

**NEW**

**Part II 3-Tier**

**2018**

**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.)*

*5×2*

*(Turn Over)*

2. Draw a blood film of your own blood. Stain the slide with Leishman stain and focus a monocyte at the center of the field with a magnification of 40X / 45X. Draw a labelled diagram of your observation. 10

[Blood film = 02,  
Staining = 02, Correct focussing = 01,  
Correct identification = 03, Diagram = 02]

3. Prepare a smear of squamous epithelium (from upper surface of your lower lip) by methylene blue stain. Demonstrate the films under the microscope at 40X / 45X magnification. 10

[Uniform spreading of tissue = 02, Staining = 03  
Correct focussing = 02, Identification = 03]

4. Identify the substance provided to you by performing the sequential qualitative tests. Write down the tests in a sequential manner. Perform and write the confirmatory test for the obtained result. 10

[Performance of sequential tests = 03,  
Performance of confirmatory test = 02,  
Table of the tests performed = 03,  
Procedure for the confirmatory test = 02]

5. Estimate the percentage of chloride through Mohr's method. Write down the following details of this method.

10

*[Principle = 02, Procedure = 02,*

*Result in tabular form = 02,*

*Calculation = 02, Interpretation = 02]*

6. Determine the latent period, contraction period, relaxation period and maximum height of contraction from the supplied sample muscle curve of a toad.

5

*[Latent period = 01, Contraction period = 01,*

*Relaxation period = 01, Maximum height*

*of contraction = 01, Interpretation = 01]*

7. Measure systolic and diastolic blood pressure of an individual (to be supplied) by sphygmomanometer. Determine the pulse pressure and mean pressure of the subject at quiet rest.

15

*[Principle = 02, Procedure = 02,*

*Tabular presentation of systolic and*

*diastolic blood pressure = 04, Calculation of pulse*

*pressure and mean pressure = 04, Interpretation = 03]*

8. Submit Diet Survey Report. 10  
[Report should be as per ICMR specification and  
authenticated by your teacher of the Department.]  
*[Report = 05, Viva on Report = 05]*
9. Submit Laboratory Note Books. 10  
*[Biochemistry = 04, Histology = 03  
Experimental Physiology 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.

*(Turn Over)*

- (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.
2. As per question and examiner's discretion.
  3. As per question and examiner's discretion.
  4. No marks should be given in case of wrong identification except for the performance of sequential tests and Table of the tests performed. Rest of the markings will be as per question and examiner's discretion.
  5. At least two variants of sample must be supplied in each day.  
  
Remaining part of markings as per question and Examiner's discretion.
  6. As per question and examiner's discretion.
  7. As per question and examiner's discretion.

8. (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.
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 against Q. No. 5.
- (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.*

**Dr. Tanushree Tulsian**

*Asst Professor*

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