

DR SAMPURNANAND MEDICAL COLLEGE JODHPUR



STUDENT BROCHURE -2017

www.medicaleducation.rajasthan.gov.in

E-mail:- medicalcollegejodhpur@yahoo.com, prmedclg-jod-rj@nic.in

Welcome Address Note from Principal



My dear students,

It is my proud privilege to welcome new batch of MBBS students and their parents & I also congratulate you on your brilliant success in getting admitted into the MBBS course at Dr. S.N. Medical College, Jodhpur. You are among those who have been born with a golden spoon in their mouths as being selected to study in this majestic institute. This is one of the most prestigious medical institutes of the country. It is a unique opportunity for you to study in this institute. Your sincere and hard work during your schooling has brought this luck to you. As head of this institution, I am happy to welcome you today. I would like to assure you that you can expect a safe and comfortable stay in the campus. You will receive all necessary help and support from your seniors, hostel staff and faculty members to acclimatize yourself at the earliest. Till you are familiar with the campus and the city, you may require help and guidance. The hostel staff, faculty and the security personnel will provide you with all that is required for your well-being. Feel free to interact and ask for any help.

The institution has an excellent library which also has an e-library and is manned by caring and trained staff to help and guide you and it is also run in a student-friendly time schedule.

It is a big challenge before you to build competence and professionalism with appropriate confidence in you and to make you a capable, competent, safe and compassionate doctor. As you will take up higher studies later on, young friends, you take a global perspective and innovate something for yourself and for others to use and enjoy, such outcomes from your work. This has been the tradition of this institute to maintain the highest standards of discipline and inculcating the high standards of noble profession.

I expect from you to keep this tradition going.

Ladies and Gentlemen, I have strong belief that this young generation will make us proud and bring laurels through their new ideas, innovation and research outcomes into medicine at this institution. At the end, I would like to congratulate your parents and school-teachers for shaping you so well and making you successful to come here for learning medicine. I am sure, that you will be able to learn and achieve all that you have dreamt of, for making you a competent and compassionate doctor, or a loving and successful teacher or an eminent medical scientist producing innovation and research and becoming the future leaders not only within India but also in the world in the health care sector.

My dear students, I strongly feel that our future will be in the safe hands of yours. The nation is waiting for your able and noble services in the coming years. People will salute you for your services. Do plan to spend some of your experience in rural part of India and take part in the National Rural Health Mission for better health of the people of India as well as in Swaccha Bharat Mission.

Finally I would end by saying these few words for these young minds: **Practice honesty, humility, hard working habits and flexibility**, Maintain clarity of purpose, and persistence in doing things, and keep good health and consistency of good behavior.

Lastly, I again assure you that we are committed to your comfort tenure and wellbeing. I extend my best wishes for your studies and fantastic life.

Thank You

Dr. A.L. Bhat
Principal and Controller
Dr. S. N. Medical College &
Associated Group of Hospitals,
Jodhpur

Welcome Note from Additional Principal



Dear students,

May the hand of God be placed upon you forever. I give you many fold thanks and greetings from our striving team to let us do our worthwhile in assisting you to carve the future of your lives with chisels of grace and vivacity within our college, to become good, faithful doctors and bear fruits of kindness and development to the world and its multifarious sufferings.

Within our college, we welcome you and hope that you become perfectionists, the doctors that the humanity of modern days truly demands, and become able to cater in a disciplined and even gracious manner to the needs of the masses.

Discipline, in all essence, along with other qualities like empathy and swift-mindedness, is what we anticipate to help in inculcating in your brilliant minds, so that the flame of life never dims through the burdens of the world. You must also realize that we have some expectations from you. We feel that you ought to make yourself disciplined and must train well your brains and mindsets as well as your hearts so as to take up the jobs of your predecessors as dexterously as they bided by their duties in their times of flowerings.

Be assiduous, not because we demand you to be so, but so as not to let down your own soul in the long run. Be the leaders that we provide you the energy to be. And live on long, so you can listen serenely to all life in good grace. And last but not the least, be the good doctors that we know you will be – true to be ‘God’ as the people say.

Dr.Rita Meena
Additional Principal &
Head of Dept.-Community Medicine

Induction and Orientation Programme

MBBS Batch 2017

Venue: New Lecture Theatre

4 August 2017

| | |
|--------------------------|----------------------------------------------------------------------------------------------------------------------------|
| 09:00 to 09:15 am | Registration and distribution of teaching timetable brochure |
| 09:15 to 09:30 am | "Welcome note" : Dr. A.L. BHAT, Principal & Controller, Dr. S.N. Medical College |
| 09:30 to 09:45 am | "Initiation speech with virtual tour of Dr. S.N. Medical College" Dr. Rita Meena, Additional Principal & Prof. , PSM |
| 09:45 to 10:00 am | Introduction to subjects by the Head of the Departments: |
| | Biochemistry: Dr. Ranjana Mathur |
| | Physiology : Dr. Raghuveer Choudhary |
| | Anatomy : Dr. Sushma Kataria |
| 10:00 to 10:15 am | "Door step to Medical curriculum" : Dr. P.K. Khatri, PHOD, Microbiology |
| 10:15 to 10:30 am | "Problems faced by fresher medico & their solutions" : Dr. S.S. Rathore, Prof. , General Surgery |
| 10:30 to 10:40 am | Address by Members of Student Union |
| 10:40 to 10:45 am | Thanks giving by Dr. Suman Bhansali, Sr. Prof. PSM and Academic Incharge. |

