 202

**B.P.T. SECOND YEAR EXAMINATION, JUNE/JULY - 2016**  
**ELECTRO THERAPY**  
**PAPER TWO**

**[Time allotted: Three hours]**

**[Max Marks: 70]**

**Note:** Attempt all questions

Draw suitable diagram wherever necessary

**A : Short answer questions:**

**(7 x 9 = 63)**

- Q. 1.** Write indications and contraindications of ultrasonic therapy.
- Q. 2.** Discuss therapeutic effects of cryotherapy. Explain Lewis's hunting reaction.
- Q. 3.** Explain in detail the indications, contraindications and doses of UVR.
- Q. 4.** Write in detail about low frequency currents.
- Q. 5.** Explain Biofeedback.
- Q. 6.** Write short notes on:
  - a.** Hydrocollator
  - b.** MWD
- Q. 7.** Describe Phonophoresis.
- Q. 8.** Discuss physiological effects and therapeutic uses of laser.
- Q. 9.** Discuss production and placement of TENS.

**B.P.T. SECOND YEAR EXAMINATION, JUNE/JULY - 2016**  
**ELECTRO THERAPY**  
**PAPER TWO (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. The term decimetre wave applies:
  - a. Infrared
  - b. Microwave
  - c. Shortwave
  - d. None of above
2. The effective depth of penetration of MWD is:
  - a. 3cm
  - b. 5cm
  - c. 4.3cm
  - d. 1cm
3. Vitamin D is produced by effects of:
  - a. UVB
  - b. UVC
  - c. UVA
  - d. None of these
4. Accommodation is seen in:
  - a. Nerves
  - b. Skin
  - c. Muscles
  - d. Bones
5. UVR reacts with oxygen in air to produce:
  - a. Neon
  - b. Ozone
  - c. Argon
  - d. Helium
6. The number of layers of towel between the moist pack and skin should be:
  - a. 4 layers
  - b. 8 layers
  - c. 16 layers
  - d. 6 layers
7. The amount of ultrasound reflected at the bone interface is:
  - a. 30%
  - b. 20%
  - c. 70%
  - d. 100%
8. In tissue heating by SWD, complex permittivity is dependent upon:
  - a. Frequency
  - b. Intensity
  - c. Duration of application
  - d. None of these
9. The unit of ultrasound dosage is:
  - a. Watts
  - b. Watts/cm square
  - c. Volts/square inch
  - d. Newton
10. Cold pack is made by:
  - a. Gel pack
  - b. Ice pack
  - c. Heat pack
  - d. None of above
11. S-D curve was used to investigate human nerve injuries by:
  - a. Adrian
  - b. Duchenne
  - c. Erb
  - d. None of above
12. In cases of diffuse area of pathology, the IFT mode selected is:
  - a. Scanning mode
  - b. Quadripolar mode
  - c. Frequency sweep mode
  - d. None of above
13. Laser promotes wound healing by:
  - a. Cell proliferation
  - b. Increase in RNA production
  - c. Increase in collagen formation
  - d. All of the above
14. When ice is applied to the body the initial reaction is:
  - a. Vasoconstriction
  - b. Increase in BP
  - c. Vasodilatation
  - d. Fall in BP

Regn. No.....

Paper Code: BP- 203...

**B.P.T. SECOND YEAR EXAMINATION, JUNE/JULY - 2016**  
**BIOMECHANICS & KINESIOLOGY**  
**PAPER THREE**

**[Time allotted: Three hours]**

**[Max Marks: 70]**

**Note:** Attempt all questions

Draw suitable diagram wherever necessary

**A : Short answer questions:**

**(7 x 9 = 63)**

- Q. 1.** Explain supination and pronation twist with diagram.
- Q. 2.** Name determinants of gait and explain any two.
- Q. 3.** Explain stair gait cycle.
- Q. 4.** Explain trabecule system of hip. Write a note on weak zone.
- Q. 5.** Name ligaments of ankle and explain role of spring ligament.
- Q. 6.** Write a note on glenohumeral joint.
- Q. 7.** Explain the role ACL and PCL in knee stability.
- Q. 8.** Write a note on synovial joints.
- Q. 9.** Write a note on spinal stability with diagram.

