Name	: Mr. SUNDARAM	
PID No.	: MED110941343	
SID No.	: 422009734	
Age / Sex	: 33 Year(s) / Male	
Туре	: OP	
Ref. Dr	: MediWheel	

Register On	:	12/02/2022 10:40 AM
Collection On	:	12/02/2022 11:59 AM
Report On	:	13/02/2022 2:33 PM
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•		

Investigation	<u>Observed</u> <u>Value</u>	<u>Unit</u>	Biological Reference Interval
<b>HAEMATOLOGY</b>			
<u>Complete Blood Count With - ESR</u>			
Haemoglobin (EDTA Blood'Spectrophotometry)	15.6	g/dL	13.5 - 18.0
Packed Cell Volume(PCV)/Haematocrit (EDTA Blood/Derived from Impedance)	47.6	%	42 - 52
RBC Count (EDTA Blood/Impedance Variation)	5.26	mill/cu.mm	4.7 - 6.0
Mean Corpuscular Volume(MCV) (EDTA Blood'Derived from Impedance)	90.0	fL	78 - 100
Mean Corpuscular Haemoglobin(MCH) (EDTA Blood'Derived from Impedance)	29.7	pg	27 - 32
Mean Corpuscular Haemoglobin concentration(MCHC) (EDTA Blood/Derived from Impedance)	32.9	g/dL	32 - 36
RDW-CV (EDTA Blood/Derived from Impedance)	13.9	%	11.5 - 16.0
RDW-SD (EDTA Blood/Derived from Impedance)	43.78	fL	39 - 46
Total Leukocyte Count (TC) (EDTA Blood'Impedance Variation)	8230	cells/cu.mm	4000 - 11000
Neutrophils (EDTA Blood/Impedance Variation & Flow Cytometry)	61.34	%	40 - 75
Lymphocytes (EDTA Blood/Impedance Variation & Flow	29.31	%	20 - 45

Cytometry)



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Investigation	<u>Observed</u> <u>Value</u>	<u>Unit</u>	Biological Reference Interval
Eosinophils (EDTA Blood/Impedance Variation & Flow Cytometry)	2.14	%	01 - 06
Monocytes (EDTA Blood/Impedance Variation & Flow Cytometry)	6.98	%	01 - 10
Basophils (Blood/Impedance Variation & Flow Cytometry)	0.22	%	00 - 02
Absolute Neutrophil count (EDTA Blood/Impedance Variation & Flow Cytometry)	5.05	10^3 / µl	1.5 - 6.6
Absolute Lymphocyte Count (EDTA Blood/Impedance Variation & Flow Cytometry)	2.41	10^3 / µl	1.5 - 3.5
Absolute Eosinophil Count (AEC) (EDTA Blood/Impedance Variation & Flow Cytometry)	0.18	10^3 / µl	0.04 - 0.44
Absolute Monocyte Count (EDTA Blood/Impedance Variation & Flow Cytometry)	0.57	10^3 / µl	< 1.0
Absolute Basophil count (EDTA Blood/Impedance Variation & Flow Cytometry)	0.02	10^3 / µl	< 0.2
Platelet Count (EDTA Blood/Impedance Variation)	354.2	10^3 / µl	150 - 450
MPV (EDTA Blood/Derived from Impedance)	7.87	fL	7.9 - 13.7
PCT (EDTA Blood/Automated Blood cell Counter)	0.28	%	0.18 - 0.28
ESR (Erythrocyte Sedimentation Rate) (Citrated Blood/ <i>Modified Westergren</i> )	2	mm/hr	< 15



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Investigation BIOCHEMISTRY	Observed Value	<u>Unit</u>	Biological Reference Interval
Liver Function Test			
Bilirubin(Total) (Serum/Diazotized Sulfanilic Acid)	0.4	mg/dL	0.1 - 1.2
Bilirubin(Direct) (Serum/Diazotized Sulfanilic Acid)	0.2	mg/dL	0.0 - 0.3
Bilirubin(Indirect) (Serum/Derived)	0.2	mg/dL	0.1 - 1.0
Total Protein (Serum/Biuret)	7.3	gm/dL	6.0 - 8.0
Albumin (Serum/Bromocresol green)	4.6	gm/dL	3.5 - 5.2
Globulin (Serum/Derived)	2.7	g/dL	2.3 - 3.5
A : G Ratio (Serum/Derived)	1.7		1.1 - 2.2
SGOT/AST (Aspartate Aminotransferase) (Serum/IFCC Kinetic)	17	U/L	5 - 40
SGPT/ALT (Alanine Aminotransferase) (Serum/IFCC / Kinetic)	20	U/L	5 - 41
Alkaline Phosphatase (SAP) (Serum/IFCC Kinetic)	57	U/L	53 - 128
GGT(Gamma Glutamyl Transpeptidase) (Serum/SZASZ standarised IFCC)	25	U/L	< 55