OFFICE OF THE PRINCIPAL, DR. S.N. MEDICAL COLLEGE AND CONTROLLER OF ASSOCIATED GROUP OF HOSPITALS, JODHPUR

No. F.1()Acad/MC/JU/2017/

Dated:- 31/07/2017

OFFICE ORDER
TIME TABLE FOR 1ST MBBS STUDENTS
BATCH-2017
w.e.f. 04.08.2017

| Day & Time | 7:00 to 8:00 am Lecture | 8:00 to 9:00 am Lecture | 9:00 to 10:45 am | | | | 10:45 to 11:15 am | 11:15 to 12:15 pm Lecture | 12:15 to 2:00 pm |
|------------------|-------------------------|-------------------------|----------------------------|-------------|---------|-----|----------------------------------|---------------------------|----------------------|
| | | | PHYSIO HAEMATO | PHYSIO EXPT | BIOCHEM | PSM | | | |
| Monday | BIOCHEMISTRY | PHYSIOLOGY | A | B | C | D | B R E A K | ANATOMY | DISSECTION/HISTOLOGY |
| Tuesday | ANATOMY | PHYSIOLOGY | B | C | D | A | | ANATOMY | DISSECTION/HISTOLOGY |
| Wednesday | PHYSIOLOGY | PHYSIOLOGY | C | D | A | B | | ANATOMY | DISSECTION/HISTOLOGY |
| Thursday | PHYSIOLOGY | PSM | D | A | B | C | | ANATOMY | DISSECTION/HISTOLOGY |
| Friday | ANATOMY | BIOCHEMISTRY | BIOCHEMISTRY DEMONSTRATION | | | | | ANATOMY | DISSECTION/HISTOLOGY |
| Saturday | PHYSIOLOGY | BIOCHEMISTRY | PHYSIOLOGY DEMONSTRATION | | | | | ANATOMY | DISSECTION/HISTOLOGY |

ALL THEORY CLASS WILL BE HELD IN Lecture Theatre – 5

- First Semester Assessment will be tentatively held in the first half of the month of January 2018.
- Diwali Vacation will be from **15th to 25th** October 2017

**OFFICE OF THE PRINCIPAL , DR.S.N.MEDICAL COLLEGE AND CONTROLLER
OF ASSOCIATED GROUP OF HOSPITALS,JODHPUR.**

NO.F. 1() Acad/MC/JU/2017/

Dated: - 26/07/2017

OFFICE ORDER

In order to stop Teasing/ Misbehaving and ragging activities with newly admitted students, as per the direction of the Hon'ble supreme court of India and guidelines framed by MCI & RUHS an anti-ragging committee of following doctors/officials/others is constituted.

| S. No. | Name & Designation | Mobile No. |
|---------------|------------------------------------------------------------------|-------------------|
| 1. | Dr.(Mrs.) Rita Meena, Addl. Principal & HOD P.S.M., Chairman | 9414019156 |
| 2. | Dr. Ranjana Mathur, PHOD, Biochemistry | 9828121724 |
| 3. | Dr. Manoj Lakhota, PHOD, General Medicine & Warden PG Hostel MGH | 9251604869 |
| 4. | Dr. Sushma Kataria, PHOD, Anatomy , Warden Girls Hostel | 9414134813 |
| 5. | Dr. A.R.Kalla, PHOD, Pathology | 8696218675 |
| 6. | Dr. P.K.Khatri, PHOD, Microbiology | 9460481236 |
| 7. | Dr. Arvind Chouhan, PHOD, Ophthalmology | 9414075664 |
| 8. | Dr. Arun Vaishya, Prof., Orthopaedics & Parent Representative | 9414130671 |
| 9. | Dr. Anusuya Gehlot, Prof., Pharmacology | 9413256424 |
| 10. | Dr. Hanslata Gehlot, Prof., Obst. & Gyne. | 9414135070 |
| 11. | Dr. Afzal Hakim, Medical Officer Incharge, Academic Cell (U.G.) | 9928366737 |
| 12. | Dr. R.K. Rathore, Prof., Pharmacology | 9461196723 |
| 13. | Dr. Raghuveer Choudhary, Prof., Physiology | 9829216643 |
| 14. | Dr. Vikas Rajpurohit, Assoc. Prof., Anaesthesia & Chief Warden | 9928060011 |
| 15. | Dr. C.R. Choudhary, Associate Prof., TB | 9414301661 |
| 16. | Dr. Manisha Gurjar, Warden PG Hostel (Girls) MDM | 9772058370 |
| 17. | Representative of District Administration | 0291-2650322 |
| 18. | Sh. Amit Sihag, SHO, Shastri Nagar Police Station | 0291-2650758 |
| 19. | Dr. Hari Ram Bishnoi, Parent Representative | 9414309144 |
| 20. | Dr. Rajesh Baheti, Parent Representative | 9829463830 |
| 21. | Sh. Mahaveer Sharma, Dainik Bhaskar | 9929312343 |
| 22. | Sh. Abhishek Bissa, Rajasthan Patrika | 9929317645 |
| 23. | Sh. Vinod Dave, Dainik Navjyoti | 9694033033 |
| 24. | Sh. Lalit Singh, ETV | 9468808869 |
| 25. | Sh. Bhupendra Sevar, President, Student Union | 9829783041 |
| 26. | Sh. Sumer Singh, General Secretary, Student Union | 7742546322 |

The above mentioned committee will monitor from time to time the progress of anti-ragging measures taken and will also suggest the actions to be taken if any complaint is received regarding ragging .They will also help the newly admitted students in the event of any call from them received on their mobile phones.

Sd/-

Principal & Controller

DR. S.N. MEDICAL COLLEGE, JODHPUR

DEPARTMENT OF ANATOMY

Teaching Faculty

Sr. Prof. & Head

Dr. Sushma Kushal Kataria

Sr. Prof.

Dr. Leena Raichandani

Assistant Prof.

Dr. Anoop Gurjar

Dr. Ritu Agarwal

Dr. Maske Shital Sopanrao

Dr. Anju Choudhary

Senior Demonstrator

Mrs. Hem Kanwar Joya

Mrs. Madhu Bhati

Mrs. Priyanka sharma

Mrs. Jaya Purohit

The broad goal of the teaching of undergraduate students in anatomy aims at providing comprehensive knowledge of the gross and microscopic structure and development of human body to provide a basis for understanding the clinical correlation of organs and structures involved and the anatomical basis for the disease prevention.

OBJECTIVE

(A) KNOWLEDGE

At the end of the course the students shall be able to:

- (a) Comprehend the normal disposition, clinically relevant interrelationship, functional and cross sectional anatomy of the various disease processes.
- (b) Identify the microscopic structure and correlate elementary ultra structure of various organs and tissues and correlate the structure with the functions as a prerequisite for understanding the altered state in various disease processes.
- (c) Comprehend the basic structure and connections of the central nervous system to analyze the integrative and regulative functions of the organs and system.
- (d) Demonstrate knowledge of the basic principles and sequential development of organs and system; recognize the critical sup or development and effects or common dermatogens, genetic mutations and environmental hazards. He/she should be able to explain the developmental basis of the major variations and abnormalities.