**B.P.T. SECOND YEAR EXAMINATION, JUNE/JULY - 2016**  
**BIOMECHANICS & KINESIOLOGY**  
**PAPER THREE (MCQ)**

**Time allotted for MCQ- 15 minutes**

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

**B : MCQs (Single response type):**

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. Agonists
  - b. Synergists
  - c. Antagonists
  - d. None of these
7. The movement of bones rather than movement of articular surface is termed as:
  - a. Osteokinematics
  - b. Arthrokinematics
  - c. Kinetics
  - d. Kinematics
8. Which of the following does not attach to the calcaneus?
  - a. Sartorius
  - b. Gastrocnemius
  - c. Plantaris
  - d. Soleus
9. Normal Q angle is
  - a. 10 – 15 degree
  - b. 8 -10 degree
  - c. 20- 25 degree
  - d. 15 – 20 degree
10. Pes anserius is formed by:
  - a. Gracillius, semitendinosus
  - b. Gracillis, biceps femoris
  - c. Gracilis , sartorius
  - d. Both A and B
11. Lateral pelvic tilt or pelvic drop occurs in :
  - a. Coronal plane
  - b. Sagittal plane
  - c. Frontal plane
  - d. Transverse plane
12. Normal degree of angle of torsion is:
  - a. 10-15
  - b. 8-15
  - c. 15-20
  - d. 13-20
13. The amount of time that exist during the stance phase of one extremity in a Gait cycle is called as:
  - a. Stride length
  - b. Stance time
  - c. Stride duration
  - d. Step duration
14. A pathologic decrease in neck shaft angle is called as:
  - a. Coxa valga
  - b. Coxa vara
  - c. Antiversion
  - d. Retroversion



Regn. No.....

Paper Code: BP- 204...

**B.P.T. SECOND YEAR EXAMINATION, JUNE/JULY - 2016**  
**PATHOLGOY & MICROBIOLOGY**  
**PAPER FOUR**

[Time allotted: Three hours]

[Max Marks: 70]

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

**A: Short answer questions:**

(7 x 8 = 56)

**PATHOLOGY**

- Q. 1. Describe types and patho-physiology of osteoporosis
- Q. 2. Describe types and patho-physiology of shock.
- Q. 3. Describe steps of acute inflammation
- Q. 4. Write a short note on hemophilia

**MICROBIOLOGY**

Q. 5. Enumerate the following :

(2+2+3=7)

- a. Two Gram positive cocci
- b. Two Acid fast bacteria.
- c. Three differences between gram positive and gram negative cell wall.

Q. 6. Write short notes on:

(3+1+3=7)

- a. Sterilisation and disinfection
- b. Time, temperature and pressure used in an autoclave.
- c. Bacterial flagella.

Q. 7. Draw and write on Bacterial growth curve.

3+4=7.

Q. 8. Write the modes of transmission of:

- a. HIV virus.
- b. Hepatitis A virus.

**B.P.T. SECOND YEAR EXAMINATION, JUNE/JULY - 2016**  
**PATHOLGOY & MICROBIOLOGY**  
**PAPER FOUR (MCQ)**

**Time allotted for MCQ- 15 minutes**

**B : MCQs (Single response type):**

(½ x 28= 14)

Select the most appropriate answer and encircle the alphabet against it

**PATHOLOGY**

1. Epithelioid cell found in granulomas are modified---:
  - a. Neutrophils
  - b. Lymphocytes
  - c. Macrophages
  - d. Endothelial cells
2. Commonest joints involved by rheumatoid arthritis are:
  - a. Knee joints
  - b. Metacarpo-phalangeal joints
  - c. Sterno-mandibular joints
  - d. Hip joints
3. Patients with sickle cell disease are predisposed to osteomyelitis by \_\_\_\_\_.
  - a. E coli
  - b. Salmonella
  - c. Proteus
  - d. Enterococci
4. Commonest site of bony tuberculosis is:
  - a. Spine
  - b. Knee
  - c. Hip
  - d. Elbow
5. Blood Cell / fragment associated with blood clotting:
  - a. RBC
  - b. WBC
  - c. Platelets
  - d. Macrophages
6. Which of the following bone tumour is malignant:
  - a. Osteoid osteoma
  - b. Osteochondroma
  - c. Osteoblastoma
  - d. Osteosarcoma
7. Swan neck abnormality is seen in \_\_\_\_\_.
  - a. Gouty arthritis
  - b. Osteoarthritis
  - c. Rheumatoid arthritis
  - d. Ankylosing Spondyloarthritis
8. Organized hematoma at end of 1<sup>st</sup> week after fracture leads to formation of:
  - a. Bony callus
  - b. Pro-callus
  - c. Bone modeling
  - d. Bone remodelling
9. Which of the following cells are involved with chronic inflammatory reaction.
  - a. Neutrophils
  - b. Lymphocytes
  - c. Eosinophils
  - d. Basophils
10. Type of shock which can occur in fracture of large bones is:
  - a. Cardiogenic shock
  - b. Hypovolaemic shock
  - c. Septic shock
  - d. Anaphylactic shock
11. Calcium is deposited in bone by:
  - a. Osteoblasts
  - b. Osteoclasts
  - c. Osteocytes
  - d. Osteoprogenitor cells
12. Hemophilia B is due to Factor \_\_\_\_\_ deficiency:
  - a. Factor VII
  - b. Factor VIII
  - c. Factor IX
  - d. Factor X
13. Functional unit of nervous system is:
  - a. Nephron
  - b. Neuron
  - c. Erythron
  - d. None of the above
14. Hormones associated with calcium deposition in bone:
  - a. Vitamin D
  - b. PTH
  - c. TSH
  - d. GH

