CORE CERTIFIABLE SKILL PERFORM OR SHOWS HOW LEVEL COMPETENCIES

Topic: Biochemical Laboratory Tests:

Competency addressed: BC14.3

Name of Activity: Perform urine analysis to estimate and determine normal constituents

CHECKLIST/ASSESSMENT CRITERIA

1 Student is able to list all physical characteristics of normal urine

2 Student is able to perform the physical examination of urine sample for Volume, appearance, colour, odour, pH and specific gravity

3 Student is able to interpret the results of all the above physical examination of urine sample

4 Student is able to list common organic constituents (Urea, Uric acid, Creatinine, Urobilinogen) of normal urine and the tests to be performed

5 Student is able to explain the principles of all organic tests performed for normal constituents of urine

6 Student is able to perform relevant tests for organic constituents of urine according to the procedure given

7 Student is able to interpret the results of all the tests for organic constituents of normal urine along with normal levels in urine

8 Student is able to list common inorganic constituents (Chloride, Calcium, Phosphate, Ammonia) of normal urine and the tests to be performed

9 Student is able to explain the principles of all organic tests performed for normal constituents of urine

10 Student is able to perform relevant tests for inorganic constituents of urine according to the procedure given

11 Student is able to interpret the results of all the tests performed for inorganic constituents of normal urine along with normal levels in urine

12 Student is able to interpret the physiological and pathological variations in organic and inorganic constituents of urine

Date completed: dd-mm-yyyy	Attempt at activity First or Only (F) Repeat (R) Remedial (Re)	Rating Below (B) expectations Meets (M) expectations Exceeds (E) expectations	Decision of faculty Completed (C) Repeat (R) Remedial (Re)	Initial of faculty and date	Feedback Received Initial of learner
12/11/24	F	M	C	19th Nov'24	

CORE CERTIFIABLE SKILL PERFORM OR SHOWS HOW LEVEL COMPETENCIES

Topic: Biochemical Laboratory Tests:

Competency addressed: BC14.3, 14.4

Name of Activity: Identify abnormal constituents in urine, interpret the findings and correlate these with pathological states.

CHECKLIST/ASSESSMENT CRITERIA

1 Student is able to list the common abnormal constituents of urine (reducing substance, ketone bodies, proteins, blood, bile salts, bile pigments)

2 Student is able to perform the physical examination of abnormal urine sample for Volume, appearance, colour, odour, pH and specific gravity

3 Student is able to interpret the results of all the above physical examination of urine sample in different pathological conditions

4 Student is able to list the relevant chemical tests to be performed to detect abnormal constituents of urine

5 Student is able to explain the principles of all the chemical tests correctly

6 Student is able to perform all the chemical tests correctly according to the procedure given

7 Student is able to interpret the observations of all the tests as positive or negative correctly

8 Student is able to explain the biochemical basis of combination of positive findings on physical examination and chemical analysis of given abnormal urine sample

9 Student is able to interpret and associate various abnormal physical findings with different pathological conditions

10 Student is able to interpret and associate various abnormal constituents with different pathological conditions

Date completed: dd-mm-yyyy	Attempt at activity First or Only (F) Repeat (R) Remedial (Re)	Rating Below (B) expectations Meets (M) expectations Exceeds (E) expectations	Decision of faculty Completed (C) Repeat (R) Remedial (Re)	Initial of faculty and date	Feedback Received Initial of learner
26/11/24	F	M	C	26/11/2024	

CORE CERTIFIABLE SKILL PERFORM OR SHOWS HOW LEVEL COMPETENCIES

Topic: Biochemical Laboratory Tests:

Competency addressed: BC14.11

Name of Activity: Demonstrate estimation of serum protein, albumin and A:G ratio

CHECKLIST/ASSESSMENT CRITERIA

1 Student is able to explain the principle of the given method of estimation of Serum Total Protein and Serum Albumin

2 Student is able to perform the estimation of Serum Total Protein and Serum Albumin in given sample according to the given procedure correctly

3 Student is able to calculate the concentration of the given analyte using the appropriate formula.

4 Student is able to calculate Total globulin level and A:G ratio correctly

5 Student is able to write the report of the given test requested correctly with appropriate units and reference intervals