(B) SKILLS

At the end of the course the students shall be able to:

- (a) Demonstrate knowledge of the basic principles and sequential development of Identify and locate all the structures of the body and mark the topography of the living anatomy.
- (b) Identify the organs and tissues under the microscope
- (c) Understanding the principles of karyotyping and identify gross congenital anomalies.
- (d) Understand the principles of newer imaging techniques and interpretation of Computerized Tomography (CT) scan, sonogram, etc.
- (e) Understand clinical basis of some common clinical procedure i.e. Intramuscular and intravenous injection, lumbar puncture and kidney biopsy etc.

To Summarise the teaching will be done under the following heads:

1. General anatomy
2. Gross anatomy (study and dissection of various regions of body Upper & Lower extremity, thorax, abdomen, pelvis, brain, head and neck)
3. Microanatomy (Histology)
4. Embryology (General and Systemic including Genetics)

TEACHING

The time allotted for first phase of MBBS course is 12 calendar months. This period includes teaching and training, internal assessment, university examination and results.

1. GROSS ANATOMY

The time allotted for various regions for the purpose of teaching, dissection and assessment shall be as under. In case you abstain for the course on prescribed dates it will be presumed as completed and assessment shall take place as scheduled.

| | |
|--------------------|----------|
| Upper extremity | 05 weeks |
| Lower extremity | 04 weeks |
| Thorax | 04 weeks |
| Abdomen and Pelvis | 08 weeks |
| Brain | 04 weeks |
| Head and Neck | 10 weeks |

2. EMBRYOLOGY

(General, Systemic and Genetics) 35 – 40 lectures

3. GENERAL ANATOMY 07-08 lectures

4. MICROANATOMY (HISTOLOGY) 25 lectures & (50 hours of microscopic study).

ASSESSMENT / EXAMINATIONS

There shall be a four tier system of assessment / examination during first phase of MBBS course under two broad heads i.e. internal assessment and university examination.

1. SUBSTAGES (internal assessment):

Assessment of performance on a small number of topics (generally oral examination).

2. STAGES OR PART COMPLETION TESTS (internal assessment):

Shall be held on completion of courses on a particular region. The assessment may be in form of an oral examination (viva voce), short answer type written examination, multiple choice questions (MCQs) or spotting.

3. SEMESTER EXAMINATIONS:

First semester examination shall be held towards the completion of first semester. Second semester (pre university) examination shall be held on the completion of all the courses and prior to university examination.

FORMAT

- Theory paper on university pattern.
- Oral examination on dissected parts and bones.
- Histology (assessment of tissue under microscope and viva voce).
- Surface anatomy.
- Radiology.

4. UNIVERSITY EXAMINATION:

Eligibility for appearing in the university examination:

(a) ATTENDANCE: 75% of attendance in the subject for appearing in an examination is compulsory inclusive of attendance in non lecture teaching i.e. practical, demonstrations, seminars, group discussions, tutorials.

(b) INTERNAL ASSESSMENT:

Student must secure at least 35% marks of the total marks fixed for internal assessment in a particular subject in order to be **Eligible to appear in final university examination** of that subject.

Teaching and Assessment Schedule

Batch-2017-18

| | |
|------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| THEORY | 11.15 AM to 12.15 PM (Monday to Saturday) |
| | 7.00 AM to 8.00 AM (1 st April to 30 th Sep.) 2.00 PM to 3.00 PM (1 st Oct. 2017 to 31 st March 2018) {Every Tuesday & Friday} |
| PRACTICALS | DISSECTION 12.15 PM to 02.00 PM (Monday to Saturday) |
| | HISTOLOGY Batch wise during dissection hours |

Batch-2017-18
TIME TABLE
TENTATIVE TEACHING SCHEDULE

| | |
|--------------------|---------------------------------------------------------------|
| Upper Limb | From 04 th Aug 2017 to 16 th Sep 2017 |
| Lower Limb | From 18 th Sept 2017 to 07 th Nov 2017 |
| Thorax | From 08 th Nov 2017 to 09 th Dec 2017 |
| Abdomen and Pelvis | From 11 th Dec 2017 to 10 th Feb 2018 |
| Brain | From 12 th Feb 2018 to 20 th March 2018 |
| Head and Neck | From 21 st March 2018 to 31 st May 2018 |

TENTATIVE DATES OF ASSESSMENT

1. Part completion tests –16th Sep 2017, 07th Nov 2017, 09th Dec 2017, 10th Feb 2018, 20th March 2018,.
2. First Semester examination – 1st Week of Jan. 2018.
3. Second Semester examination- 1st Week of June 2018.
4. University Examination (Please refer to University notification only) - Expected dates July 2018.

TIME

First professional examination (1st MBBS examination) shall be held during second semester of phase-I of training of MBBS course.

DISTRIBUTION OF MARKS

1. Theory

Two papers of 50 marks each (one applied question of 10 marks in each paper) 100marks

2. Oral (viva voce) 20 marks

3. Practical 40 marks

4. Internal Assessment –includes 40 marks

(Theory-20 marks, practical -20 marks)

A. Continuous Assessment 10 marks

B.1st semester 15 marks

C.2nd semester

15 marks

Total

200 marks

| THEORY | | | | ORAL | INTERNAL ASSESSMENT | THEORY TOTAL | PRACTICAL | PRACTICAL TOTAL | G. TOTAL |
|-----------------|-----------|-----------|-----------|-------------|----------------------------|---------------------|---------------------------------|------------------------|-----------------|
| Paper I | | | | 20 | 20 | 140 | University Practical- 40 | 60 | 200 |
| Paper II | | | | | | | | | |
| A | B | A | B | | | | | | |
| 26 | 24 | 26 | 24 | | | | Internal Assessment - 20 | | |

Pass marks 50% separately in theory and practical

Requirement for Practical Classes:

1. Laboratory Coat (Apron)
(White, long sleeved and knee length)
2. Instruments- Scissors (2)-Long and short, Forceps(2)-Long and blunt and short and pointed tooth forcep, Bard parker knife and Scalpel(1).
3. Cunningham's manual of practical anatomy Vol. I, II & III
or Grant's Dissector (Mandatory to bring during dissection classes).
4. Gloves (optional)
5. Histology practical note book.
6. Pencils (HB, lilac and violet), eraser, compass etc.
7. Practical note book for Gross Anatomy .Drawing sheets and lined sheets.