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Investigation	<u>Observed</u> <u>Value</u>	<u>Unit</u>	Biological Reference Interval
Lipid Profile			
Cholesterol Total (Serum/Cholesterol oxidase/Peroxidase)	175	mg/dL	Optimal: < 200 Borderline: 200 - 239 High Risk: >= 240
Triglycerides (Serum/Glycerol phosphate oxidase / peroxidase)	75	mg/dL	Optimal: < 150 Borderline: 150 - 199 High: 200 - 499 Very High: >= 500

**INTERPRETATION:** The reference ranges are based on fasting condition. Triglyceride levels change drastically in response to food, increasing as much as 5 to 10 times the fasting levels, just a few hours after eating. Fasting triglyceride levels show considerable diurnal variation too. There is evidence recommending triglycerides estimation in non-fasting condition for evaluating the risk of heart disease and screening for metabolic syndrome, as non-fasting sample is more representative of the õusualö"circulating level of triglycerides during most part of the day.

HDL Cholesterol (Serum/Immunoinhibition)	44	mg/dL	Optimal(Negative Risk Factor): >= 60 Borderline: 40 - 59 High Risk: < 40
LDL Cholesterol (Serum/ <i>Calculated</i> )	116	mg/dL	Optimal: < 100 Above Optimal: 100 - 129 Borderline: 130 - 159 High: 160 - 189 Very High: >= 190
VLDL Cholesterol (Serum/Calculated)	15	mg/dL	< 30
Non HDL Cholesterol (Serum/ <i>Calculated</i> )	131.0	mg/dL	Optimal: < 130 Above Optimal: 130 - 159 Borderline High: 160 - 189 High: 190 - 219 Very High: >= 220



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Investigation	<u>Observed</u> <u>Value</u>	<u>Unit</u>	Biological Reference Interval
<b>INTERPRETATION:</b> 1.Non-HDL Cholesterol is now 2.It is the sum of all potentially atherogenic proteins in co-primary target for cholesterol lowering therapy.			
Total Cholesterol/HDL Cholesterol Ratio (Serum/ <i>Calculated</i> )	4		Optimal: < 3.3 Low Risk: 3.4 - 4.4 Average Risk: 4.5 - 7.1 Moderate Risk: 7.2 - 11.0 High Risk: > 11.0
Triglyceride/HDL Cholesterol Ratio (TG/HDL) (Serum/ <i>Calculated</i> )	1.7		Optimal: < 2.5 Mild to moderate risk: 2.5 - 5.0 High Risk: > 5.0
LDL/HDL Cholesterol Ratio (Serum/Calculated)	2.6		Optimal: 0.5 - 3.0 Borderline: 3.1 - 6.0 High Risk: > 6.0



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DR SHAMIM JAVED MD PATHOLOGY KMC 88902

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Ref. Dr	: MediWheel	

Investigation Glycosylated Haemoglobin (HbA1c)	<u>Observed</u> <u>Value</u>	<u>Unit</u>	Biological Reference Interval
<u>Grycosymien Haemoglobin (HbA1c)</u>			
HbA1C (Whole Blood/ <i>HPLC</i> )	6.0	%	Normal: 4.5 - 5.6 Prediabetes: 5.7 - 6.4 Diabetic: >= 6.5
<b>INTERPRETATION:</b> If Diabetes - Good control : 6.1 -	- 7.0 %, Fair control :	: 7.1 - 8.0 % , Poor contro	ol >= 8.1 %

INTERI RETATION. II Diabetes - 0000 control . 0.	1 = 7.0 %, Fall collutor.	7.1 - 8.0 %, 100	i contro
Estimated Average Glucose	125.5	mg/dL	

Estimated Average Glucose	125.5	mg/o

(Whole Blood)

## **INTERPRETATION: Comments**

HbA1c provides an index of Average Blood Glucose levels over the past 8 - 12 weeks and is a much better indicator of long term glycemic control as compared to blood and urinary glucose determinations.

Conditions that prolong RBC life span like Iron deficiency anemia, Vitamin B12 & Folate deficiency,

hypertriglyceridemia, hyperbilirubinemia, Drugs, Alcohol, Lead Poisoning, Asplenia can give falsely elevated HbA1C values.

Conditions that shorten RBC survival like acute or chronic blood loss, hemolytic anemia, Hemoglobinopathies, Splenomegaly, Vitamin E ingestion, Pregnancy, End stage Renal disease can cause falsely low HbA1c.