## MICROBIOLOGY

15. Who discovered Mycobacterium tuberculosis and Vibrio cholerae?
  - a. Loeffler
  - b. Alexander Fleming
  - c. Joseph Lister
  - d. Robert Koch
16. Which class of immunoglobulins can cross the placenta?
  - a. IgG
  - b. IgM
  - c. IgD
  - d. IgA
17. First antibody to appear following stimulation by an antigen is:
  - a. IgG
  - b. IgM
  - c. IgD
  - d. IgA
18. Delayed hypersensitivity reaction is mediated by:
  - a. T lymphocytes
  - b. B lymphocytes
  - c. Killer cells
  - d. Natural killer cells
19. 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*
20. BCG vaccine is a:
  - a. Live attenuated preparation
  - b. Killed preparation
  - c. Toxoid preparation
  - d. Preparation recombinant
21. What is the shape of the rabies virus?
  - a. Spherical
  - b. Polygonal
  - c. Bullet shaped
  - d. Tubular
22. All of the following hepatitis viruses are RNA viruses EXCEPT :
  - a. Hepatitis A virus
  - b. Hepatitis B virus
  - c. Hepatitis E virus
  - d. Hepatitis G virus
23. Which of the following bacteria is acid fast:
  - a. E.coli
  - b. Salmonella
  - c. Mycobacterium tuberculosis
  - d. Vibrio
24. Causative organism of syphilis is :
  - a. Mycoplasma
  - b. Salmonella
  - c. Mycobacterium tuberculosis
  - d. Treponema pallidum
25. The widal test is a type of
  - a. Precipitation reaction
  - b. Agglutination reaction
  - c. Complement fixation test
  - d. Immunofluorescence
26. The organ of adhesion of bacteria is :
  - a. Capsule
  - b. Slime
  - c. Flagella
  - d. Fimbriae
27. The virus responsible for avian influenza is :
  - a. H2N1
  - b. H2N2
  - c. H3N1
  - d. H5N1
28. Darting motility is seen:
  - a. Proteus
  - b. E.coli
  - c. Vibrio
  - d. Salmonella

Regn. No.....

Paper Code: BP- 205...

**B.P.T. SECOND YEAR EXAMINATION, JUNE/JULY - 2016**  
**PHARMACOLOGY**  
**PAPER FIVE**

**[Time allotted: Three hours]**

**[Max Marks: 70]**

**Note:** Attempt all questions  
Draw suitable diagram 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.** Describe therapeutic uses & adverse effects of corticosteroids.
- Q. 3.** Discuss management of organophosphate poisoning.
- Q. 4.** Enumerate antihypertensive medications. Write in brief about Beta blockers.
- Q. 5.** State mechanism of action & adverse effects of Phenytoin.
- Q. 6.** Classify the various routes of drug administration. Compare & contrast oral versus parenteral route.
- Q. 7.** Classify NSAIDs. Write in brief about the therapeutic uses & adverse effects of aspirin.
- Q. 8.** Describe teratogenicity in brief.
- Q. 9.** Discuss selective serotonin reuptake inhibitors in depression.