Recommended Books

Compulsory:

For General Anatomy

1. *General Anatomy* by B.D.Chaurasia Or I B Singh

For Gross Anatomy-

1. *Human Anatomy* by B.D.Chourasia, vol.I, II & III. Or
2. *Textbook of Anatomy* by Inderbir singh, vol. I, II & III. or
3. *Gray's Anatomy for Students.*
4. *Krishna Garg- Practical Work Book of Anatomy.*
5. *Surface and Rediological Anatomy* by A. Halim.

For Practical (Dissection):

1. *Cunningham's manual of practical anatomy* Vol. I, II & III or
2. *Grant's Dissector.* or
3. *Dissection manual with regions and applied anatomy* Vol. I, II & III By Mercy Navis

For Neuroanatomy-

1. *Clinical Neuroanatomy* by Snell. or
2. *Neuroanatomy* by Inderbir Singh. or
3. *Neuroanatomy* By Vishram Singh or
4. *Neuroanatomy* By G. P. Pal.

For Embryology-

1. *Langman's Medical Embryology* Or
2. *Human Embryology* by Inderbir Singh

For Histology-

1. *Histology Practical Notebook* by S.R. Prasad
2. *Text book of Human Histology* By I. B. Singh or *Textbook of Histology* by Brijesh Kumar.

Reference books:

1. *Gray's Anatomy – Peter L. Williams*
2. *Dutta- Text Book of Anatomy*(Vol. I, II, III).
3. *Atlas of Human Anatomy*(with CD ROM)- Singh
4. *Atlas of Human Anatomy* by Asklepios.
5. *Clinical anatomy for students-* Neeta V.Kulkarni
6. *Dr. Sibnai Muzumdar, Mazumdar's Practical Anatomy Dissector Book.*
7. *Text book of Histology ,A practical guide* by JP Gunasegadan (ELSEVIER)
8. *Dr. S. Chauhan Histology book.*
9. *Atlas of Human histology* by Mariano S H Difiore.
10. *Osteology* by Inderbir Singh
11. *Osteology* By Nafis Ahmed Faruqui.
12. *Asterion Pratical Hand Book of Anatomy.*
13. *Human Genetics.* Kataria Varsha.
14. *Human Genetics.* Kapur & Suries

Dr. SAMPURNANAD MEDICAL COLLEGE JODHPUR

DEPARTMENT OF PHYSIOLOGY

Teaching Faculty

| | |
|----------------------|-------------------------|
| Prof. & Head | Dr. ND Soni |
| Prof. | Dr. Raghuvver Choudhary |
| Associate Prof. | Dr. Manish Parihar |
| Assistant Prof. | Dr. Sonika Choudhary |
| | Dr. Kamla Choudhary |
| | Dr. Sunita Choudhary |
| | Dr. Khemlata Tilwani |
| | Dr. Priya Jangid |
| Senior Demonstrators | Dr. Prakash Joshi |
| | Dr. Manoj Bundela |
| | Dr. Rajanee |
| | Dr. Garima |
| | Islam Khan |
| Medical Officer | Dr. Madhurima |
| | Dr. Abhinav Purohit |

DETAILED LIST OF TOPICS TO BE COVERED IN EACH SYSTEM No. of Classes

1. General Physiology & Biophysics :

06

- a. Molecular structure of cell membrane and its functions. Types of transport across cell membrane.
- b. Intercellular connections.
- c. Resting membrane potential and Action potential.
- d. Homeostasis.
- e. Physical principles governing flow of blood in heart and blood vessels (to be taught with CVS).
- f. Physical principles governing air flow in respiratory passage (to be taught with Respiratory System).

2. Nerve Muscle Physiology :

10

- a. Neurone: Structure, degeneration, regeneration, denervation hypersensitivity, electrogenesis of action potential.
- b. Neuromuscular transmission and its clinical application.
- c. Functional anatomy of skeletal muscle. Mechanism of muscle contraction and relaxation, contracture, rigor mortis, isotonic & isometric contraction, energy sources and metabolism, motor unit, size principle, recruitment.
- d. Types of smooth muscles and mechanism of contraction.

3. Blood :

22

- a. Composition and functions of blood.
- b. Plasma proteins – types, origin, functions, applied importance
- c. R.B.C – morphology, erythropoiesis, functions, fate

- d. ESR and its clinical importance
- e. Haemoglobin – structure, types, compounds of haemoglobin, abnormal haemoglobin, RBC indices - PCV, MCV, MCH, MCHC, Colour index.
- f. Anaemia - Types with examples
- g. Polycythaemia
- h. Iron metabolism
- i. WBC - types, morphology, leucopoiesis, functions
- j. Immunity: Humoral & cellular, mechanism of immune response, immunoglobulins.
- k. Monocyte – Macrophage system.
- l. Platelets: structure and functions
- m. Haemostasis: Role of platelets, Blood coagulation, anticlotting mechanisms, anticoagulants.
- n. Bleeding disorders: Purpura, Hemophilia, Vitamin K deficiency, tests for bleeding disorders.
- o. Thrombotic disorders: Thrombosis embolism
- p. Blood group: different systems, Blood grouping & cross matching and clinical importance.
- q. Blood transfusion: Hazards of blood transfusion, storage of blood

4. Gastro-Intestinal System :

14

- a. Characteristics of G.I wall
- b. Neural control of G.I function.
- c. G.I. Hormones
- d. Saliva: Composition, Functions, control of secretion.

- e. Gastric juice: Composition, mechanism of secretion, functions, regulation of secretion, mucosal barrier, peptic ulcer, gastrectomy, Dumping Syndrome, gastric function tests (to be taught in Biochemistry)
- f. Pancreatic juice: Composition, functions, regulation, applied importance
- g. Liver & Gall Bladder: Composition & functions of bile, control of secretion, functions of gall bladder, gall stones, enterohepatic circulation, jaundice, functions of liver & L.F.T.
- h. Small intestine: Composition & regulation of secretion and functions of intestinal juice.
- i. Large intestine: Functions
- j. Digestion & Absorption: (to be taught in Biochemistry)
- k. Movements of GI tract: Mastication deglutition, gastric motility and emptying, intestinal motility with reference to BER, small bowel wave, peristalsis, paralytic ileus defecation.