6 Student is able to enumerate and explain the causes for Hypoproteinemia/ Hypoalbuminemia correctly

7 Student is able to enumerate and explain the causes of Hyperproteinemia correctly

8 Student is able to enumerate and explain the causes of reversed A:G ratio correctly

9 Student is able to relate the findings of estimation performed with clinical condition appropriately

10 Student is able to extrapolate the results of serum total protein and serum albumin in different clinical conditions a ppropriately

Date completed: dd-mm-yyyy	Attempt at activity First or Only (F) Repeat (R) Remedial (Re)	Rating Below (B) expectations Meets (M) expectations Exceeds (E) expectations	Decision of faculty Completed (C) Repeat (R) Remedial (Re)	Initial of faculty and date	Feedback Received Initial of learner
7/1/25	F	E	C	7/1/25	Athul Tushaar

CASE BASED LEARNING/SMALL GROUP DISCUSSION

Competency number Addressed Name of Topic	Date of completion	Score (10 marks for each Topic)	Initial of faculty	Feedback Received Initial of learner
Porphyria	13/11/24	9	10/12/2024	Athul Tushaar
Hemoglobinopathies	15/11/24	9	10/12/2024	Athul Tushaar
Enzyme Inhibition	23/11/24	10	MP 20/12/24	Athul Tushaar
Enzyme diagonostic cases.	29/11/24	10	MP 20/12/24	Athul Tushaar
Enzymology	30/11/24	10	MP 20/12/24	Athul Tushaar
Liver function Test	3/12/24	10	MP 20/12/24	Athul Tushaar
diabetes	7/1/25	10	MP	Athul Tushaar
GTT Charts	7/1/25	10	MP 8/1/25	Athul Tushaar
Inborn Error of Carbohydrates	7/1/25	10	MP 8/1/25	Athul Tushaar

CORE CERTIFIABLE SKILL PERFORM OR SHOWS HOW LEVEL COMPETENCIES

Topic: Biochemical Laboratory Tests:

Competency addressed: BI 11.21

Name of Activity: Demonstrate estimation of Glucose in serum

CHECKLIST/ASSESSMENT CRITERIA

1 Student is able to explain the principle of the given method of estimation of Glucose

2 Student is able to mention other methods for estimation with advantages and disadvantages

3 Student is able to perform the estimation of Serum glucose in given sample according to the given procedure correctly

4 Student is able to calculate the concentration of the given analyte using the appropriate formula.

5 Student is able to write the report of the given test requested correctly with appropriate units and reference ntervals

6 Student is able to mention the preanalytical errors that could affect the test result

7 Student is able to mention the right collection tube and right time for collecting fasting and post prandial samples

8 Student is able to interpret the report of the given sample according to current standard guidelines using biological reference intervals of fasting, postprandial and random glucose.

9 Student is able to relate the findings of estimation performed with clinical condition appropriately

10 Student is able to extrapolate the results of serum glucose in different clinical conditions appropriately

Date completed: dd-mm-yyyy	**Attempt at activity** First or Only (F) Repeat (R) Remedial (Re)	**Rating** Below (B) expectations Meets (M) expectations Exceeds (E) expectations	**Decision of faculty** Completed (C) Repeat (R) Remedial (Re)	**Initial of faculty and date**	**Feedback Received** Initial of learner
24/11/23	F	M	C	24/11/23	

CORE CERTIFIABLE SKILL PERFORM OR SHOWS HOW LEVEL COMPETENCIES

Topic: Biochemical Laboratory Tests:

Competency addressed: BI 11.7, BI 11.21

Name of Activity: Demonstrate estimation of serum creatinine and creatinine clearance

CHECKLIST/ASSESSMENT CRITERIA

1. Student is able to explain the principle of the given method of estimation of Serum Creatinine
2. Student is able to mention other methods for estimation with advantages and disadvantages
3. Student is able to perform the estimation of Serum Creatinine in given sample according to the given procedure correctly
4. Student is able to calculate the concentration of the given analyte using the appropriate formula.
5. Student is able to write the report of the given test requested correctly with appropriate units, reference intervals and interpret the result correctly.
6. Student is able to mention the non-Creatinine interferences that could affect the test result
7. Student is able to calculate Creatinine clearance using appropriate formula correctly and interpret the results
8. Student is able to mention the indications for Creatinine clearance and its advantages.
9. Student is able to calculate estimated Creatinine clearance using different formulae, different urine Creatinine ratios with their advantages.
10. Student is able to explain the biochemical basis of altered levels of Creatinine in serum and urine in different pathological conditions

