

SV 502]

April-1998

Sub. Code : 4002

**FIRST M.B.B.S. DEGREE EXAMINATION**

(Non-Semester)

(Revised Regulations)

**Paper III - PHYSIOLOGY INCLUDING BIO-PHYSICS - I**

Time : Three hours

Maximum : 50 marks

Two and a half hours  
for Section A

Section A : 35 marks

Section C : 15 marks

Separate answer books must be used for Sec.A and B

Section C must be answered separately on the answer sheet  
provided as per instructions on the first page

Answer ALL the questions

**SECTION A**

1. What are the hormones secreted by the thyroid gland. Describe the synthesis and actions of thyroid hormones. Discuss briefly the hyper function of thyroid gland. (3 + 4 + 3 = 10)

2. Write short notes on: (10 x 2½ = 25)

- (a) Classify the anticoagulants and discuss their mode of action
- (b) Methods used to measure the blood volume
- (c) Functional types of lymphocytes and its function
- (d) Pituitary dwarfism
- (e) Renal function tests
- (f) Tests for pregnancy
- (g) Hormones acting on the nephron and their actions
- (h) Hypothalamic control of pituitary gland
- (i) Functions of bile salt
- (j) Mechanism of action of gastrin

**NOVEMBER '98**

**SM 502]**

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**(Revised Regulations)**

**Paper III - PHYSIOLOGY INCLUDING BIO-PHYSICS - I**

**Time : Three hours**

**Maximum : 50 marks**

**Two and a half hours  
for Sections A and B**

**Sections A and B : 35 marks**

**Section C : 15 marks**

**Section C must be answered separately on the answer sheet  
provided as per instructions on the first page.**

**Answer ALL the questions**

**Draw suitable diagrams wherever necessary**

**SECTION A**

**1. Describe the functions of plasma albumin and plasma globulin. Give the  
causes and consequences of low plasma albumin levels. (10)**

**2. Write briefly on: (10 x 2½ = 25)**

- (a) Cretinism**
- (b) Hormones involved in menstrual cycle and their in the different  
events of cycle**
- (c) Tests of fertility in male**
- (d) Sequence of events of neuromuscular transmission**
- (e) Difference in the function and properties of skeletal and smooth  
muscle**
- (f) Brief account of Juxta glomerular apparatus**
- (g) Functions of placenta**
- (h) Name the bile salts and explain briefly its enterohepatic circulation**
- (i) Functions of platelets and test to diagnose the platelet disorders**
- (j) Function of cortisol in stress and inflammation**

April-1999

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Paper III — PHYSIOLOGY INCLUDING  
BIO-PHYSICS — I

Time : Three hours                      Maximum : 50 marks

Two and a half hours                      Section A : 35 marks

for Section A                                      Section C : 15 marks

Section C must be answered separately on the answer  
sheet provided.

Answer ALL questions.

Draw suitable diagrams wherever necessary.

SECTION A — (35 marks)

1. Describe Erythropoiesis with the help of a flow  
chart.

Discuss

(a) Regulation of normal erythropoiesis

(b) Altered erythropoiesis.                      (5 + 3 + 2 = 10)

Write briefly on :                                      (10 × 2½ = 25)

(a) Current concepts in Immune mechanisms

(b) Components and functional significance of  
Sarco tubular system in skeletal muscle

(c) Functions of Neuroglia

(d) Peculiar features of Renal circulation

(e) Composition and functions of saliva

(f) Feto-placental unit and its importance

(g) Enumerate three important thyroid function  
tests and their significance

(h) Functions of large intestine

(i) Diuretics and their actions

(j) Regulation of Extracellular fluid volume.

October-1999

[KA 502]

Sub. Code : 4002

FIRST M.B.B.S. DEGREE EXAMINATION.

(Non-Semester)

(Revised Regulations)

Paper III — PHYSIOLOGY INCLUDING  
BIO-PHYSICS — I

Time : Three hours                      Maximum : 50 marks  
Two and a half hours                      Section A : 35 marks  
for Section A                              Section C : 15 marks

Section C must be answered separately on the answer sheet provided.

Answer ALL questions.

Draw suitable diagrams wherever necessary.