5. Respiratory System :

14

- a. Functional Anatomy and functions of respiratory system.
- b. Mechanics of respiration.
- c. Lung volumes and capacities: definition, normal values, their measurement and clinical importance
- d. Pulmonary ventilation,, alveolar ventilation, dead space.
- e. Diffusion of gases across alveolar capillary membrane, diffusing capacity.
- f. Pulmonary circulation.
- g. Oxygen & carbon dioxide transport in blood.

- h. Pressure changes during ventilation, pressure volume relationship including surfactant and compliance, airway resistance, work of breathing
- i. Control of respiration: neural control, chemical control, response to exercise, periodic breathing.
- j. Hypoxia including high altitude physiology and acclimatization, asphyxia, cyanosis, oxygen therapy and toxicity.
- k. Effects of increased barometric pressure – nitrogen narcosis, high pressure nervous syndrome, decompression sickness (Caissons disease).
- l. Artificial respiration
- m. Lung function tests.

6. Cardio-Vascular System :

22

- a. Functional anatomy of heart and blood vessels.
- b. Properties of cardiac muscle.
- c. Origin & spread of cardiac impulse, heart block, cardiac arrhythmias.
- d. ECG: leads, principles of normal recording, normal waves & internal & their interpretations, electrical axis of the heart including left and right axis deviation, clinical uses of ECG.
- e. Cardiac cycle: Mechanical events, pressure changes in atria, ventricles, aorta, pulmonary artery and jugular vein. End diastolic volume, end systolic volume, ejection fraction.
- f. Heart sounds: normal character, physiological basis of splitting, murmur.
- g. Cardiac output: definition, determination, factors regulating, venous return.

- h. Arterial pulse: normal & abnormal
- i. Physical principles governing flow of blood in heart & blood vessels, laminar flow, turbulent flow, Reynolds number, peripheral resistance, Poiseuille-Hagen formulae.
- j. Arterial pressure: total pressure, lateral pressure, Bernoulli's principle, importance of different pressure, measurement, factors controlling B.P effects of gravity, posture and exercise on B.P
Hypertension & hypotension
- k. Regulation of CVS: local regulation including auto regulation of blood flow, vasoconstrictors & vasodilators, substances secreted by endothelium including NO. systemic regulation – humoral & neural, innervation of heart and blood vessels, cardiovascular centers, cardiovascular reflexes, regulation of B.P & heart rate.
- l. Regional circulation: coronary circulation, cutaneous circulation, pulmonary cerebral, renal circulation will be taught in respective systems.
- m. Cardio – vascular adjustments in health & disease: effects of exercise, haemorrhage & shock.

7. Excretory System :

12

- a. Functional anatomy of kidney, nephron-structure, parts, function, types,
- b. Juxtaglomerular apparatus: autoregulation, peculiarities, measurement.
- c. Glomerular filtration: filtration barrier, forces governing filtration, measurement.
- d. Tubular functions: reabsorption, secretion, T_m values

- e. Regulation of ECF – volume, osmolality and electrolytes
- f. Acid base balance (to be taught in biochemistry)
- g. Micturition
- h. Renal function tests, renal clearance, abnormal constituents of urine
- i. Excretory functions of skin

RECOMMENDED THEORY BOOKS :

Theory :

- | | |
|---------------------------------|----------------------------|
| 1. Medical physiology | A. C. Guyton |
| 2. Review of medical physiology | W. F. Ganong |
| 3. Medical Physiology | Sembulingam |
| 4. Text book of Physiology | A.K. Jain |
| 5. Text book of Physiology | Indu Khurana |
| 6. Text book of Physiology | G K Pal |
| 7. Text book of Physiology | D. Venkatesh ,H.H.Sudhakar |

Practical :

- | | |
|-------------------------|-------------------|
| 1. Practical physiology | C. L. Ghai |
| 2. Practical Physiology | A.K. Jain, GK PAL |

REFERENCE THEORY BOOKS :

- | | |
|-------------------------------------|-------------------|
| 1. Physiology | Berne & Levy |
| 2. Medical Physiology | Hershel Raff |
| 3. Fundamentals of Human Physiology | Lauralee Sherwood |
| 4. Human Physiology | Silverthorn |
| 5. NMS Physiology | NMS Sereis |
| 6. Vander's Human Physiology | Eric Widmaier |

PRACTICAL SCHEDULE

Whole batch will be divided into four batches. One batch will go to PSM, Another to Biochemistry and two batches will come to Physiology Department. Each of the two batches will be given practical exercises simultaneously in the hematology and Amphibian Labs from Monday to Thursday. Practical Demonstrations will be given on Friday and Saturday.

Number of the working weeks falling within the period from August to January are 26. But due to the gazetted and local holidays, the batch which is scheduled to come on that day, will be lagging behind in comparison to other batches. To compensate for this unavoidable holiday's loss, we will provide at least two extra revision weeks for left out topics.

LIST OF DEMONSTRATIONS & PRACTICALS CLASSES IN HEMATOLOGY

- 1 MICROSCOPE
- 2 COMMON OBJECTS
- 3 BLOOD FILM PREPARATION & STAINING
- 4 IDENTIFICATION OF WBCs
- 5 DLC
- 6 HEMOCYTOMETRY
- 7 TLC
- 8 TRBC
- 9 HEMOGLOBIN ESTIMATION, ARNETH COUNT
- 10 BLOOD GROUPS
- 11 BT & CT
- 12 BLOOD INDICES
- 13 ESR & PCV

LIST OF DEMONSTRATION & PRACTICAL CLASSES IN CLINICAL HUMAN LAB

- 1 STETHOGRAPHY
- 2 SPIROMETRY
- 3 EXAMINATION OF RESPIRATORY SYSTEM
- 4 BLOOD PRESSURE
- 5 EFFECT OF EXERCISE ON BLOOD PRESSURE
- 6 EXAMINATION OF CARDIOVASCULAR SYSTEM
- 7 ECG
- 8 REFLEXES
- 9 SENSATIONS
- 10 PERIMETRY
- 11 VISUAL ACUITY
- 12 CRANIAL NERVE EXAMINATION