Date completed: dd-mm-yyyy	**Attempt at activity** First or Only (F) Repeat (R) Remedial (Re)	**Rating** Below (B) expectations Meets (M) expectations Exceeds (E) expectations	**Decision of faculty** Completed (C) Repeat (R) Remedial (Re)	**Initial of faculty and date**	**Feedback Received** Initial of learner
4/03/24	F	M	C	4/3/24	Jmd

CORE CERTIFIABLE SKILL PERFORM OR SHOWS HOW LEVEL COMPETENCIES

Topic: Biochemical Laboratory Tests:

Competency addressed: BI 11.21

Name of Activity: Demonstrate estimation of urea in serum

CHECKLIST/ASSESSMENT CRITERIA

1 Student is able to explain the principle of the given method of estimation of Serum Urea
2 Student is able to mention other methods for estimation with advantages and disadvantages
3 Student is able to perform the estimation of Serum Urea in given sample according to the given procedure co
4 Student is able to calculate the concentration of the given analyte using the appropriate formula.
5 Student is able to write the report of the given test requested correctly with appropriate units and reference in
6 Student is able to mention the preanalytical errors/ interferences that could affect the test result
7 Student is able to calculate Blood urea nitrogen and explain its importance
8 Student is able to enumerate various pre renal, renal and post renal causes for Uremia
9 Student is able to relate the findings of estimation performed with clinical condition appropriately
10 Student is able to extrapolate the results of serum urea in different clinical conditions appropriately

Date completed: dd-mm-yyyy	**Attempt at activity** First or Only (F) Repeat (R) Remedial (Re)	**Rating** Below (B) expectations Meets(M) expectations Exceeds (E) expectations	**Decision of faculty** Completed (C) Repeat (R) Remedial (Re)	**Initial of faculty and date**	**Feedback** Initial of
23/02/24	F	M	C	23/02/24	

CORE NON-CERTIFIABLE SKILL PERFORM OR SHOWS HOW LEVEL COMPETENCIES

Topic: Biochemical Laboratory Tests:

Competency addressed: BI 11.9

Name of Activity: Demonstrate the estimation of serum total cholesterol

1 Describe the principle of chemical/enzymatic method for estimation of serum Total Cholesterol K KH
2 Perform the estimation of serum Total cholesterol by chemical method using Colorimeter/Semi auton analyser as per the standard test protocol S P Practical
3 Interpret the given serum Total cholesterol values against biological reference intervals S SH

Date completed: dd-mm-yyyy	**Attempt at activity** First or Only (F) Repeat (R) Remedial (Re)	**Rating** Below (B) expectations Meets (M) expectations Exceeds (E) expectations	**Decision of faculty** Completed (C) Repeat (R) Remedial (Re)	**Initial of faculty and date**	**Feedback Rece** Initial of learn
8/12/23	F	M	C	8/12/23	Fwd

CORE NON-CERTIFIABLE SKILL PERFORM OR SHOWS HOW LEVEL COMPETENCIES

Topic: Biochemical Laboratory Tests:

Competency addressed: BI 11.9

Name of Activity: Demonstrate the estimation of serum HDL

1 Describe the principle of given method for estimation of serum HDL Cholesterol K KH
2 Perform the estimation of serum HDL cholesterol by chemical method using Colorimeter/Semi autc analyser as per the standard test protocol S P
3 Interpret the given serum HDL Cholesterol values against biological reference intervals S SH

Date completed: dd-mm-yyyy	**Attempt at activity** First or Only (F) Repeat (R) Remedial (Re)	**Rating** Below (B) expectations Meets (M) expectations Exceeds (E) expectations	**Decision of faculty** Completed (C) Repeat (R) Remedial (Re)	**Initial of faculty and date**	**Feedback R** Initial of l
12/01/2024	F	M	C	12/01/24	Fwd

CORE NON-CERTIFIABLE SKILL PERFORM OR SHOWS HOW LEVEL COMPETENCIES

Topic: Biochemical Laboratory Tests:

Competency addressed: BI 11.10

Name of Activity: Demonstrate the estimation of triglycerides

1 Describe the principle of given method for estimation of serum triglycerides K KH
2 Perform the estimation of serum triglycerides by given method using Colorimeter/Semi automated analyser as per standard test protocol S P
3 Interpret the given serum triglycerides values against biological reference intervals S SH