**B.P.T. SECOND YEAR EXAMINATION, JUNE/JULY - 2016**  
**PHARMACOLOGY**  
**PAPER FIVE (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. Morphine acts on which receptor:
  - a.  $\mu$
  - b.  $\kappa$
  - c. Beta
  - d.  $\alpha$
4. Example of a drug given by transdermal route is:
  - a. Paracetamol
  - b. Glyceryl trinitrate
  - c. Carbamazepine
  - d. Succinylcholine
5. Which of the following drugs is a calcium channel blocker?
  - a. Nitroglycerin
  - b. Sodium nitroprusside
  - c. Captopril
  - d. Nifedipine
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. Aminoglycosides
  - b. Tetracycline
  - c. Sulphonamide
  - d. Chloramphenicol
8. Hoffmann elimination is seen with:
  - a. Morphine
  - b. Atracurium
  - c. Succinylcholine
  - d. Selegiline
9. Antibiotic acting by inhibition of cell wall synthesis is:
  - 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. Tranlycpromine
11. Drug of choice in myasthenia gravis is:
  - a. Neostigmine
  - b. Atropine
  - c. Succinylcholine
  - d. Adrenaline
12. Which of the following is an antifungal drug?
  - a. Streptomycin
  - b. Amphotericin B
  - c. Zidovudine
  - d. Amoxycillin
13. Drug contraindicated in narrow angle glaucoma is:
  - a. Atropine
  - b. Timolol
  - c. Adrenaline
  - d. Pilocarpine
14. Which of the following drug is an ACE inhibitor?
  - a. Clonidine
  - b. Captopril
  - c. Atenolol
  - d. Diazoxide

Regn. No.....

Paper Code: BPT- 201...

**B.P.T. SECOND YEAR EXAMINATION**  
**JUNE/JULY - 2017**  
**EXERCISE THERAPY**  
**PAPER FIRST**

[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. Define good posture. Explain scoliosis in terms of deviations occurring in frontal and sagittal plane.
- Q. 2. Explain the principles and grades of manual muscle testing.
- Q. 3. Explain types of traction along with indications and contraindications.
- Q. 4. Explain MMT procedure for following muscles :
  - a. ECRL
  - b. Subscapularis
- Q. 5. Short notes:
  - a. Forward neck posture
  - b. Hydrotherapy
- Q. 6. Define passive movements. Explain the principles of passive movements. What are the effects and uses of passive movements?
- Q. 7. Define gait. Explain various time and distance parameters of gait.
- Q. 8. What are mat exercises? What are the indications and contraindications of mat exercises?
- Q. 9. What are walking aids? Write uses and part of axillary crutches. Draw a diagram of an axillary crutch.

**B.P.T. SECOND YEAR EXAMINATION****JUNE/JULY - 2017****EXERCISE THERAPY****PAPER FIRST (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 one of the following is not an indication of traction?
  - a. PIVD
  - b. Muscle spasm
  - c. Radiculopathy
  - d. Osteoporosis
2. In a sports person, use of stretching is:
  - a. Ballistic stretching
  - b. Slow stretching
  - c. Both
  - d. None
3. Shavasana is also known as:
  - a. Jacobson
  - b. Passive movement
  - c. Mat exercise
  - d. None
4. Concentration, prevision and repetition are principles of :
  - a. Passive movement
  - b. Gait
  - c. Relaxation
  - d. Co-ordination
5. Which one of following is time parameter of gait?
  - a. Step length
  - b. Cadence
  - c. Toe out angle
  - d. Base of support
6. Which is the characteristic of dominant side of hemiplegia?
  - a. Depressed shoulder
  - b. Raised pelvis
  - c. Both of these
  - d. None of these
7. Which one of the following is partial weight bearing gait?
  - a. Three point gait
  - b. Passive movement
  - c. Gait training
  - d. Mat
8. If the weight of the patient is 60 kg, what is the maximum weight approx. that can be applied for lumber traction?
  - a. 30 kg
  - b. 20 kg
  - c. 40 kg
  - d. 10 kg
9. Line of gravity passes through:
  - a. Front of thoracic vertebra
  - b. Back of thoracic vertebra
  - c. Both thoracic vertebra
  - d. None
10. C.O.G of human body in anatomical position passes through:
  - a. S1
  - b. S2
  - c. C2
  - d. None
11. -----is usually expressed as a percentage:
  - a. Efficiency
  - b. Energy
  - c. Activities
  - d. None
12. -----is the conditioning part of the exercise program:
  - a. Aerobic exercise period
  - b. Continuous training
  - c. Cool down period
  - d. None of these
13. In flat back posture, tightness commonly occurs in which muscles?
  - a. Iliopsoas
  - b. Hamstring
  - c. Both
  - d. None of these
14. The -----is the muscle's ability to generate tension (intramuscular tension):
  - a. Strength of muscle contraction
  - b. Motor unit
  - c. Group action of muscle
  - d. None

