

[LE 0414]

APRIL 2014

Sub. Code: 2001

**FELLOWSHIP IN CLINICAL DIABETOLOGY**  
**FINAL YEAR**  
**(Candidates admitted 2012-213)**  
**PAPER I - BASIC SCIENCE AND LABORATORY IN DIABETES**

***Q.P. Code :232001***

**Time : 3 hours**

**Maximum : 100 marks**

**Answer All Questions**

**I. Elaborate on :**

**(2 X 20=40)**

1. Mention about different pathogenic mechanisms of Diabetic Complication.
2. Mention about Insulin structure, Biosynthesis and secretion.

**II. Write Short Notes on:**

**(10 X 6 = 60)**

1. Islet cell Antibody
2. Plasma Glucose Estimation
3. Ketone Bodies
4. Fructosamine
5. Pathogenesis of PCOS
6. Anatomy of Islet cells
7. Insulin Receptor
8. Micro-Albumin
9. Glycaemic Index
10. Inflammatory Markers

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[LF 1014]

OCTOBER 2014

Sub. Code: 2001

**FELLOWSHIP IN CLINICAL DIABETOLOGY EXAMS  
FINAL YEAR  
(Candidates admitted 2012-2013)  
PAPER I - BASIC SCIENCE AND LABORATORY IN DIABETES**

***Q.P. Code : 232001***

**Time : Three hours**

**Maximum : 100 marks**

**I. Elaborate on :** **(2 x 20=40)**

1. Describe the components of Islets of Langerhans with its organizational structure.
2. Discuss the phases of glucose homeostasis and its metabolism in the fed state and starvation.

**II. Write notes on:** **(10 x 6 = 60)**

1. Leptin in Diabetes
2. OGTT
3. Lipotoxicity
4. Genetics of MODY
5. IGF Receptors
6. Insulin structure
7. Rothera's Test for ketones
8. SMBG
9. Advanced glycation end products
10. Kimmelstiel-Wilson lesion

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**[LG 0415]**

**APRIL 2015**

**Sub. Code: 2001**

**FELLOWSHIP IN CLINICAL DIABETOLOGY EXAMS  
FINAL YEAR  
(Candidates admitted 2012-2013)  
PAPER I - BASIC SCIENCE AND LABORATORY IN DIABETES**

***Q.P. Code : 232001***

**Time : Three hours**

**Maximum : 100 marks**

**I. Elaborate on :**

**(2 x 20=40)**

1. Describe the Kreb's citric acid cycle with a note on its regulation.
2. Discuss the pathophysiology of Type two Diabetes and describe the factors regulating insulin resistance.

**II. Write notes on:**

**(10 x 6 = 60)**

1. Insulinitis
2. Autoantibodies in diabetes
3. Adiponectin
4. IGF
5. Entero-insular axis
6. Glucotoxicity
7. Islets of Langerhans
8. Exocrine pancreatic function tests
9. Benedicts test for glucose
10. C-Peptide

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**[LI 0416]**

**APRIL 2016**

**Sub. Code: 2001**

**FELLOWSHIP IN CLINICAL DIABETOLOGY EXAMS  
FINAL YEAR  
PAPER I - BASIC SCIENCES AND LABORATORY IN DIABETES**

***Q.P. Code : 232001***

**Time : Three hours**

**Maximum : 100 Marks**

**I. Elaborate on :** **(2 x 20=40)**

1. Discuss the regulation of glucose metabolism in the Liver and briefly mention the drugs which act on it.
2. Discuss the organizational structure of Islet Beta Cells and their functional significance.

**II. Write notes on:** **(10 x 6 = 60)**

1. Glucagon
2. Lipoprotein (a)
3. Prevalence of Type 1 Diabetes
4. Leptin
5. Insulin receptors
6. Kimmelstein Wilson nodules
7. Islet Amyloid Polypeptide
8. First phase Insulin release
9. Crinophagy
10. Malignant Otitis externa

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[LK 0517]

MAY 2017

Sub. Code: 2001

**FELLOWSHIP IN CLINICAL DIABETOLOGY EXAMS  
FINAL YEAR  
PAPER I – BASIC SCIENCES AND LABORATORY IN DIABETES**

***Q.P. Code : 232001***

**Time : Three hours**

**Maximum : 100 Marks**

**I. Elaborate on:** **(2 x 20 = 40)**

1. Mention about pathogenesis of ketogenesis and discuss about various acid base and electrolyte disturbances in a patient with DKA.
2. Discuss in detail about absorption of carbohydrates and Glucose Homeostasis.