Date completed: dd-mm-yyyy	**Attempt at activity** First or Only (F) Repeat (R) Remedial (Re)	**Rating** Below (B) expectations Meets (M) expectations Exceeds (E) expectations	**Decision of faculty** Completed (C) Repeat (R) Remedial (Re)	**Initial of faculty and date**	**Feedback Received** Initial of learner
08/12/23	F	M	C	8/12/23	

CORE NON-CERTIFIABLE SKILL PERFORM OR SHOWS HOW LEVEL COMPETENCIES

Topic: Biochemical Laboratory Tests:

Competency addressed: BI 11.11

Name of Activity: Demonstrate the estimation of calcium

1 Describe the principle of OCPC/Dye binding method for estimation of serum Total calcium K KH
2 Perform the estimation of serum Total calcium by given method using Semi automated analyser as per 3 standard test protocol S P
3 Interpret the given serum Total calcium values against biological reference intervals S SH

Date completed: dd-mm-yyyy	**Attempt at activity** First or Only (F) Repeat (R) Remedial (Re)	**Rating** Below (B) expectations Meets (M) expectations Exceeds (E) expectations	**Decision of faculty** Completed (C) Repeat (R) Remedial (Re)	**Initial of faculty and date**	**Feedback Received** Initial of learner
10/05/24	F	M	C	10/5/24	

CORE CERTIFIABLE SKILL PERFORM OR SHOWS HOW LEVEL COMPETENCIES

Topic: Biochemical Laboratory Tests:

Competency addressed: BC14.3

Name of Activity: Perform urine analysis to estimate and determine normal constituents

CHECKLIST/ASSESSMENT CRITERIA

1 Student is able to list all physical characteristics of normal urine

2 Student is able to perform the physical examination of urine sample for Volume, appearance, colour, odour, pH and specific gravity

3 Student is able to interpret the results of all the above physical examination of urine sample

4 Student is able to list common organic constituents (Urea, Uric acid, Creatinine, Urobilinogen) of normal urine and the tests to be performed

5 Student is able to explain the principles of all organic tests performed for normal constituents of urine

6 Student is able to perform relevant tests for organic constituents of urine according to the procedure given

7 Student is able to interpret the results of all the tests for organic constituents of normal urine along with normal levels in urine

8 Student is able to list common inorganic constituents (Chloride, Calcium, Phosphate, Ammonia) of normal urine and the tests to be performed

9 Student is able to explain the principles of all organic tests performed for normal constituents of urine

10 Student is able to perform relevant tests for inorganic constituents of urine according to the procedure given

11 Student is able to interpret the results of all the tests performed for inorganic constituents of normal urine along with normal levels in urine

12 Student is able to interpret the physiological and pathological variations in organic and inorganic constituents of urine

Date completed: dd-mm-yyyy	Attempt at activity First or Only (F) Repeat (R) Remedial (Re)	Rating Below (B) expectations Meets (M) expectations Exceeds (E) expectations	Decision of faculty Completed (C) Repeat (R) Remedial (Re)	Initial of faculty and date	Feedback Received Initial of learner
18/12/24	F	E	C	Dhmga 18/12/24	Nicolas Mark

CORE CERTIFIABLE SKILL PERFORM OR SHOWS HOW LEVEL COMPETENCIES

Topic: Biochemical Laboratory Tests:

Competency addressed: BC14.3, BC14.4

Name of Activity: Perform urine analysis to determine Abnormal constituents, interpret the findings and correlate with pathological states

CHECKLIST/ASSESSMENT CRITERIA

1	Student is able to list the common abnormal constituents of urine (reducing substance, ketone bodies, proteins, blood, bile salts, bile pigments)
2	Student is able to perform the physical examination of abnormal urine sample for Volume, appearance, colour, odour, pH and specific gravity
3	Student is able to interpret the results of all the above physical examination of urine sample in different pathological conditions
4	Student is able to list the relevant chemical tests to be performed to detect abnormal constituents of urine
5	Student is able to explain the principles of all the chemical tests correctly
6	Student is able to perform all the chemical tests correctly according to the procedure given
7	Student is able to interpret the observations of all the tests as positive or negative correctly
8	Student is able to explain the biochemical basis of combination of positive findings on physical examination and chemical analysis of given abnormal urine sample
9	Student is able to interpret and associate various abnormal physical findings with different pathological conditions
10	Student is able to interpret and associate various abnormal constituents with different pathological conditions