**B.P.T. SECOND YEAR EXAMINATION, JUNE/JULY - 2017**  
**ELECTRO THERAPY**

[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. Explain the Pain Gate Theory.
- Q. 2. Briefly explain:
  - a. Therapeutic uses of LASER
  - b. Contraindications of cryotherapy
- Q. 3. Explain:
  - a. Production of ultrasound
  - b. Therapeutic uses of ultrasound
- Q. 4. Explain in brief:
  - a. Physiological effects of SWD
  - b. Dosage of SWD
- Q. 5. Write about Seddon's classification of peripheral nerve injuries.
- Q. 6. Explain SD curve testing.
- Q. 7. Explain:
  - a. Types of TENS
  - b. Propagation of action potential
- Q. 8. Describe therapeutic uses of faradic currents.
- Q. 9. Discuss therapeutic uses of UVR.

\*\*\*\*\*



**B.P.T. SECOND YEAR EXAMINATION, JUNE/JULY - 2017**  
**ELECTRO THERAPY**  
**(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. Kromayer lamp is a:
  - a. Medium pressure lamp.
  - b. Low pressure lamp.
  - c. Fluorescent lamp.
  - d. None of the above.
2. An E3 E4 dose of UVC is given for:
  - a. Vitiligo
  - b. Eczema
  - c. Psoriasis
  - d. Skin wounds (chronic infections)
3. The class of LASER used for physiotherapy:
  - a. Low
  - b. Medium
  - c. High
  - d. Low-medium(5mW)
4. Most widely used MWD wavelength and frequency in medicine is:
  - a. 915 MHz-32.79cm
  - b. 433.9 MHz-69.14cm
  - c. 2450 MHz-12.25cm
  - d. None of the above
5. Method of SWD application:
  - a. Capacitor method
  - b. Induction method
  - c. 4 pole method
  - d. Both a & b
6. One of the potential danger of SWD is:
  - a. Burns
  - b. Obese patient
  - c. Implants
  - d. All of the above
7. The alternation of constriction and dilation of vessels during application of cold packs is:
  - a. Lewi's hunting reaction
  - b. Vanthoff's law
  - c. Ohm's law
  - d. None of the above
8. In immersion method for application of cryotherapy:
  - a. Solution is made of 50% water (16-18 degrees centigrade) + 50% flaked ice
  - b. Solution made of 100% flaked ice
  - c. Solution made of water and ice cubes at 4 degrees centigrade
  - d. None of the above
9. One of the contraindications of cold therapy is:
  - a. Vasospastic diseases
  - b. Cold ulticaria
  - c. Cryoglobinaemia
  - d. All of the above
10. Nature of sonic waves(ultrasound):
  - a. Compression and rarefactions.
  - b. Coherence.
  - c. Collimation.
  - d. None of the above.
11. The sonic waves are more evenly spread to treatment area by:
  - a. Continuous motion of ultrasound head during treatment
  - b. Holding the ultrasound head steady during treatment
  - c. Keeping it at a distance from the treatment area
  - d. None of the above
12. Phonophoresis refers to:
  - a. UVA with psoralen for psoriasis
  - b. Therapeutic currents with therapeutic drug ions for iontophoresis
  - c. Ultrasound with therapeutic drugs
  - d. All of the above
13. Pain relief from TENS works on:
  - a. Pain gate theory
  - b. Analgesia
  - c. Sedation
  - d. All of the above
14. Choice of therapeutic current for tendon transfer:
  - a. Galvanic
  - b. Faradic
  - c. IFT
  - d. Russian

Regn. No.....

Paper Code: BPT- 203...

**B.P.T. SECOND YEAR EXAMINATION, JUNE/JULY - 2017**  
**BIOMECHANICS & KINESIOLOGY**

**[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. Explain in detail about joint motion.
- Q. 2. Write in detail about the role of patellae in different position of knee joint.
- Q. 3. Explain dynamic stability of the shoulder joint with diagram.
- Q. 4. Explain in short about load deformation curve for tendons and ligaments.
- Q. 5. Explain frontal plane mal-alignment with diagrams.
- Q. 6. Explain the role of transverse tarsal joint in respect to sub-talar motion related to tibial rotation.
- Q. 7. Name the ligament of ankle joint with diagram.
- Q. 8. Name the ligament of knee joint with explanation of function.
- Q. 9. What is Q angle? Explain with diagram how it is formed. Write its importance.