LIST OF DEMONSTRATION & PRACTICAL CLASSES IN AMPHIBIAN LAB

- 1 AMPHIBIAN EXPERIMENT INSTRUMENTS
- 2 GN MUSCLE NERVE DISSECTION & PREPARATION
- 3 RECORDING OF SMC
- 4 EFFECT OF TEMPERATURE ON SMC
- 5 EFFECT OF TWO SUCCESSIVE STIMULI
- 6 CLONUS
- 7 TETANUS
- 8 EFFECT OF LOAD
- 9 GENESIS OF FATIGUE
- 10 DETERMINATION OF NERVE CONDUCTION VELOCITY
- 11 RECORDING OF NORMAL CARDIOGRAM
- 12 EFFECT OF TEMPERATURE ON CARDIOGRAM
- 14 EFFECT OF STIMULATION OF VAGUS NERVE
- 15 EFFECT OF ELECTROLYTES ON FROG'S HEART

DEPARTMENT OF BIOCHEMISTRY

| S.N. | Name of Faculty | Designation |
|-------------|------------------------|--------------------|
| 1. | Dr. Ranjana Mathur | Sr. Prof. & Head |
| 2. | Dr. Jairam Rawtani | Prof. |
| 3. | Dr. Nitin Sharma | Associate Prof. |
| 4. | Dr. Manisha Gurjar | Assistant Prof. |
| 5. | Dr. Vihan Chawdhary | Assistant Prof. |
| 6. | Dr. Mili Jain | Assistant Prof. |
| 7. | Dr. Asmita Hazra | Assistant Prof. |
| 8. | Dr. Ritu Gupta | Sr. Demonstrator |
| 9. | Mr. Arjun Singh | Sr. Demonstrator |
| 10. | Ms. Vinita Saini | Sr. Demonstrator |
| 11. | Mrs. Renu Jodha | Sr. Demonstrator |
| 12. | Mrs. Monika Yadav | Sr. Demonstrator |
| 13. | Dr. Himanshu Panwar | Sr. Demonstrator |
| 14. | Mr. Om Prakash | Sr. Demonstrator |
| 15. | Dr. Sunil Kumar | Sr. Demonstrator |
| 16. | Dr. Anirudh Singh | Sr. Demonstrator |
| 17. | Dr. Ashwin Soni | Sr. Demonstrator |
| 18. | Dr. Isha Sharma | Sr. Demonstrator |

Pattern of Examination in Department of Biochemistry

Ist Semester Examination

Theory

Course-All what is taught from day 1 to 31st December 2017.

Marks-Theory Paper will have 2 sections

Section A-26 marks

Students will have to attempt any 3 questions out of 4 questions.

Question number 1 is compulsory.

Section B-24 marks

Students will have to attempt 3 questions.

Viva

Grand viva on theory will be of 10 marks.

Practicals

Practicals and spot viva will be of 40 marks.

IInd Semester Examination

Theory

Course-All what is taught after 1st semester.

Marks-Theory Paper will have 2 sections

Section A-26 marks

Students will have to attempt any 3 questions out of 4 questions.

Question number 1 is compulsory.

Section B-24 marks

Students will have to attempt 3 questions.

Viva

Grand viva on theory will be of 10 marks.

Practicals

Practicals and spot viva will be of 40 marks.

University Examination

RUHS conducts the examination.

Theory

Paper 1-50 marks

Course-Chemistry, Metabolism, Vitamins and Enzymes

Marks-Theory Paper will have 2 sections

Section A-26 marks

Students will have to attempt any 3 questions out of 4 questions.

Question number 1 is compulsory.

Section B-24 marks

Students will have to attempt 3 questions.

Paper 2-50 marks

Course-Molecular Biology, Immunology, Regulation of metabolism and Clinical Biochemistry

Marks-Theory Paper will have 2 sections

Section A-26 marks

Students will have to attempt any 3 questions out of 4 questions.

Question number 1 is compulsory.

Section B-24 marks

Students will have to attempt 3 questions.

Practical and Viva

Practical will be of 40 marks and grand viva will be of 20 marks.

Internal Assessments

Theory-20 marks

Practical-20 marks

SYLLABUS

THEORY:

PAPER-1

1. Molecular and functional organization of a cell and its subcellular components.
2. Structure, function and inter-relationship of biomolecules and consequences of deviation from normal (carbohydrates, protein, plasma, lipids, Nucleic acids, Vitamins, Haemoglobin)
3. Fundamental aspects of enzymology, and clinical application wherein regulation of enzymatic activity is altered.
4. Molecular concept of body defences and their application in medicine.
5. Molecular mechanism of gene expression and regulation, the principles of genetic engineering and their application in medicine.
6. Principles of various conventional and specialized laboratory investigations and instrumentation analysis and interpretation of given data.

[Functional tests and instrumentation (Electrophoresis, chromatography, colorimetry, radioactive isotopes and immunometry etc.), analysis and interpretation of given data]

PAPER-2

1. Digestion and assimilation of nutrients.
2. Integration of the various aspects of metabolism and their regulatory pathways.
3. Biochemical basis of inherited disorders with their associated sequelae and disorders of malnutrition. (Relevant aspects of 1,2 and w.r.t vitamin, minerals, biological oxidation, carbohydrates, lipids, protein, nucleic acids, Hb, Detoxication)
4. Mechanisms involved in maintenance of body fluid and p^H homeostasis.
5. Biochemical basis of environmental health hazards, biochemical basis of cancer and carcinogenesis.
6. Experiments to support theoretical concepts and clinical diagnosis.

LECTURE SCHEDULE FOR FIRST M.B.B.S.

| S.No. | TOPICS AND SUBTOPICS | LECTURES |
|-------|--------------------------------------------------------------------------------------------------------------|----------|
| 1. | Introduction | 1 |
| 2. | Cell | 2 |
| a. | Organelles its structure and function | |
| b. | Membrane structure and transport mechanisms | |
| 3. | Carbohydrates | 5 |
| a. | Introduction and classification | |
| b. | Monosaccharides | |
| c. | Disaccharides | |
| d. | Homopolysaccharides | |
| e. | Heteropolysaccharides | |
| 4. | Proteins | 8 |
| a. | Classification of amino acids | |
| b. | Properties of amino acids and Biologically active peptides | |
| c. | Structure of proteins | |
| d. | Physical properties of proteins | |
| e. | Classification of proteins | |
| f. | Plasma proteins | |
| g. | Immunoglobulins | 2 |
| 5. | Enzymes | 7 |
| a. | Introduction and terminology | |
| b. | Nomenclature and classification | |
| c. | Coenzymes, Metalloenzymes, Mechanism of action | |
| d. | Active center and Factors influencing enzyme's activity (Enzyme, Substrate, p ^H , Temp. and Time) | |
| e. | Enzyme activation and inhibition | |
| f. | Enzyme regulation | |
| g. | Diagnostic importance of Enzymes, Isoenzymes | |