Date completed: dd-mm-yyyy	Attempt at activity First or Only (F) Repeat (R) Remedial (Re)	Rating Below (B) expectations Meets (M) expectations Exceeds (E) expectations	Decision of faculty Completed (C) Repeat (R) Remedial (Re)	Initial of faculty and date	Feedback Received Initial of learner
27/11/24	F	M	C	[signature]	Nicolas Malk

CORE CERTIFIABLE SKILL PERFORM OR SHOWS HOW LEVEL COMPETENCIES

Topic: Biochemical Laboratory Tests:

Competency addressed: BC14.11

Name of Activity: Demonstrate estimation of serum protein, albumin and A:G ratio

CHECKLIST/ASSESSMENT CRITERIA

1 Student is able to explain the principle of the given method of estimation of Serum Total Protein and Serum Albumin

2 Student is able to perform the estimation of Serum Total Protein and Serum Albumin in given sample according to the given procedure correctly

3 Student is able to calculate the concentration of the given analyte using the appropriate formula.

4 Student is able to calculate Total globulin level and A:G ratio correctly

5 Student is able to write the report of the given test requested correctly with appropriate units and reference intervals

6 Student is able to enumerate and explain the causes for Hypoproteinemia/ Hypoalbuminemia correctly

7 Student is able to enumerate and explain the causes of Hyperproteinemia correctly

8 Student is able to enumerate and explain the causes of reversed A:G ratio correctly

9 Student is able to relate the findings of estimation performed with clinical condition appropriately

10 Student is able to extrapolate the results of serum total protein and serum albumin in different clinical conditions a ppropriately

Date completed: dd-mm-yyyy	Attempt at activity First or Only (F) Repeat (R) Remedial (Re)	Rating Below (B) expectations Meets (M) expectations Exceeds (E) expectations	Decision of faculty Completed (C) Repeat (R) Remedial (Re)	Initial of faculty and date	Feedback Received Initial of learner
8/1/25	F	M	C	8/1/25	Nicolas Mask

CORE CERTIFIABLE SKILL PERFORM OR SHOWS HOW LEVEL COMPETENCIES

Topic: Biochemical Laboratory Tests:

Competency addressed: BC14.11

Name of Activity: Demonstrate estimation of serum protein, albumin and A:G ratio

CHECKLIST/ASSESSMENT CRITERIA

1 Student is able to explain the principle of the given method of estimation of Serum Total Protein and Serum Albumin

2 Student is able to perform the estimation of Serum Total Protein and Serum Albumin in given sample according to the given procedure correctly

3 Student is able to calculate the concentration of the given analyte using the appropriate formula.

4 Student is able to calculate Total globulin level and A:G ratio correctly

5 Student is able to write the report of the given test requested correctly with appropriate units and reference intervals

6 Student is able to enumerate and explain the causes for Hypoproteinemia/ Hypoalbuminemia correctly

7 Student is able to enumerate and explain the causes of Hyperproteinemia correctly

8 Student is able to enumerate and explain the causes of reversed A:G ratio correctly

9 Student is able to relate the findings of estimation performed with clinical condition appropriately

10 Student is able to extrapolate the results of serum total protein and serum albumin in different clinical conditions a ppropriately

Date completed: dd-mm-yyyy	Attempt at activity First or Only (F) Repeat (R) Remedial (Re)	Rating Below (B) expectations Meets (M) expectations Exceeds (E) expectations	Decision of faculty Completed (C) Repeat (R) Remedial (Re)	Initial of faculty and date	Feedback Received Initial of learner
8/1/25	F	M	C	8/1/25	Nicolas Mask

CASE BASED LEARNING/SMALL GROUP DISCUSSION

Competency number Addressed Name of Topic	Date of completion	Score (10 marks for each Topic)	Initial of faculty	Feedback Received Initial of learner
Haem Synthesis and porphyria	12/11/24	10		Nicolas Mark
Haemoglobinopathies and Hb derivatives	15/11/24	10		Nicolas Mark
Enzymology case	23/11/24	10		Nicolas Mark
Enzyme diagnostic case	26/11/24	10		Nicolas Mark
Cardiac markers	29/11/24	10		Nicolas Mark
Liver function test	3/12/24	10		Nicolas Mark
Diabetes & GTT charts	3/01/25	10		Nicolas Mark
GTT chart	4/01/25	10		Nicolas Mark
Inborn errors of carbohydrates	4/01/25	10		Nicolas Mark