\*\*\*\*\*

**B.P.T. SECOND YEAR EXAMINATION, JUNE/JULY - 2017**

**BIOMECHANICS & KINESIOLOGY**

**(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. Study of joints is called:
  - a. Kinesiology
  - b. Biology
  - c. Anthropometry
  - d. Anthology.
2. In MCL, fibers that arise from anterior surface of medial epicondyle are taut in:
  - a. Full extension
  - b. Full flexion
  - c. 90 degree to full flexion
  - d. 90 degree to full extension
3. Strongest ligament of the hip joint is:
  - a. Pub femoral
  - b. Ileo femoral
  - c. Ischio femoral
  - d. None of the above.
4. Which muscle is involved in the elevation of arm?
  - a. Deltoid
  - b. Biceps
  - c. Triceps
  - d. Quadriceps.
5. Which of the following is an example of bi-axial joint?
  - a. Hinge
  - b. Pivot
  - c. Both a and b
  - d. None of the above.
6. Which of the following is an example of uniaxial joint?
  - a. Condylod
  - b. Saddle
  - c. Hinge
  - d. Condylod and saddle both.
7. Synovial joints are:
  - a. Slightly movable
  - b. Freely movable
  - c. Both a and b
  - d. None of the above
8. In which type of lever, the weight is in between force and fulcrum?
  - a. Type I
  - b. Type II
  - c. Type III
  - d. All the above.
9. The bursa located between the patella of the knee and the overlying skin is called as:
  - a. Infrapatellar
  - b. Suprapatellar
  - c. Subpatellar
  - d. Prepatellar
10. 'Lordosis' is also called:
  - a. Round back
  - b. Hollow back
  - c. Lateral back
  - d. Back curve.
11. Muscles that have parallel fiber arrangement are designated as:
  - a. Strap muscles
  - b. Unipennate muscles
  - c. Multipennate muscles
  - d. Bipennate muscle
12. The \_\_\_\_\_ are the major power producers in cycling:
  - a. Plantar flexors
  - b. Quadriceps
  - c. Hamstring
  - d. Gluteal muscle
13. Muscles that have proximal attachment close to joint axis and distal attachment far from joint axis that group are called as:
  - a. Shunt
  - b. Spurt
  - c. Tonic
  - d. Phasic
14. Centre edge angle of acetabulum is called as:
  - a. Q angle
  - b. Angle of anteversion
  - c. Angle of Weisberg
  - d. Angle of torsion



Regn. No.....

Paper Code: BPT- 204...

**B.P.T. SECOND YEAR EXAMINATION, JUNE/JULY - 2017**  
**PATHOLOGY & MICROBIOLOGY**

[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 tuberculosis.
- Q. 2. Write short notes on:  
a. Apoptosis.  
b. Laboratory findings in iron deficiency anemia.
- Q. 3. Describe pathogenesis, clinical features, morphology and complications of emphysema.
- Q. 4. Enumerate differences between benign and malignant tumors.

**MICROBIOLOGY**

- Q. 5. 3  
a. Name three pathogens that infect the central nervous system. 3  
b. Describe briefly (in 2-3 sentences each), the disease caused by each of these three pathogens. 1  
c. Mention one CNS pathogen that is transmitted by mosquitoes.
- Q. 6. 2  
a. Name two pathogens that cause diarrhoea. 2  
b. Name two bacterial infections that can be prevented by vaccination. 3  
c. Name three antibiotics that can kill bacteria.
- Q. 7. 3  
a. Name the disease caused by HIV. 2  
b. Can HIV be transmitted on physiotherapy equipment? 2  
c. If yes, what are the different ways you can prevent such spread?
- Q. 8. 1  
You have been requested to provide physiotherapy for a patient of pulmonary tuberculosis whose sputum shows acid-fast bacilli on microscopic examination:  
a. Is there a risk of catching TB if you treat him? 2  
b. Is there something you can ask the patient to do to reduce your risk of catching TB? 2  
c. Is there something you can wear to protect yourself? 2  
Is there any way to modify the treatment room to reduce the risk of TB transmission?

