PARUL UNIVERSITY

PARUL INSTITUTE OF APPLIED SCIENCES

MID SEMESTER INTERNAL EXAMINATION, MARCH 2020

B. Sc. Semester IV

Subject: Biotechnology

Paper Code: 11201255 **Title of the paper: Immunology II**

Date: 06 /03 /2020 **Time: 12:00 p.m – 1:30 p.m.**

Maximum Marks: 40

Instructions:

1. **All questions are compulsory and options are given in first and second question only.**
2. **Numbers to the right of question indicate the marks of respective question.**

Q. 1	Attempt any one question of the following. (i)Explain Paul and Richet reaction with its components, process and pharmacological mediators. (ii) Describe the classical pathway for activation of complement system.	**(08)**
Q. 2	Attempt any three questions of the following. (i) Explain the experiment which revealed the structure of Antibody. (ii) Discuss the structure of IgM. (iii) Write a note on Rheumatoid Arthritis. (iv) Describe the process of immunoblotting. (v) State difference between primary and secondary response.	**(12)**
Q. 3	Do as directed. Attempt all five questions. (i) Define allotypic (ii) Mention the principle of RIA. (iii) Name some enzymes used in ELISA (iv) List out different components used in fluorescence activated cell sorter. (v) State two functions of IgG	**(05)**
Q. 4	Write correct option in your answer sheet for following 15 multiple choice questions.	**(15)**

MCQ 1	_____antibody works best at room temperature.			
	(A)	IgM	(B)	IgA
	(C)	IgG	(D)	IgD
MCQ 2	Maximum precipitation is seen in _____Zone.			
	(A)	Prozone	(B)	Antibody
	(C)	Equivalence	(D)	Antigen
MCQ 3	The autoimmunity thyroid disorder with a presence of anti-TSH receptor antibody is suggestive of_____.			
	(A)	SLE	(B)	Gravis disease
	(C)	Graves disease	(D)	Multiple sclerosis
MCQ 4	Type III hypersensitivity reaction recruit _____ at inflammation site			
	(A)	Neutrophils	(B)	Macrophages
	(C)	Both A and B	(D)	None of them
MCQ 5	Which of the following disease occurred due to antibody mediated cytotoxic hypersensitivity?			
	(A)	Transfusion reaction	(B)	Drug indused hemolytic anemia

	(C)	Hemolytic disease in new born	(D)	All of the above
MCQ 6	_____ mechanism is/are responsible for prozone effect.			
	(A)	High concentration of antibodies	(B)	High concentration of antigen
	(C)	Incomplete antibodies	(D)	Both A and C
MCQ 7	Detector in FACS measure_____.			
	(A)	Intensity	(B)	Frequency
	(C)	Both A and B	(D)	None of the above
MCQ 8	Which of these is an autoimmune disease?			
	(A)	Type I diabetes	(B)	Rheumatoid arthritis
	(C)	AIDS	(D)	All of the above
MCQ 9	Allergy to penicillin is an example of_____hypersensitivity.			
	(A)	Type I	(B)	Type III
	(C)	Type II	(D)	Type IV
MCQ 10	A technique in which an antigen mixture is first separated into its component parts by electerophoresis and then tested by double immunodiffusion.			
	(A)	Rocket eclecterophoreis	(B)	Immunoelecterophoresis
	(C)	Both a and b	(D)	None of them
MCQ 11	What antibodies is radial Immunodiffusion used to measure?			
	(A)	Ig M	(B)	Ig A
	(C)	Ig G	(D)	All of the above
MCQ 12	_____Antibody can cross the placenta.			
	(A)	Ig G	(B)	Ig A
	(C)	Ig M	(D)	Ig D
MCQ 13	Light chains and heavy chains are joined by_____.			
	(A)	Di-Sulphide bond	(B)	Hydrophobic bond
	(C)	Hydrogen bond	(D)	Ionic bond
MCQ 14	The hypervariable region resides in the _____.			
	(A)	N terminal region of Light chain	(B)	N terminal region of Light chain and heavy chain
	(C)	C terminal region of heavy chain	(D)	C terminal region of Light chain and heavy chain
MCQ 15	Complements are_____.			
	(A)	Proteins	(B)	Lipids
	(C)	Carbohydrate	(D)	Fats

-- All The Best--