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Investigation	<u>Observed</u> <u>Value</u>	<u>Unit</u>	Biological Reference Interval
<b>IMMUNOASSAY</b>			
<u>THYROID PROFILE / TFT</u>			
T3 (Triiodothyronine) - Total (Serum/ <i>CMIA</i> ) <b>INTERPRETATION:</b> <b>Comment :</b> Total T3 variation can be seen in other condition like preg Metabolically active.	1.03 mancy, drugs, nephr	ng/mL osis etc. In such cases, Free T	0.7 - 2.04 3 is recommended as it is
T4 (Thyroxine) - Total (Serum/ <i>CMIA</i> ) <b>INTERPRETATION:</b> <b>Comment :</b> Total T4 variation can be seen in other condition like preg Metabolically active.	6.43 mancy, drugs, nephr	µg/dL osis etc. In such cases, Free T	<ul><li>4.2 - 12.0</li><li>4 is recommended as it is</li></ul>
TSH (Thyroid Stimulating Hormone) (Serum/Chemiluminescent Microparticle Immunoassay(CMIA))	2.76	µIU/mL	0.35 - 5.50
INTERPRETATION: Reference range for cord blood - upto 20 1 st trimester: 0.1-2.5 2 nd trimester 0.2-3.0 3 rd trimester : 0.3-3.0 (Indian Thyroid Society Guidelines) Comment : 1.TSH reference range during pregnancy depends on Iodi 2.TSH Levels are subject to circadian variation, reaching of the order of 50%, hence time of the day has influence o 3 Values & ample 0.03 uU/val. need to be clinically correl	peak levels between n the measured seru	2-4am and at a minimum bet m TSH concentrations.	ween 6-10PM.The variation can be

3.Values&amplt,0.03 µIU/mL need to be clinically correlated due to presence of rare TSH variant in some individuals.



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Investigation	<u>Observed</u> <u>Value</u>	Unit	Biological Reference Interval
CLINICAL PATHOLOGY			
PHYSICAL EXAMINATION			
Colour (Urine)	Pale yellow		
Appearance (Urine)	Clear		Clear
Volume (Urine)	10	mL	
<u>CHEMICAL EXAMINATION(Automated-</u> <u>Urineanalyser)</u>			
pH (Urine/ <i>AUTOMATED URINANALYSER)</i>	5.0		4.5 - 8.0
Specific Gravity (Urine)	1.020		1.002 - 1.035
Ketones (Urine)	Negative		Negative
Urobilinogen (Urine/AUTOMATED URINANALYSER)	0.2		0.2 - 1.0
Blood (Urine/AUTOMATED URINANALYSER)	Negative		Negative
Nitrite (Urine/AUTOMATED URINANALYSER)	Negative		Negative
Bilirubin (Urine/AUTOMATED URINANALYSER)	Negative		Negative
Protein (Urine)	Negative		Negative



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Investigation	<u>Observed</u> <u>Value</u>	<u>Unit</u>	Biological Reference Interval
Glucose (Urine)	Negative		Negative
Leukocytes (Urine) <u>MICROSCOPY(URINE DEPOSITS)</u>	Negative	leuco/uL	Negative
Pus Cells (Urine/Flow cytometry)	0-2	/hpf	3-5
Epithelial Cells (Urine)	0-2	/hpf	1-2
RBCs (Urine/Flow cytometry)	Nil	/hpf	2-3
Others (Urine)	Nil		Nil

DR SHAMIM JAVED MD PATHOLOGY KMC 88902 APPROVED BY

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**Investigation** 

<u>Observed</u> <u>Value</u> <u>Unit</u>

Biological Reference Interval

## **IMMUNOHAEMATOLOGY**

BLOOD GROUPING AND Rh TYPING (EDTA Blood/Agglutination)

'A' 'Positive'



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Investigation BIOCHEMISTRY	<u>Observed</u> <u>Value</u>	<u>Unit</u>	Biological Reference Interval
BUN / Creatinine Ratio	12		6 - 22
Glucose Fasting (FBS) (Plasma - F/GOD - POD)	81	mg/dL	Normal: < 100 Pre Diabetic: 100 - 125 Diabetic: >= 126

**INTERPRETATION:** Factors such as type, quantity and time of food intake, Physical activity, Psychological stress, and drugs can influence blood glucose level.

Glucose Fasting - Urine (Urine - F)	Negative		Negative
Glucose Postprandial (PPBS) (Plasma - PP/GOD - POD)	111	mg/dL	70 - 140

## **INTERPRETATION:**

Factors such as type, quantity and time of food intake, Physical activity, Psychological stress, and drugs can influence blood glucose level. Fasting blood glucose level may be higher than Postprandial glucose, because of physiological surge in Postprandial Insulin secretion, Insulin resistance, Exercise or Stress, Dawn Phenomenon, Somogyi Phenomenon, Anti- diabetic medication during treatment for Diabetes.

Blood Urea Nitrogen (BUN)	11	mg/dL	7.0 - 21
(Serum/Urease-GLDH)			
Creatinine	0.9	mg/dL	0.9 - 1.3

(Serum/Jaffe Kinetic)

**INTERPRETATION:** Elevated Creatinine values are encountered in increased muscle mass, severe dehydration, Pre-eclampsia, increased ingestion of cooked meat, consuming Protein/ Creatine supplements, Diabetic Ketoacidosis, prolonged fasting, renal dysfunction and drugs such as cefoxitin ,cefazolin, ACE inhibitors ,angiotensin II receptor antagonists,N-acetylcyteine , chemotherapeutic agent such as flucytosine etc.

Uric Acid	5.3	mg/dL	3.5 - 7.2
(Serum/Uricase/Peroxidase)			



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-- End of Report --