

St. Philomena's College (Autonomous), Mysore			
PG Department of Biochemistry			
Question Bank (Revised Curriculum 2018 onwards)			
Second Year- Third Semester (2019-21 Batch)			
Course Title (Paper Title): Clinical Biochemistry(SC) QP Code -54204			
Sl. No	Unit	Questions	Marks
1	1	Write the composition of blood.	2
2	1	Distinguish between serum and plasma.	2
3	1	Define Health and Disease.	2
4	1	Mention the important functions of plasma proteins.	2
5	1	Distinguish between Blood, serum and plasma.	2
6	1	What are plasma proteins? Give an example.	2
7	1	What are the functions of Albumin?	2
8	1	How serum differs from Plasma?	2
9	1	Enlist the major functions of Platelets.	2
10	1	What is cell death?	2
11	1	How apoptosis differs from that of Necrosis?	2
12	2	How gall stone are formed? How they differ from renal stones.	2
13	2	What is fatty liver? How is it caused?	2
14	2	What is liver Cirrhosis?	2
15	2	What are mineralcorticoids? Give an example.	2
16	2	What is Jaundice? What causes it?	2
17	2	Mention the importance of isoenzymes in clinical diagnosis.	2

18	2	Name any two isoenzymic forms of LDH with clinical significance.	2
19	2	Mention the clinical symptoms seen in Hashimoto's Disease.	2
20	2	What are gall stones? How are they formed?	2
21	2	Mention the functioning of Hypothalamus-Pituitary-Adrenal axis.	2
22	2	Give the symptoms and therapy for hypothyroidism.	2
23	2	Mention the symptoms and therapy for hyperthyroidism.	2
24	2	Distinguish between Acromegaly and Gigantism.	2
25	2	What is Alcoholic fatty liver?	2
26	3	What is steatorrhea? How it differs from Diarrhea.	2
27	3	Enlist the causes for gastric ulcer.	2
28	3	Define GFR	2
29	3	Define Glomerular Filtration Rate.	2
30	3	What is stimulation test? Give its significance.	2
31	3	Name the different types of peptic ulcers.	2
32	3	What is Diarrhea? How it is different from Stearrhea?	2
33	3	Mention the causes and symptoms of Steatorrhea.	2
34	4	What is lactose intolerance? How to overcome it	2
35	4	What is petosuria? How to overcome it.	2
36	4	What is the molecular defect seen in Lysch-Nyhan disease?	2
37	4	What are advanced glycation end products? Mention their significance.	2
38	4	What is the molecular defect seen in alkaptonuria?	2

39	4	What is the molecular defect seen in Phenylketonuria?	2
40	4	What is glycated hemoglobin? How it is used in diagnosis of DM.	2
41	4	What causes Gout? How do you diagnose it.	2
42	4	List the genetic defects seen in patients suffering from lactose intolerance.	2
43	4	list the clinical manifestations seen in Phenylketonuria.	2
44	4	What are the similarities between Lesch-Nyman syndrome and Gout?	2
45	5	What is the molecular defect seen in Niemann-pick disease?	2
46	5	What are foam cells? How are they made?	2
47	5	Enlist the causes for Fabry's Disease.	2
48	5	Mention the clinical symptoms seen in Tay-Sach's Disease.	2
49	5	Mention the etiology and symptoms of Tay-Sach's Disease.	2
50	5	Differentiate between LDL and Ox-LDL.	2
51	5	Define Atherosclerosis.	2
52	6	Define Cellular Senescence.	2
53	6	What are oncogenes? Give an example.	2
54	6	Define cellular senescence.	2
55	6	Distinguish between oncogenes and carcinogens.	2
1	1	Explain the function of plasma proteins.	5
2	1	How anemia is classified? Explain.	5
3	1	How are clinical enzymes useful in diagnosis of diseases? Explain with examples.	5

4	1	Explain the physiological causes responsible for cell death.	5
5	1	Give an account on different types of anemias.	5
6	1	How different clinically significant enzymes are used in diagnosis of AMI?	5
7	1	How different serum enzymes are used in diagnosis of Myocardial Infarction?	5
8	1	Explain the normal and pathological changes affecting cells in the body.	5
9	1	What is Anemia? Explain the types of Anemia.	5
10	1	How Clinical enzymes are useful in diagnosis of diseases? Explain in detail.	5
11	1	Explain Anemia's.	5
12	1	How electrophoresis is used for classifying the hemoglobin disorders?	5
13	2	Choose an endocrine disorder of your choice, explain the molecular defect associated with it and how it diagnosed in clinical laboratory.	5
14	2	Give the symptoms, molecular defects and treatment options for the following metabolic disease: Gout and Goiter	5
15	2	Write an explanatory note on hypo and hyper secretion of hormones.	5
16	2	Which are the tests to be done to assess the proper functioning of liver? Describe in detail.	5
17	2	Explain the formation of Bilirubin.	5
18	2	Write short note on Grave's Disease.	5
19	2	Choose an endocrine disorder related to pituitary gland; Explain the molecular defect associated with it and how it diagnosed in clinical laboratory.	5

