

**NEW**

**2017**

**Part II 3-Tier**

**PHYSIOLOGY**

**(Honours)**

**PAPER—V**

**(PRACTICAL)**

*Full Marks : 100*

*Time : 6 Hours*

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

*Answer all questions.*

1. Identify five histological sections of permanent slides focussed under the microscope, marked as A, B, C, D and E. Give two appropriate identifying characters for each section.

(Unique identifying character  $2 \times \frac{1}{2} = 1$ , Correct Identification = 1)

(Note : No credit will be given for identifying character with incorrect identification).

5×2

*(Turn Over)*

2. Spread, fix and properly stain supplied adipose tissue using alcoholic Sudan III solution. Count stain with methylene blue after rinsing in 50% alcohol. Mount and observe under the microscope. Draw and label the observed field of focus. 10

*(Staining : Sudan III - 03, Counter stain - 01,  
Mounting - 01, Focussing - 02,  
Drawing - 02, Labelling - 01)*

3. Properly stain the supplied paraffin section with haematoxylin and eosin as per working schedule. Mount the slide clearly, focus under low power (100X) of microscope, identify with 2 unique identification characters. Submit the slide to the examiner accordingly with authentication. 10

*(Deparaffinitation - 01, Staining : Haematoxylin - 03,  
Eosin - 03, Mounting - 01,  
Clearing - 01, Identification - 01)*

4. Prepare a blood film of your own blood. Properly stain it with Leishman stain and observe under high power (400X) of microscope. Focus, identify a monocyte. Measure its diameter using micrometer scale. 10

[Errors upto 5% = 04 marks

Result - 04, Interpretation - 02)

(Procedure - 02, Plotting of standard curve - 02,

10

plotted. Interpret your result.  
curve and calculate your result as per standard curve  
results of standard in tabular form. Draw the standard  
method. Write down the procedure in flow chart and  
the given serum sample by Folin Ciocalteu (Lowry)  
7. Quantitatively estimate the amount of protein present in

Correct identification - 01)

(Sequential tests - 06, Confirmatory tests - 03,

10

test.  
sequential manner. Perform and write specific confirmatory  
sequential qualitative tests. Write down the tests in a  
6. Identify the supplied unknown sample by performing the

5 × 1

5. Submit a slide box containing five (5) HE stained  
histological slides duly signed by the respective teacher.

Measurement with tabular result - 03)

Focussing and Identification - 02,

(Blood film preparation - 01, Staining - 04,

10. Viva-Voce. 10

(Biochemistry - 04, Histology - 06)

9. Submit Laboratory Note Books. 10

Above 30% = 0 marks]

20 - 30% = 02 marks

10 - 20% = 04 marks

Errors : Upto 10% = 06 marks

Interpretation - 01)

Calculation - 01, Result - 06,

(Principle - 02, Procedure - 03, Tabulation - 02,

15

represent the result in tabular form. Interpret your results;

the principle and schematic procedure. Calculate and

8. Estimate the acid value of the given fat sample. Depict

Above 20% = no marks]

15 - 20% = 02 marks

5 - 15% = 03 marks

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***Instructions to the Examiners***

1. Only one histological tissue section will be chosen from each of the following groups and to be recorded in the key khata for each day of examination.

A : Tongue, Esophagus, Stomach, Duodenum, Jejunum,  
Large intestine.

B : Bone, Cartilage, Trachea, Lung, Spleen, Lymph  
Gland.

*(Turn Over)*

C : Liver, Kidney, Pancreas, Adrenal gland, Thyroid gland.

D : Testis, Ovary, Uterus, Artery, Vein.

E : Spinal Cord, Cerebral cortex, Cerebellum, Skin, Skeletal muscle, Cardiac muscle.

(i) 1 minute for each slide identification. Extra 1 minute to be given for completion of writing.

(ii) Marks distribution as per question.

(iii) In case of more than one day of examination at least three slides out of five must be changed from the previous day of examination. This is for all successive days of examination at the centre.

(iv) If identification is incorrect, no credit will be given for identifying character.

2. As per questions and examiner's discretion.

3. As per questions and examiner's discretion.

4. As per question and examiner's discretion.

5. (i) Importance should be given on staining, mounting and clearing of the submitted permanent slides.

- (ii) No marks for slide without teacher's signature.
6. (i) No marks should be given in case of wrong identification.
- (ii) Marking will be done as per question and examiner's discretion.
7. At least two variants of sample must be supplied in each day. Remaining part of markings as per question and examiner's discretion.
8. As per question and examiner's discretion.
9. (i) Markings as per questions.
- (ii) Special weightage to be given for regular signature of the teacher.
- (iii) No markings for unsinged note books.
10. During viva-voce following instruments are to be displayed —
- (i) Burette, (ii) Pipette, (iii) Volumetric flask, (iv) Conical flask, (v) Beaker, (vi) Haemoglobinometer, (vii) Hemocytometer and (viii) compound microscope.

Marking :

- (a) Naming of the instruments = 01.
- (b) Use of the instruments = 01.
- (c) Questions from the practical performed and related fields as per discretion of the examiners.

### ***Post Examination Instruction***

1. All examiners are requested to submit their specimen signature, full name, address and contact number.
2. Examiners are requested to submit the following items to the Head Examiner :
  - (a) Sample key book which contains the name of histological slides for Q.No. 6, 7 and 8.
  - (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.