SECTION A — (35 marks)

1. Mention the various phases of menstrual cycle. Correlate changes in the Ovary with changes in the Endometrium of the Uterus during a menstrual cycle.  
(1 + 3 + 6 = 10)
2. Write briefly on :                      (10 × 2½ = 25)
  - (a) Functions of plasma protein
  - (b) Erythroblastosis Fetalis
  - (c) Mechanisms of fatigue in skeletal muscle
  - (d) Morphology and functions of platelet

- (e) Pharyngeal stage of deglutition
- (f) Water reabsorption in the renal tubule
- (g) Functions of cortisol
- (h) Castration and its effect before and after puberty
- (i) What is meant by the term 'tetany'? List the features of tetany.
- (j) Composition and functions of bile.

April-2000

[KB 502]

Sub. Code : 4002

FIRST M.B.B.S. DEGREE EXAMINATION.

(Non-Semester)

(Revised Regulations)

Paper III — PHYSIOLOGY INCLUDING  
BIO-PHYSICS — I

Time : Three hours

Maximum : 50 marks

Two and a half hours

Section A : 35 marks

for Section A

Section C : 15 marks

Section C must be answered separately on the answer  
sheet provided.

Answer ALL questions.

Draw suitable diagrams wherever necessary.

### SECTION A

1. What are the sites of Red Blood Cell formation in  
20 year old person? Describe the various stages of  
Erythropoiesis. (10)

2. Write briefly on : (10 × 2½ = 25)

(a) Refractory Period.

(b) Anticoagulants.

(c) Smooth Muscle.

(d) Neuromuscular Junction.

(e) Peristalsis.

(f) Dietary Fiber.

(g) Counter Current Exchangers.

(h) Cystometrogram.

(i) Pregnancy Tests.

(j) Semen Analysis.

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Sub. Code : 4053

SECTION B

FIRST M.B.B.S. DEGREE EXAMINATION.

(Non-Semester)

(Revised Regulations)

Paper III — PHYSIOLOGY INCLUDING  
BIO-PHYSICS — I

Time : Three hours                      Maximum : 100 marks  
Two and a half hours                  A & Sec. B : 70 marks  
for Sec. A & Sec. B                      Section C : 30 marks

Separate answer books must be used  
for Sections A and B.

Section C must be answered separately on the answer  
sheet provided as per the instructions on the first page.

Answer ALL questions.

Draw diagrams wherever necessary.

SECTION A

1. Name the hormones concerned with the calcium metabolism. Describe their synthesis and functions. Add a note on the clinical manifestations of hyposecretion of them. (15)
2. Write short notes on : (4 × 5 = 20)
  - (a) Describe the biosynthesis, secretion and actions of Testosterone
  - (b) Give an account of the cephalic phase of gastric juice secretion with the experimental evidence
  - (c) Give an account of the Renal function tests
  - (d) Draw and name the parts of neuromuscular junction. Describe the chemical and electrical changes during transmission of an impulse at this junction.

3. Describe the structure, synthesis and functions of platelets. Add a note on Fibrinolysin system in the blood. (15)

4. Write short notes on : (4 × 5 = 20)

- (a) Active transport
- (b) Measurement of extracellular body fluid
- (c) Functions of skin
- (d) Human chorionic gonadotropic hormone.

[KC 502]

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(Non-Semester)

(Revised Regulations)

Paper III — PHYSIOLOGY INCLUDING  
BIO-PHYSICS — I

Time : Three hours

Maximum : 50 marks

Two and a half hours

Section A : 35 marks

for Section A

Section C : 15 marks

Section C must be answered separately on the answer sheet provided as per the instructions on the first page.

SECTION A

1. What is the normal blood calcium level? Describe how blood calcium level is regulated. Add a note on Tetany. (1 + 6 + 3 = 10)

2. Write briefly on : (10 × 2½ = 25)

- (a) Smooth muscle
- (b) Entero-hepatic circulation of Bile Salts
- (c) Cystometrogram
- (d) Limiting pH
- (e) Myoenteric reflex
- (f) Hazards of Blood transfusion

(g) Monocyte-macrophage system

(h) ECF compartment

(i) Immunological Test of pregnancy

(j) Functions of Testosterone.