20	2	Explain the causes, defects and diagnosis of any one disorder of your choice related to thyroid gland.	5
21	2	Explain the causes, defects and diagnosis of any one disorder of your choice related to pituitary gland.	5
22	2	Explain the causes, defects and diagnosis of any one disorder of your choice related to Adrenal Gland.	5
23	2	Give an account on hypo and hyper secretion of hormones with suitable example.	5
24	2	What are bile pigments? Explain the formation of Bilirubin.	5
25	2	Write short note on Jaundice.	5
26	2	How Bilirubin is an excellent diagnostic tool for monitoring liver function?	5
27	2	Explain how hypo and hyper secretion of growth hormone affect the system? How are they diagnosed?	5
28	2	Explain Thyroid disorders	5
29	3	How renal functions are assessed in clinical laboratory?	5
30	3	Which are the tests to be done to assess the proper functioning of Kidney? Describe in detail.	5
31	3	How renal function can be assessed in clinical laboratory?	5
32	3	Write short note on fractional gastric analysis and give its significance.	5
33	3	Write short note on Malabsorption syndrome.	5
34	3	What are kidney clearance tests? How are they used as diagnostic tools?	5
35	3	List the differences and similarities between hypo and hyper secretion acidity. How do they affect Malabsorption syndrome.	5

36	3	Explain kidney stone formation. How are they different from gall stones?	5
37	4	Give the classification, etiology, clinical manifestation and treatment of Diabetes Mellitus.	5
38	4	Give an account on Glycogen storage diseases.	5
39	4	Give the symptoms, molecular defects and treatment options for the following metabolic disease: Phenylketonuria and Cystic Fibrosis	5
40	4	Give the symptoms, molecular defects and treatment options for the following metabolic disease: Lactate intolerance and Petosuria.	5
41	4	Describe the Glycogen Storage Diseases.	5
42	4	Discuss on different types of Glycogen Storage Diseases.	5
43	4	Discuss on examination of Amniotic Fluid.	5
44	4	Mention the disorders of carbohydrate metabolism and explain.	5
45	4	Explain different types of Glycogen Storage Diseases.	5
46	4	Give the classification, etiology, clinical manifestation and management of Diabetes mellitus.	5
47	4	Explain Amniocentesis.	5
48	4	Give an account on congenital errors of carbohydrate metabolism.	5
49	4	Give an account on congenital errors of Nucleic acid metabolism.	5
50	4	Give an account on congenital errors of Amino acid metabolism.	5
51	4	Explain congenital errors of carbohydrate metabolism with an suitable example.	5
52	4	Explain congenital errors of Nucleic acid metabolism with an suitable example.	5
53	4	Explain congenital errors of Amino acid metabolism with an suitable	5

		example.	
54	4	Briefly explain the general physiological markers and phenotypes for and classify Diabetes. Mention the treatment plan for each class.	5
55	5	Give the classification and major functions of lipoprotein. Add a note on reverse cholesterol transport.	5
56	5	Enlist the risk factors contributing to the pathogenesis of cardiovascular diseases.	5
57	5	Describe Niemann-pick disease.	5
58	5	Explain the prognosis and risk factors of Atherosclerosis.	5
59	5	Give an account on Lipoproteinemias.	5
60	5	Explain different types of Lipoproteinemias. Add a note on Atherosclerosis.	5
61	5	Explain Tay-Sach's Disease.	5
62	5	Write a brief note on causes and treatment for cardiovascular diseases.	5
63	6	How are xenobiotics detoxified?	5
64	6	Explain the mechanism of oncogenesis.	5
65	6	Write a note on mechanism of detoxification of Xenobiotics.	5
66	6	Explain etiology and diagnosis of cancer.	5
67	6	Write short note on Diagnosis and etiology of cancer.	5
68	6	What are proto-oncogenes? Explain the mechanism of oncogenesis.	5
69	6	Explain the phases of Cancer development. Describe briefly the types of cancer based on origin.	5

Question Paper Pattern- Model Question Paper

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St. Philomena's College (Autonomous) Mysore
III Semester M.Sc. Make-up Examination July - 2019

Subject: BIOCHEMISTRY

Title: Clinical Biochemistry (HC)

Time: 3 Hours

Max Marks: 70

PART –A

Answer any TEN the following Questions:

10×2=20

- a. Define health and disease.
- b. Mention the important functions of plasma proteins.
- c. What are mineral corticoids? Give an example.
- d. Define GFR.
- e. What is glycated hemoglobin? How it is used in diagnosis of Diabetes Mellitus.
- f. Write about the stimulation test used in gastric function test.
- g. What are oncogenes? Give an example.
- h. What causes gout? How do you diagnose it.
- i. What is Jaundice? What causes it?
- j. Explain the genetic defects seen in patient's sufferings from lactose intolerance.
- k. Mention the importance of isoenzymes in clinical biochemistry.
- l. Distinguish between serum, plasma and blood.

PART –B

Answer any FIVE of the following Questions:

5×10=50

- a. Explain the physiological causes responsible for cell death.
- b. Give an account on different types of anemias.
- a. How different clinically significant enzymes are used in diagnosis of Myocardial infraction.
- b. Write an explanatory note on hypo and hyper secretion of hormones.

PTO

4.
 - a. Which are the tests to be done to assess the proper functioning of liver? Describe in detail.
 - b. Explain the laboratory investigations of kidney disorders.
5.
 - a. Describe the glycogen storage diseases.
 - b. Discuss on examination of amniotic fluid.
6.
 - a. Describe Nieman – pick disease.
 - b. Mention the disorders of carbohydrate metabolism and explain.
7.
 - a.. Explain the prognosis and risk factors of Atherosclerosis.
 - b. Write a note on mechanism of detoxification of xenobiotics.
8. **Answer ANY TWO of the following:**
 - a. Etiology and diagnosis of cancer
 - b. Grave's disease
 - c. Formation of Bilirubin
 - d. Lipoproteinemias
