



**First B.H.M.S. (2015)/(New) Examination, Winter 2018
PHYSIOLOGY INCLUDING BIOCHEMISTRY – I**

Total Duration : 3 Hours

Total Marks : 100

- Instructions :**
- 1) Use **blue/black** ball point pen only.
 - 2) **Do not** write anything on the **blank portion of the question paper**. If written anything, such type of act will be considered as an attempt to resort to unfair means.
 - 3) **All** questions are **compulsory**.
 - 4) The number to the **right** indicates **full** marks.
 - 5) Draw diagrams **wherever** necessary.
 - 6) Distribution of syllabus in Question Paper is only meant to cover entire syllabus within the stipulated frame. The Question paper pattern is a mere guideline. Questions can be asked from any paper's syllabus into any question paper. Students cannot claim that the Question is out of syllabus. As it is only for the placement sake, the distribution has been done.

1. Write short answer (**any ten** out of fifteen) : **(10×2=20)**
- a) Write the sites of formation of RBCs.
 - b) Enumerate types of leucocytes.
 - c) What is haemoglobin ?
 - d) Define B.P. systolic B.P. and diastolic B.P.
 - e) Enumerate any four properties of cardiac muscle.
 - f) What is 'apex beat' ?
 - g) Define cyanosis.
 - h) Enumerate different lung volumes.
 - i) Name any four normal constituents of urine.
 - j) What is countercurrent mechanism used for ?
 - k) What is 'shell' and 'core' temperature ?
 - l) Write any four functions of the skin.
 - m) Name the glands of skin.
 - n) Define diffusion.
 - o) What is co-transport ?



2. Write short answer (**any four** out of six) : (4×5=20)
- a) Functions of RBC.
 - b) Thrombocytes.
 - c) Venous return.
 - d) Functions of S.A.node and A.V.node.
 - e) Functions of lymph.
 - f) Functions of spleen.

3. Write short answer (**any four** out of six) : (4×5=20)
- a) Renal function tests
 - b) Nephron.
 - c) Muscle fatigue.
 - d) Dead space.
 - e) Surfactant.
 - f) Structure of skin.

4. Long answer question (**any two** out of four) : (2×10=20)
- a) Describe ABO blood group system.
 - b) Describe mechanism of regulation heart rate.
 - c) What is hypoxia? Describe causes, effects and treatment of hypoxia.
 - d) What is normal body temperature ? How is it regulated ?

Long answer question (**any one** from Q. No. 5, 6 and 7)

5. Long answer question : (1×20=20)
Explain the mechanism of blood coagulation.
6. Long answer question : (1×20=20)
Describe the nervous and chemical regulation of respiration.
7. Long answer question : (1×20=20)
Describe the mechanism of micturition. Add a note on applied physiology of micturition.
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First B.H.M.S. (2015)/(New) Examination, Winter 2018
PHYSIOLOGY INCLUDING BIOCHEMISTRY – II

Total Duration : 3 Hours

Total Marks : 100

- Instructions :**
- 1) Use **blue/black** ball point pen **only**.
 - 2) **Do not** write anything on the **blank portion of the question paper**. If written anything, such type of act will be considered as an attempt to resort to unfair means.
 - 3) **All** questions are **compulsory**.
 - 4) The number to the **right** indicates **full** marks.
 - 5) Draw diagrams **wherever** necessary.
 - 6) Distribution of syllabus in Question Paper is only meant to cover entire syllabus within the stipulated frame. The Question paper pattern is a mere guideline. Questions can be asked from any paper's syllabus into any question paper. Students cannot claim that the Question is out of syllabus. As it is only for the placement sake, the distribution has been done.

1. Write short answer (**any ten** out of fifteen) : (10×2=20)
- a) Write hormones secreted by posterior pituitary gland.
 - b) What is gigantism ?
 - c) What are functions of parathyroid hormones ?
 - d) What is dysphagia? Write any two causes of dysphagia.
 - e) What is digestion ?
 - f) Write protein digesting enzymes in pancreatic juice.
 - g) What is peristalsis ?
 - h) Write functions of oxytocin.
 - i) What is fertilization ?
 - j) What is menopause ?
 - k) Write functions of progesterone.
 - l) Write sources of vitamin C.
 - m) Write sources of vitamin A.
 - n) What are functions of vitamin K ?
 - o) What are signs of vitamin E deficiency ?

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2. Write short answer (**any four** out of six) : (4×5=20)
- a) Hypothyroidism
 - b) Adrenogenital syndrome
 - c) Functions of gastric juice
 - d) Digestion and absorption of fats
 - e) Glycolysis
 - f) Classification of proteins.
3. Write short answer (**any four** out of six) : (4×5=20)
- a) Vitamin D
 - b) Vitamin B12
 - c) Ovulation
 - d) Composition of semen
 - e) Minerals in diet
 - f) Basal metabolic rate.
4. Long answer question (**any two** out of four) : (2×10=20)
- a) Discuss the functions of ADH in detail. Add a note on diabetes insipidus.
 - b) Discuss mechanism of deglutition.
 - c) Describe endometrial cycle along with its phases and regulation.
 - d) Describe formation, circulation, and functions of cerebro-spinal fluid.
- Long answer question (**any one** from Q. No. 5, 6 and 7)
5. Long answer question : (1×20=20)
- Describe the mechanism of regulation of blood glucose in detail.
6. Long answer question : (1×20=20)
- Describe the glands, mechanism of secretion, composition and functions of saliva.
7. Long answer question : (1×20=20)
- Describe the taste buds and sensation of taste in detail.