| S.No. | TOPICS AND SUBTOPICS | LECTURES |
|------------|-------------------------------------------------------|----------|
| 6. | Lipids | 5 |
| a. | Introduction and classification | |
| b. | Fats & Oils – Structure and properties | |
| c. | Phospholipids | |
| d. | Glycolipids and other lipids | |
| e. | Fatty acids and Steroids | |
| 7. | Nucleic acid | 3 |
| a. | Bases, Nucleosides, Nucleotides | |
| b. | Structures of DNA | |
| c. | Structure of RNAs and Biologically active Nucleotides | |
| 8. | Vitamins | 7 |
| a. | Introduction | |
| b. | Vitamin A | |
| c. | Vitamin D | |
| d. | Vitamin E & K | |
| e. | Vitamins B1 & B12 | |
| f. | Nicotinic acid & Pyridoxine | |
| g. | Folic acid & Vitamin B12 | |
| h. | Other B complex vitamins | |
| i. | Vitamin C | |
| 9. | Haemoglobin | 3 |
| a. | Porphyrin, Porphyrinogen and their metabolism | |
| b. | Porphyrias, Structure of Haemoglobin & Catabolism | |
| c. | Abnormal haemoglobins | |
| 10. | Biological Oxidation | 2 |
| a. | Oxidation reduction reactions | |
| b. | ETC & Oxidative phosphorylation | |

| S.No. | TOPICS AND SUBTOPICS | LECTURES |
|------------|----------------------------------------------------------------------------------|----------|
| 11. | Carbohydrate metabolism | 8 |
| a. | Introduction to metabolism & Digestion and absorption | |
| b. | Glycolysis, Gluconeogenesis & regulation | |
| c. | Glycogenesis, Glycogenolysis & Glycogen storage disease | |
| d. | HMP shunt | |
| e. | Citric acid cycle | |
| f. | Metabolism of other sugars | |
| g. | Genetic disorders associated with carbohydrate metabolism | |
| h. | Blood glucose regulation & Diabetes mellitus | |
| 12. | Protein metabolism | 8 |
| a. | Digestion & absorption of AA pool | |
| b. | General fate of AAs | |
| c. | Ammonia detoxification, Urea formation and disorders associated | |
| d. | 1 C metabolism, Individual AA catabolism and disorders associated | 3 |
| e. | Synthesis of Biochemically important compounds from AA & protein malnutrition | 2 |
| 13. | Lipid metabolism | 10 |
| a. | Digestion, absorption & disorders | |
| b. | Lipoprotein composition | |
| c. | Fatty acid catabolism & disorders | |
| d. | Fatty acid biosynthesis | |
| e. | Ketone body metabolism & Ketosis | |
| f. | Phospholipid | |
| g. | TG metabolism and disorders | |
| h. | Cholesterol metabolism | |
| i. | Eicosanoids | |
| j. | Lipoproteinemias | |
| 14. | Nucleic acid metabolism | 3 |
| a. | Purine & pyrimidine metabolism, regulation and disorders | |

| S.No. | TOPICS AND SUBTOPICS | LECTURES |
|------------|-------------------------------------------------------------------------|----------|
| 15. | Biochemical genetics | 7 |
| a. | Replication | |
| b. | Transcription | |
| c. | Genetic code, Translation, post translational modification & inhibitors | 2 |
| d. | Mutation | |
| e. | Restriction endonucleases & Recombinant technology | |
| f. | Probe, Finger printing, PCR, Monoclonal antibodies etc. | |
| 16. | Mineral metabolism | 3 |
| a. | Calcium | |
| b. | Iron | |
| c. | Trace elements | |
| 17. | Integrated metabolism | 3 |
| a. | Common metabolic pathway | |
| b. | Detoxification | |
| c. | Free radicals and antioxidants | |
| 18. | Biochemistry of cancer and tumour marker | 4 |
| 19. | Water & Electrolyte regulation | 3 |
| a. | p ^H & Acid-base regulation | 2 |
| 20. | Environmental pollution & Toxicology | 2 |
| 21. | Nutrition | 3 |
| 22. | Immunology | 5 |
| 23. | Cancer | 3 |

DEMONSTRATIONS AND PRACTICALS OF FIRST M.B.B.S

| DEMONSTRATION | PRACTICAL DAYS |
|--------------------------------------------------------------------|-----------------------|
| 1. Tests of Carbohydrates | 5 |
| 2. Tests of Proteins | 3 + 1 |
| 3. Tests of Lipids & Vitamins | 1 |
| 4. Tests of Miscellaneous Group (Unknown) | 1 + 1 |
| 5. Study of composition of Saliva & Bile | 1 |
| 6. Study of composition of Gastric juice, Pepsin activity & CSF | 2 |
| 7. Study of composition of Milk/ Egg/ Meat/ Wheat flour | 2 |
| 8. Study of Normal constituents of Urine | 1 |
| 9. Study of Abnormal constituents of Urine | 3 |
| 10. Study of Hemoglobin & its derivatives | 1 |
| 11. Estimation of Free & Combined Acidity & Gastric Function Tests | 2 |
| 12. Estimation of Acidity & Ammonia in Urine | 1 + 1 |
| 13. Establishment of Beer's Law | 1 |
| 14. Estimation of Blood Glucose & GTT | 1 |
| 15. Estimation of Serum Cholesterol | 1 |
| 16. Estimation of Serum Total Protein & A:G Ratio | 1 |
| 17. Estimation of Serum Uric acid | 1 |
| 18. Estimation of Serum Urea | 1 |
| 19. Estimation of Serum Inorganic Phosphorous | 1 |
| 20. Estimation of Serum Amylase | 1 |
| 21. Estimation of Serum Calcium | 1 |
| 22. Estimation of Serum Creatinine | 1 |
| 23. Spectroscopy, Clinical enzyme | 1 |
| 24. Electrophoresis | 1 |
| 25. Chromatography | 1 |
| 26. Liver Function Tests | 1 |

| | |
|-------------------------------|----------|
| 27. Kidney Function Tests | 2 |
| a. Urea clearance | |
| b. Creatinine clearance | |
| REVISION AND TUTORIALS | 9 |

