

Practicals

(A) Haematology

Hb% R. B. C. W. B. C. Differential, B.T.C.T. Blood group, ABO system Rh typing, Blood Indices

(B) Clinical examination and Human experiments

Stethography, Spirometry, Ergography, Perimetry, Tests for physical fitness, Clinical examination of all systems.

(C) Demonstrations

Reticulocyte count. Platelet count, P. C. V., E. S. R, fragility, peripheral blood smear, bone marrow slides,

E.M.G. S.D. curve, conduction velocity of nerve (Human), E.C.G., E.E.G., Audiometry, H.R.T. (Human reaction time)

Visit to blood bank, wards to show common disorders or video tapes (list given in appendix I), X-rays (list given in appendix II)

Animal experiments on frogs,

a) Skeletal muscle:

effect of graded stimuli,

simple muscle twitch

genesis of tetanus,

effect of load on skeletal muscle

fatigue.

b) Cardiac muscle.

normal cardiogram, effect of temperature,

properties of cardiac muscle,

effect of vagal stimulation and phenomenon of vagal escape.

effect of drugs (Acetyl choline, Adrenaline, Nicotine) on frog's heart.

perfusion of isolated frogs heart with effects of Na^+ , K^+ and Ca^{++} ,

- and demonstration of Starling's law

Museum to be developed

Historical land marks, Nobel laureates

VII) EVALUATION :**A) THEORY – SYSTEMS TO BE INCLUDED ARE****Paper I**

Cardiovascular, Respiratory, Gastrointestinal, Endocrines, Reproduction,
Acclimatization to hypoxia, Temperature regulation, Exercise physiology

Paper II

Cell membrane and transport systems across the cell membrane, Homeostasis Nerve
and Muscle Physiology, Blood, Excretory, C.N.S. and special senses.

Duration of each paper : 2 Hours & 30 minutes

(30 minutes – **Section A** – M.C.Q.

2 hours – **Section B & C**)

MCQ Section A will be given to the candidate at the beginning of the examination. After 30 minutes, Section A will be collected . Paper containing Section B and Section C will then be handed over to the candidate. Section B and Section C are to be written in separate answer sheets.

Marks : Total marks for each paper: 50

B) NATURE OF QUESTION PAPER**Section A**

Q. No. 1 Multiple choice question (MCQ) 15 marks

Section B

Q. No. 2 Write in brief (Five out of Six) 2 marks each 10 marks

Q. No. 3 On applied Physiology (Two out of three) 8 marks

(List of topics to be asked is given in appendix III)

Section C

Q. No. 4 Long question 9 marks

OR

Long Question

Q. No. 5 Write short notes (Any two out of three) 8 marks

C) PATTERN OF VIVA VOCE AND PRACTICAL EXAMINATION

There shall be separate batches of students for viva and Practicals.

(i) Viva examination(orals) Total marks 20 Duration – 20 minutes.

Four Examiners (5 minutes with each examiner)

(ii)Two Examiners for topics of paper I systems to be distributed,

Two Examiners for topics of paper II systems to be distributed,

(B) Practical examination Total marks 40

3 Exercises :

Exercise (1) Clinical examination ... 20 marks,

4 sub questions each of 5 marks,

(i) C.V.S. ...5

(ii) R.S. ...5

(iii) C.N.S. & Special senses ...5

(iv) Abdomen ...5

Exercise (2) Haematology ...10 marks,

Exercise (3) Short exercise ...10 marks,

Sub questions each having 2 marks,

Calculations,

Interpretation of graphs,

Charts,

Data analysis and interpretation

Photographs on-endocrine disorders,

Neurological disorder,

APPENDIX I

List of common disorders to be shown during word visits or using video tapes.

1. Generalised Oedema

2. Anaemia

3. Jaundice

4. Hepatomegaly

5. Splenomegaly

6. Ascites

7. Myxoedema

8. Cretinism

9. Hyperthyroidism

10. Dwarfism

11. Acromegaly

12. Facial nerve paralysis

13. Hemiplegia

14. Paraplegia

15. Parkinsonism

16. Cerebellar dysfunction.

APPEDIX II

List of X-rays to be shown along with clinical examinations to improve understanding.

1. Normal X-ray chest
2. Consolidation of lung
3. Pleural effusion showing mediastinal shift
4. Collapse of lung / cavity in lung
5. Hyper inflated lungs in emphysema
6. Left ventricular hypertrophy showing shift of apex beat
7. Barium meal follow through – oesophagus, stomach, small and large intestine.

APPENDIX III

Topics to be asked as applied questions in theory .

A brief history and diagnosis to be provided.

1. Erythroblastosis foetalis
2. Haemophilia, purpura
3. Myasthenia gravis
4. Peptic ulcer
5. Oedema
6. Jaundice and anaemia – due to mismatched transfusion
7. Myxoedema
8. Cretinism
9. Hyperthyroidism
10. Tetany
11. Acromegaly, Gigantism
12. Respiratory distress syndrome
13. Parkinsonism
14. Asthma
15. Hemiplegia
16. Spinal cord injury
17. Deafness
18. Hemorrhagic shock
19. Cushing's syndrome
20. Dwarfism