\*\*\*\*\*



Regn. No.....

Paper Code: BPT- 204...

**B.P.T. SECOND YEAR EXAMINATION, JUNE/JULY - 2017**  
**PATHOLOGY & MICROBIOLOGY**  
**(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 chronic renal failure is:
  - a. Anemia of chronic disorders
  - b. Iron deficiency anemia
  - c. Megaloblastic anemia
  - d. Aplastic anemia
2. Most common cause of epithelioid cell granuloma in our country is:
  - a. Tuberculosis
  - b. Cat scratch disease
  - c. Brucellosis
  - d. Drug induced
3. Macro-ovalocytes are seen in:
  - a. Megaloblastic anemia
  - b. Iron deficiency anemia
  - c. Thalassemia
  - d. Aplastic anemia
4. Marked increase in polymorphs are seen in cases of:
  - a. Burns
  - b. Acute infections
  - c. Leukemoid reaction
  - d. All of the above
5. Sickle cells are pathognomic of..... anemia:
  - a. Megaloblastic anemia
  - b. Sickle cell anemia
  - c. Aplastic anemia
  - d. Hemolytic anemia
6. Myeloblast is precursor of :
  - a. RBC
  - b. Leukocyte
  - c. Macrophage
  - d. Platelet
7. Malignant tumor is:
  - a. Osteosarcoma
  - b. Osteoma
  - c. Osteochondroma
  - d. Osteomalacia
8. ZN stain is used to stain:
  - a. Virus
  - b. AFB
  - c. Both
  - d. None
9. Bone tumor is:
  - a. Osteosarcoma
  - b. Angiosarcoma
  - c. Lipoblastoma
  - d. Carcinoma
10. Benign tumor have all features except:
  - a. They are encapsulated.
  - b. They usually metastasize
  - c. They have usually uniform cells
  - d. They generally carry good prognosis
11. Caseous necrosis seen in:
  - a. Rheumatoid arthritis
  - b. Tuberculosis
  - c. Asthma
  - d. Myocardial infarction
12. Programmed cell death is known as:
  - a. Necrosis
  - b. Gangrene
  - c. Apoptosis
  - d. All of the above
13. Tumor of fat cells is known as:
  - a. Osteoblastoma
  - b. Lipoma
  - c. Osteosarcoma
  - d. Chondrosarcoma
14. Microcytic hypochromic picture seen in:
  - a. Megaloblastic anemia
  - b. Sickle cell anemia
  - c. Hereditary spherocytosis
  - d. Iron deficiency anemia

...PTO/----

2017

## MICROBIOLOGY

15. *Cryptococcus neoformans* can be detected in CSF using:
  - a. Gram's stain
  - b. Z-N stain
  - c. Albert's stain
  - d. India ink stain
16. Which of the following agents is most useful for inactivating HIV and hepatitis B virus?
  - a. Dettol
  - b. Savlon
  - c. Sodium bicarbonate
  - d. Chlorine
17. Which of the following are the smallest in size?
  - a. Bacteria
  - b. Fungi
  - c. Viruses
  - d. Nematodes
18. Which of the following pathogens can be transmitted by blood transfusion?
  - a. Hepatitis C virus
  - b. *Vibrio cholerae*
  - c. *Ascaris lumbricoides*
  - d. Influenza A virus
19. Almost all culture media contain which of the following?
  - a. Cholesterol
  - b. Sucrose
  - c. Meat extract
  - d. Sodium tellurite
20. Which of the following is a gram-positive bacterium?
  - a. *Escherichia coli*
  - b. *Klebsiella pneumoniae*
  - c. *Salmonella typhi*
  - d. *Streptococcus pyogenes*
21. Which of the following is transmitted sexually?
  - a. *Treponema pallidum*
  - b. *Clostridium botulinum*
  - c. *Bacillus anthracis*
  - d. *Vibrio cholera*
22. Which of the following is a component of innate immunity?
  - a. T-lymphocytes
  - b. Complement
  - c. IgM
  - d. IgG
23. Which of the following produces a toxin that prevents neuromuscular transmission causing flaccid paralysis?
  - a. *Streptococcus pyogenes*
  - b. *Salmonella typhi*
  - c. *Pseudomonas aeruginosa*
  - d. *Clostridium botulinum*
24. Which of the following is an opportunistic fungus?
  - a. *Trichyphyton rubrum*
  - b. *Mucor indicus*
  - c. *Trichophyton mentagrophytes*
  - d. *Epidermophyton floccosum*
25. Which of the following viruses is transmitted by mosquitoes?
  - a. Influenza virus
  - b. Rabies virus
  - c. Dengue virus
  - d. HIV
26. Which of the following scientists is commonly regarded as the "Father of medical microbiology"?
  - a. Antony van Leuwenhoek
  - b. Louis Pasteur
  - c. Robert Koch
  - d. Joseph Lister
27. Direct transfer of naked DNA from one bacterial cell to another is called:
  - a. Transformation
  - b. Transduction
  - c. Transillumination
  - d. Conjugation
28. Ciprofloxacin kills bacteria by:
  - a. Inhibiting DNA gyrase
  - b. Inhibiting RNA transcription
  - c. Inhibiting cell wall synthesis
  - d. Inhibiting protein synthesis in ribosomes