CORE CERTIFIABLE SKILL PERFORM OR SHOWS HOW LEVEL COMPETENCIES

Topic: Biochemical Laboratory Tests:

Competency addressed: BC14.3

Name of Activity: Perform urine analysis to estimate and determine normal constituents

CHECKLIST/ASSESSMENT CRITERIA

1 Student is able to list all physical characteristics of normal urine

2 Student is able to perform the physical examination of urine sample for Volume, appearance, colour, odour, pH and specific gravity

3 Student is able to interpret the results of all the above physical examination of urine sample

4 Student is able to list common organic constituents (Urea, Uric acid, Creatinine, Urobilinogen) of normal urine and the tests to be performed

5 Student is able to explain the principles of all organic tests performed for normal constituents of urine

6 Student is able to perform relevant tests for organic constituents of urine according to the procedure given

7 Student is able to interpret the results of all the tests for organic constituents of normal urine along with normal levels in urine

8 Student is able to list common inorganic constituents (Chloride, Calcium, Phosphate, Ammonia) of normal urine and the tests to be performed

9 Student is able to explain the principles of all organic tests performed for normal constituents of urine

10 Student is able to perform relevant tests for inorganic constituents of urine according to the procedure given

11 Student is able to interpret the results of all the tests performed for inorganic constituents of normal urine along with normal levels in urine

12 Student is able to interpret the physiological and pathological variations in organic and inorganic constituents of urine

Date completed: dd-mm-yyyy	Attempt at activity First or Only (F) Repeat (R) Remedial (Re)	Rating Below (B) expectations Meets (M) expectations Exceeds (E) expectations	Decision of faculty Completed (C) Repeat (R) Remedial (Re)	Initial of faculty and date	Feedback Received Initial of learner
6.11.2024	F	M	C	16/12/24	Priyanka

CORE CERTIFIABLE SKILL PERFORM OR SHOWS HOW LEVEL COMPETENCIES

Topic: Biochemical Laboratory Tests:

Competency addressed: BC14.3, 14.4

Name of Activity: Identify abnormal constituents in urine, interpret the findings and correlate these with pathological states.

CHECKLIST/ASSESSMENT CRITERIA

1 Student is able to list the common abnormal constituents of urine (reducing substance, ketone bodies, proteins, blood, bile salts, bile pigments)

2 Student is able to perform the physical examination of abnormal urine sample for Volume, appearance, colour, odour, pH and specific gravity

3 Student is able to interpret the results of all the above physical examination of urine sample in different pathological conditions

4 Student is able to list the relevant chemical tests to be performed to detect abnormal constituents of urine

5 Student is able to explain the principles of all the chemical tests correctly

6 Student is able to perform all the chemical tests correctly according to the procedure given

7 Student is able to interpret the observations of all the tests as positive or negative correctly

8 Student is able to explain the biochemical basis of combination of positive findings on physical examination and chemical analysis of given abnormal urine sample

9 Student is able to interpret and associate various abnormal physical findings with different pathological conditions

10 Student is able to interpret and associate various abnormal constituents with different pathological conditions

Date completed: dd-mm-yyyy	Attempt at activity First or Only (F) Repeat (R) Remedial (Re)	Rating Below (B) expectations Meets (M) expectations Exceeds (E) expectations	Decision of faculty Completed (C) Repeat (R) Remedial (Re)	Initial of faculty and date	Feedback Received Initial of learner
27.11.2024	F	E.	C	27/11/2024	Priyanka

CORE CERTIFIABLE SKILL PERFORM OR SHOWS HOW LEVEL COMPETENCIES

Topic: Biochemical Laboratory Tests:

Competency addressed: BC14.11

Name of Activity: Demonstrate estimation of serum protein, albumin and A:G ratio

CHECKLIST/ASSESSMENT CRITERIA

1 Student is able to explain the principle of the given method of estimation of Serum Total Protein and Seru Albumin

2 Student is able to perform the estimation of Serum Total Protein and Serum Albumin in given sample accordi to the given procedure correctly