RECOMENDED BOOKS

1. Textbook of Biochemistry for Medical students 8th Edition by DM Vasudevan
2. Essentials of Medical Biochemistry by R.C. Gupta
3. Textbook of Biochemistry 2nd Edition by Rajinder Chawla
4. Practical Biochemistry 5th edition by R.C. Gupta
5. Practical Clinical Biochemistry 4th Edition by Ranjana Chawla

REFERENCE BOOK:

1. Harper's illustrated Biochemistry 30th Edition
2. Lippincott's Biochemistry 6th Edition
3. Textbook of Medical Biochemistry 3rd Edition by Dinesh Puri
4. Pocket Dictionary of Biochemistry by D C Sharma and Jairam Rawtani

DEPARTMENT OF COMMUNITY MEDICINE

TEACHING FACULTY

| No. | Name | Designation |
|-----|---------------------|---------------------------------|
| 1. | Dr Rita Meena | Sr. Professor & Head |
| 2. | Dr. Suman Bhansali | Sr. Professor |
| 3. | Dr. Afzal Hakim | Professor |
| 4. | Dr. G.L. Saini | Associate Professor |
| 5. | Dr. Savitri Sharma | Assistant Professor |
| 6. | Dr. Kuldeep Solanki | Sr. Demo |
| 7. | Dr. Dinesh Kuldeep | Sr. Demo |
| 8. | Dr. Sandeep Deora | M.O./I.C. (H.T.C. Bhadwasia) |

**DEPARTMENT OF COMMUNITY MEDICINE, DR. S.N. MEDICAL COLLEGE,
JODHPUR**

Comm. Med./MC/JU/17/346

Date: 25-07-2017

: Notice :

Following is the teaching programme for the theory classes of
I Semester (adm. 2017) Time – 8:00 A.M. to 9:00 A.M.

| Date | Topic | Teacher |
|-------------|----------------------------------------------------------------|--------------------|
| 04-08-17 | Introduction to Community Medicine | Dr. Rita Meena |
| 11-08-17 | Introduction to Community Medicine | Dr. Rita Meena |
| 18-08-17 | Man and Medicine | Dr. Rita Meena |
| 25-08-17 | Man and Medicine | Dr. Rita Meena |
| 01-09-17 | Disaster Management | Dr. Suman Bhansali |
| 08-09-17 | Disaster Management | Dr. Suman Bhansali |
| 15-09-17 | International Health Agencies | Dr. Suman Bhansali |
| 22-09-17 | International Health Agencies | Dr. Suman Bhansali |
| 29-09-17 | Communication for Health Education | Dr. Afzal Hakim |
| 06-10-17 | Communication for Health Education | Dr. Afzal Hakim |
| 13-10-17 | Health Care of the Community | Dr. Afzal Hakim |
| 27-10-17 | Health Care of the Community | Dr. Afzal Hakim |
| 03-11-17 | Biomedical waste management | Dr. Savitri Sharma |
| 10-11-17 | Biomedical waste management | Dr. Savitri Sharma |
| 17-11-17 | Routes of Transmission of diseases and universal precaution | Dr. Savitri Sharma |

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**Prof. & Head
Community Medicine**

Copy to-

1. Principal & Controller .
2. Concerned teacher
3. Notice board.

**Prof. & Head
Community Medicine**

**DEPARTMENT OF COMMUNITY MEDICINE, DR. S.N. MEDICAL COLLEGE,
JODHPUR**

Comm. Med./MC/JU/17/347

Date: 25-07-17

: Notice :

Following is the teaching programme for the Practical classes of
I Semester(adm.2017) Time – 9:00 A. M. to 10:45 A.M.

| Date | Topic |
|------------------|------------------------------------|
| September | |
| I Week | Urban Health Training Centre |
| II Week | Rural Health Training Centre |
| III Week | ARV Clinic |
| IV Week | Immunization Clinic |
| October | |
| I Week | Sub Centre |
| II Week | Primary Health Centre |
| III Week | Community Health Centre |
| IV Week | Anganwadi centre |
| November | |
| I Week | Reproduction & Child Health Office |
| II Week | Record Room |
| III Week | Family Welfare Clinic |
| IV Week | Incinerator |
| December | |
| I Week | Rehabilitation Research Centre |
| II Week | Saras Dairy |
| III Week | Water Filtration Plant |
| IV Week | Nagar Nigam |

| Day | Teacher |
|------------|---------------------|
| I Week | Dr. Kuldeep Solanki |
| II Week | Dr. Dinesh Kuldeep |
| III Week | Dr. Kuldeep Solanki |
| IV Week | Dr. Dinesh Kuldeep |

Copy to- 1. P&C, 2. Concerned teacher, 3. Transport incharge

---sd--
**Prof. & Head
Community Medicine**

Recommended Books :-

| S.No. | Author | Title | Publisher |
|--------------|----------------------------------|------------------------------------------------|--------------------|
| 1 | K.Park | Parks Textbook of Preventive & Social Medicine | Banarasidas Bhanot |
| 2 | A.H.Suryakantha | Community medicine with recent advances | Jaypee |
| 3 | Sunderlal, Adarsh, Pankaj | Textbook of Community Medicine | CBS |
| 4 | D.K.Mahabalaraju | Essential of Community Medicine Practicals | Jaypee |
| 5 | Poornima Tiwari, Shashank Tiwari | Mastering Practicals-Community Medicine | Wolters Kluwer |
| 6 | B.K. Mahajan | Methods in Biostatistics | Jaypee |

Details of Academic Section:-

| S.No. | Name | Mobile No. |
|-------|-------------------------------------------|------------|
| 1. | Dr. Suman Bhansali, Academic Incharge, PG | 9414412645 |
| 2. | Dr. Afzal Hakum, Academic Incharge, UG | 9928366737 |
| 3. | Sh. Ramkumar, Stenographer | 9828625121 |
| 4. | Sh. C.S. Acharya, Clerk Grade-I | 9413462443 |
| 5. | Sh. Pyare Miyan, Clerk Grade-I | 9414412430 |
| 6. | Mrs. Madhuri Agarwal, IA | 9602276865 |
| 7. | Sh. Jitendra Bhatt, Clerk Grade-II | 9799180777 |