**B.P.T. SECOND YEAR EXAMINATION, JUNE/JULY - 2017**  
**PHARMACOLOGY**

**[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 anti-hypertensive drugs. Write in brief about thiazide diuretics.
- Q. 2.** Drugs acting on renin-angiotensin system. Elaborate about the ACE inhibitors.
- Q. 3.** Classify the anti-adrenergic drugs. Write the important therapeutic uses and side effects of prazosin.
- Q. 4.** Classify the skeletal muscle relaxants. Write about the balanced anaesthesia.
- Q. 5.** Write in brief indications and contraindications of corticosteroid.
- Q. 6.** Classify antimicrobial agents. Discuss in brief the mechanism of action, uses and adverse effects of aminoglycoside antibiotics.
- Q. 7.** Discuss preanaesthetic medications.
- Q. 8.** Write in short:  
a. Classify anti-epileptic drugs.  
b. Write Mechanism of action and two important adverse effects of phenytoin.
- Q. 9.** Write in short:  
a. Lignocaine  
b. Cotrimoxazole

\*\*\*\*\*



**B.P.T. SECOND YEAR EXAMINATION, JUNE/JULY - 2017**  
**PHARMACOLOGY**  
**PAPER FIVE (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 is morphine antagonist?
  - a. Naloxone
  - b. Buprenorphine
  - c. Flumazenil
  - d. Methadone
2. The pharmacological effects of morphine include all **except**:
  - a. Urinary retention
  - b. Miosis
  - c. Respiratory depression
  - d. Diarrhoea
3. First local anesthetics used in clinical anesthesia was:
  - a. Bupivacaine
  - b. Procaine
  - c. Lidocaine
  - d. Cocaine
4. Carbidopa levodopa combinations are taken in a ratio of:
  - a. 1:4
  - b. 4:1
  - c. 20:1
  - d. 1:20
5. A patient on aspirin will have increase in:
  - a. Bleeding time
  - b. Clotting time
  - c. Prothrombin time
  - d. Activated partial thromboplastin time
6. Which antiepileptic can be used in pregnancy?
  - a. Phenobarbitone
  - b. Valproate
  - c. Phenytoin
  - d. Carbamazepine
7. Most common side effect of salbutamol is:
  - a. Tremors
  - b. Hypertension
  - c. Rhinorrhoea
  - d. Bradycardia
8. Which of the following drug is given only by parenteral route?
  - a. Isoniazid
  - b. Rifampicin
  - c. Ethambutol
  - d. Streptomycin
9. Diuretic agent which is aldosterone antagonist is:
  - a. Furosemide
  - b. Spironolactone
  - c. Dichlothiazide
  - d. Captopril
10. Nephrotoxicity is common with:
  - a. Ethambutol
  - b. Isoniazid
  - c. Streptomycin
  - d. Rifampicin
11. All factors are responsible for digoxin toxicity **except**:
  - a. Hyperkalemia
  - b. Hypomagnesemia
  - c. Hypercalcemia
  - d. Renal failure
12. Bioavailability of 100% is seen with which route?
  - a. Intramuscular
  - b. Intravenous
  - c. Rectal
  - d. Oral
13. Disulfiram like reaction occurs when alcohol is co-administered with:
  - a. Penicillin
  - b. Streptomycin
  - c. Metronidazole
  - d. Ofloxacin
14. Which of the following is **not** amide linked local anaesthetic?
  - a. Prilocaine
  - b. Benzocaine
  - c. Bupivacaine
  - d. Lignocaine