

NEW

Part II 3-Tier

2015

PHYSIOLOGY

(General)

PAPER—III

(PRACTICAL)

Full Marks : 100

Time : 5 Hours

The figures in the right-hand margin indicate full marks.

Answer all questions.

1. Identify five histological sections focussed under the microscopes, marked as A, B, C, D and E. Give at least one unique identifying character for each section.

[For one unique identifying character = 01, For Correct Identification = 01]

(Note : If identification is incorrect no credit will be given for identifying character.)

2. Prepare a blood film of your own blood and stain it with Leishman's stain. Focus a small lymphocyte with X400 magnification at the center of the field. Draw a labelled diagram of your observation. 10

[Blood film = 02

Staining = 02

Correct focussing = 01, Correct identification = 03

Diagram = 02]

3. Tease properly a supplied strip of nerve and stain it properly with silvernitrate solution. Mount it in glycerin and demonstrate nodes of Ranvier under the microscope at X100 or X150 magnification. 10

[Proper teasing = 02

Staining = 03, Mounting = 02

Focussing and identification = 03]

4. Calculate the percentage content (gm%) of glucose in the supplied sample by Benedict's quantitative method. Write the principle of this method. 20

[Spot marking on the basis of overall performance = 06

Principle = 04, Calculation = 04

Result = 02, Accuracy = 04]

(Errors upto 10% = 04 marks, Errors between 10 - 20% = 03 marks, Errors above 20% = 02 marks.)

5. Demonstrate the effect of warm saline on unperfused toad's heart. Interpret your observation. 10

[Overall experimental set-up = 03, normal tracing = 02,
effect of warm saline = 03, interpretation. = 02]

(Note : No post-effect normal is needed.)

6. Record the heart rate of an individual at resting state before performing 3 minutes exercise as per specifications of Harvard Step test. Give 1 minute rest after finishing the exercise and take 3 consecutive recording of recovery pulse rate at the interval of 1-1½ min, 2-2½ min, and 3-3½ min. Calculate the PFI from your data and interpret the result. 10

[Resting pulse rate = 02

3 recovery pulse rate = 03

calculation = 03, interpretation = 02]

7. Submit Diet Survey Report. 5

[Report should be as per ICMR specification and authenticated by your teacher of the Department.]

[Report = 03, Viva on Report = 02]

8. Submit your report on educational excursion to higher learning institute.

(Report should be authenticated by departmental teacher.)

[Report = 03, Viva on Report = 02]

9. Submit Laboratory Note Books. 10

[Biochemistry = 04, Histology = 03

Experimental and Human experiments = 03]

10. Viva voce. 10
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[Instructions to the Examiners]

1. Only one histological section will be chosen from each of the following five groups :
 - A. Salivary gland, Esophagus, Pancreas, Liver.
 - B. Stomach, Small intestine, Tongue, Skin.
 - C. Lung, Trachea, Spleen, Lymph node, Kidney.
 - D. Ovary, Testis, Thyroid, Adrenal.
 - E. Cerebral cortex, Cerebellum, Spinal cord.
 - (i) Marks distribution as per question.
 - (ii) 1 minute for each slide.
 - (iii) In case of more than one day of examination, minimum 3 slides out of five must be changed from the previous day of examination. This is for all successive days of examination at the center.

(Turn Over)

2. As per question and examiner's discretion.
3. As per question and examiner's discretion.
4. At least two variants of sample must be supplied in each day.

Remaining part of markings as per question and Examiner's discretion.

5. Candidate should submit the whole paper of recording.
As per question and examiner's discretion.

Part markings are to be shown on the unsmoked side of the paper.

6. The resting and three post exercise pulse rates (in one minute equivalent) are to be signed by the examiner.

All markings are as per question and examiner's discretion.

7. (a) Report should be prepared on ICMR specification.
(b) No marks will be given in case of improper report preparation or without authentication by the department.

(c) Markings as per examiner's discretion.

8. (a) No marks will be given if the report is not authenticated properly.

(b) Marks as per examiner's discretion.

9. (a) Markings as per questions.
 (b) No markings for unsigned note books.
10. During Viva-Voce following instruments are to be displayed —

Induction coil, Sphygmomanometer burette, pipette, conical flask, volumetric flask, beaker and compound microscope.

Marking :

- (a) Naming of the instruments = 02
 (b) Use of the instruments = 02
 (c) Questions from the practical performed and related fields as per discretion of the examiners = 06

Post Examination Instructions

Examiners are requested to submit the following items to the Head Examiner within 15 days of completion of practical examination positively.

- (a) Sample key book which contains the name of histological slides for Q. No. 01, stock and distribution of biochemical sample (glucose) against Q. No. 4.
 (b) Marks key which contains the part marks of all questions after signatures of the examiners.
 (c) Copy of student's attendance sheet.
 (d) Evaluated answerscripts with examiner's signatures.

- (e) Award lists signed by the examiners.
- (f) Any other paper or statement as desired by the examiners, if any.

The documents should be sent with proper sealed packets to the Head Examiner at the following Address :

Dr. Biswarup Sarkar

Dept. of Physiology

Midnapore College

Midnapore, Paschim Medinipur - 721101

Mobile No. : 9830878909
