Question Paper

Exam Date & Time: 01-Jun-2024 (10:00 AM - 01:00 PM)

MANIPAL ACADEMY OF HIGHER EDUCATION

FOURTH SEMESTER B.Sc. MLT DEGREE EXAMINATION - MAY/JUNE 2024
SUBJECT: MLT2201 - HEMATOLOGICAL DISORDER
(2020 SCHEME)

Marks: 100 **Duration: 180 mins.**

Answer all the questions.

Draw diagrams wherever necessary.

1)	Define and classify anemia based on morphology. Explain the causes for megaloblastic anemia. Discuss clinical symptoms and lab diagnosis of anemia due to B12 deficiency. (2+6+5+2+5 = 20 marks)	(20)
2)	Define qualitative and quantitative leucocyte disorders with examples. Discuss clinical symptoms and lab diagnosis of acute myelogenous leukemia (AML). (6+2+12 = 20 marks)	(20)
3)	Discuss aetiology and lab diagnosis of iron deficiency anemia.	(10)
4)	Explain in detail the intrinsic and extrinsic pathways of coagulation. Explain the principle of Fibrinogen test.	(10)
5A)	Explain lab diagnosis of paroxysmal nocturnal hemoglobinuria (PNH).	(5)
5B)	Enumerate the test for sickle cell anemia. Explain screening test using reducing agent.	(5)
5C)	Compare and contrast differential diagnosis of leukemoid reaction and CML.	(5)
5D)	Name the Myeloproliferative neoplasm. Explain principle and interpretation of LAP score.	(5)
5E)	Explain clot solubility test and discuss on factor XIII deficiency.	(5)
5F)	Discuss lab diagnosis of Disseminated intravascular coagulation (DIC).	(5)
6A)	Name tests used to confirm spherocytes. Name the anemia where we find increased MCHC.	(2)
6B)	Name four agonist used in platelet aggregation.	(2)
6C)	Write any two lab diagnosis of polycythaemia vera.	(2)
6D)	Bleeding time normal and clotting time prolonged, PT normal, APTT prolonged, TT normal and platelet count normal. Identify the condition and name the confirmatory test to this condition.	(2)
6E)	Name any two specific lab diagnosis to identify Haemophilia B.	(2)

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Question Paper

Exam Date & Time: 05-Jun-2024 (10:00 AM - 01:00 PM)

MANIPAL ACADEMY OF HIGHER EDUCATION

FOURTH SEMESTER B.Sc. MLT DEGREE EXAMINATION - MAY/JUNE 2024
SUBJECT: MLT2202 - APPLIED BIOCHEMISTRY-II
(2020 SCHEME)

Marks: 100 **Duration: 180 mins.**

Answer all the questions.

1)	Explain in detail FSH, LH & TSH hormones with its structure, function, regulation and pathophysiology	(20)
2)	Discuss Bilirubin formation & metabolism. Explain Vandenberg reaction and bile pigment test.	(20)
3)	Explain method of estimation, principle, normal range and clinical significance Creatinine	(10)
4)	Explain the mechanism of blood pH regulation by blood buffers	(10)
5A)	Explain inulin clearance test with interpretation	(5)
5B)	Explain tumour markers for hepatocellular carcinoma	(5)
5C)	Explain the biochemical role, normal values and clinical significance of chloride	(5)
5D)	Explain PTH hormones with its regulation	(5)
5E)	Explain water intoxication	(5)
5F)	List the functions of Liver. Explain any 1 liver enzymes.	(5)
6A)	Define uraemia	(2)
6B)	List the applications of tumour marker	(2)
6C)	Define metabolic alkalosis	(2)
6D)	Define proteinuria	(2)
6E)	Define Respiratory Acidosis	(2)

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Question Paper

Exam Date & Time: 03-Jun-2024 (10:00 AM - 12:00 PM)

MANIPAL ACADEMY OF HIGHER EDUCATION

FOURTH SEMESTER B.Sc. MLT DEGREE EXAMINATION - MAY/JUNE 2024
SUBJECT: MLT2241 - PROGRAM ELECTIVE - I: METABOLIC DISORDER
(2020 SCHEME)

Marks: 50 **Duration: 120 mins.**

Answer all the questions.

1)	Explain conditions leading to ketoacidosis and its management.	(10)
2)	Explain on metabolic derangements and adaptations in diabetes mellitus.	(10)
3A)	Explain the management of lipoprotein disorders	(5)
3B)	Explain various types of tyrosinaemias	(5)
3C)	Explain inborn errors of bilirubin metabolism	(5)
3D)	Explain the formation and transport of ammonia	(5)
4A)	Outline the diagnosis of homocystinuria	(2)
4B)	Explain two clinical disorders of purine metabolism	(2)
4C)	Outline identification of ketone bodies in urine	(2)
4D)	Define and classify gout	(2)
4E)	Explain alkaptonuria	(2)

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Question Paper

Exam Date & Time: 03-Jun-2024 (10:00 AM - 12:00 PM)

MANIPAL ACADEMY OF HIGHER EDUCATION

FOURTH SEMESTER B.Sc. MLT DEGREE EXAMINATION - MAY/JUNE 2024
SUBJECT: MLT2242 - PROGRAM ELECTIVE - I : NUTRITION AND HEALTH
(2020 SCHEME)

Marks: 50 **Duration: 120 mins.**

Answer all the questions.

1)	Explain nutritional requirements in bodybuilders.	(10)
2)	Explain the clinical manifestations and laboratory diagnosis of vitamin A deficiency.	(10)
3A)	Explain the relationship between maternal diet and birth outcome.	(5)
3B)	Explain zinc toxicity and its laboratory diagnostic tests.	(5)
3C)	Explain about white blood cells in the diagnosis of nutritional disorders.	(5)
3D)	Explain the national preventive strategy for iodine deficiency disorders.	(5)
4A)	Define basal metabolic rate	(2)
4B)	List any two factors affecting BMR	(2)
4C)	Define Kwashiorkor.	(2)
4D)	List immunization services of national nutritional programs.	(2)
4E)	Define obesity	(2)

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