**II. Write notes on:** **(10 x 6 = 60)**

1. C-Peptide.
2. Reverse cholesterol transport.
3. Glycogen.
4. IGF (Insulin like Growth Factor).
5. Oral glucose tolerance test.
6. LADA (Latent Auto Immune Diabetes).
7. Counter regulatory hormones.
8. Animal models for Type-2 Diabetes
9. Incretin hormones.
10. Viruses and Type-1 Diabetes.

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[LL 1017]

**OCTOBER 2017**

**Sub. Code: 2001**

**FELLOWSHIP IN CLINICAL DIABETOLOGY EXAMS  
FINAL EXAMS  
PAPER I – BASIC SCIENCES AND LABORATORY IN DIABETES**

***Q.P. Code : 232001***

**Time : Three hours**

**Maximum : 100 Marks**

**I. Elaborate on:** **(2 x 20 = 40)**

1. Describe the pathogenesis and diagnosis of Diabetic Keto Acidosis (DKA).
2. Describe the lipid abnormalities in patients with diabetes and its management.

**II. Write notes on:** **(10 x 6 = 60)**

1. Lifestyle modification.
2. Role of exercise in management of type 2 Diabetes.
3. C Peptide.
4. Microalbuminuria.
5. Conditions which influences HbA<sub>1</sub>C.
6. Lab tests for insulin resistance.
7. Diagnosis of NASH by lab tests.
8. Lab diagnosis of acute coronary syndrome.
9. Lab tests for a patient with Diabetes who presents with fever.
10. Role of alpha cell of Pancreas.

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[LN 1018]

OCTOBER 2018

Sub. Code: 2001

**FELLOWSHIP IN CLINICAL DIABETOLOGY EXAMS  
FINAL YEAR  
PAPER I – BASIC SCIENCES AND LABORATORY IN DIABETES**

***Q.P. Code : 232001***

**Time : Three hours**

**Maximum : 100 Marks**

**I. Elaborate on:** **(2 x 20 = 40)**

1. Discuss in detail about different pathogenic mechanisms of diabetic microvascular complications.
2. Discuss in detail about immuno-pathogenesis of type 1 diabetes and prevention strategies of type 1 diabetes.

**II. Write notes on:** **(10 x 6 = 60)**

1. Beta cell autoimmunity.
2. HOMA scores.
3. Neuropeptide Y.
4. GLUT Receptors.
5. Gluconeogenesis.
6. Lipotoxicity.
7. OSA and Glucose metabolism.
8. Ketone bodies.
9. Glycaemic Index.
10. Leprechaunism.

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[LO 0519]

**MAY 2019**

**Sub. Code: 2001**

**FELLOWSHIP IN CLINICAL DIABETOLOGY EXAMS  
FINAL YEAR  
PAPER I – BASIC SCIENCES AND LABORATORY IN DIABETES**

***Q.P. Code : 232001***

**Time : Three hours**

**Maximum : 100 Marks**

**I. Elaborate on:** **(2 x 20 = 40)**

1. Explain the etiopathogenesis of Ketone bodies production and their implication in blood. Write in detail on the diagnosis and management of Diabetic Ketoacidosis.
2. Discuss in detail the physiological response to hypoglycemia in normal persons and in patients with diabetes. Add a note on classification and management of hypoglycaemia.

**II. Write notes on:** **(10 x 6 = 60)**

1. Molecular basis of insulin resistance and measurements of Insulin resistance.
2. Blood supply to pancreas.
3. Insulin Tolerance Test.
4. Genetic beta-cell defects.
5. Inflammatory Markers.
6. Anatomy of islets of langerhans.
7. Non glucose lowering properties of Insulin.
8. Incretin effect.
9. Informed consenting process in clinical trials.
10. Screening for diabetes.

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