3 Student is able to calculate the concentration of the given analyte using the appropriate formula.

4 Student is able to calculate Total globulin level and A:G ratio correctly

5 Student is able to write the report of the given test requested correctly with appropriate units and referen intervals

6 Student is able to enumerate and explain the causes for Hypoproteinemia/ Hypoalbuminemia correctly

7 Student is able to enumerate and explain the causes of Hyperproteinemia correctly

8 Student is able to enumerate and explain the causes of reversed A:G ratio correctly

9 Student is able to relate the findings of estimation performed with clinical condition appropriately

10 Student is able to extrapolate the results of serum total protein and serum albumin in different clinical conditions ppropriately

Date completed: dd-mm-yyyy	Attempt at activity First or Only (F) Repeat (R) Remedial (Re)	Rating Below (B) expectations Meets (M) expectations Exceeds (E) expectations	Decision of faculty Completed (C) Repeat (R) Remedial (Re)	Initial of faculty and date	Feedback Receiv Initial of learne
8-1-2025	F	M	C	Kshmga 08/01/25	Priyanka

CASE BASED LEARNING/SMALL GROUP DISCUSSION

Competency number Addressed Name of Topic	Date of completion	Score (10 marks for each Topic)	Initial of faculty	Feedback Received Initial of learner
Haem synthesis Porphyria	14.11.24	10	Dr Anuja	Priyanka
Haemoglobinopathies & Hb derivaties	15.11.24	10	Dr Anuja	Priyanka
Enzymology cases - Inhibition	23.11.24	10	Dr Anuja	Priyanka
Enzyme diagnostic cases	29.11.24	10	Dr Anuja	Priyanka
cardiac markers	29.11.24	10	Dr Anuja	Priyanka
Liver function tests.	5.12.24	10	Dr Anuja	Priyanka
Assignment	7.12.24	10	Dr Anuja	Priyanka
Diabetes and GTT Charts	6-1-2025	10	Dr Anuja	Priyanka
GTT charts	6-1-2025	10	Dr Anuja	Priyanka
Inborn errors of carbohydrates.	6-1-2025	10	Dr Anuja	Priyanka

EARLY CLINICAL EXPOSURE - Reflection

Session number: 1 Date: 20/10/2023

Department visited/ activity Class room

Objectives

1. Classify anemia based on the morphological features of RBC
2. Describe erythropoiosis and its regulation
3. Explain the physiological bases for deficiency anemia and its management.

1. Briefly describe what you learnt from this activity.
   I learnt how to analyse the symptoms of an anemic patients.

2. How do you apply your knowledge of Physiology in this case?
   As a Ist year MBBS students, after seeing the symptoms and reports. I would confirm anemia and classify them under the different types of anemia.

3. What knowledge/skill do you need to develop to handle similar situation in future
   We need to have a proper knowledge on Anemia.

4. Apart from the above learning, what did you observe that influenced you?
   We also have to ask about their dietary, family history, if they are under medications and also about their medical history.

Competency addressed	Rating (B): Below Expectations, (M):Meets Expectations, (E): Exceeds Expectations					Initial of faculty and date	Feedback Received Initial of learner
	Critical appraisal	Utilization of learning resources	Active participation	Attitude & Communication Skill	Overall performance		
	E	E	E	E	E		

EARLY CLINICAL EXPOSURE - Reflection

Session number: 2 Date: 24/10/2023

Department visited/ activity

Objectives

1. Basis for classification of blood group
2. Indications for blood transfusion
3. hazards of mismatched blood grouping / transfusion

1. Briefly describe what you learnt from this activity.
criteria for blood donation, blood bad types, procedure and equipment used in collection of blood, tests done for grouping of blood, cross matching and tests done for HIV, etc.

2. How do you apply your knowledge of Physiology in this case?
knowledge acquired from blood grouping chapter comes in hand we get to watch the theory learnt in class, further solidifying our understanding.

3. What knowledge/skill do you need to develop to handle similar situation in future
learning how to insert needles to draw blood, studying the forms submitted and making the acquired reports to be maintained in the system and also learning to handle equipments

4. Apart from the above learning, what did you observe that influenced you?
It is necessary to be quick and steady during the procedure despite the pain, attention must be paid, to prevent mixing of samples as it can cause dire accidents in the near future stringent hygine must be maintained.

Competency addressed	Rating (B): Below Expectations, (M):Meets Expectations, (E): Exceeds Expectations					Initial of faculty and date	Feedback Received Initial of learner
	Critical appraisal	Utilization of learning resources	Active participation	Attitude & Communication Skill	Overall performance		
	M	M	M	M	M	24/1/24	

Self Directed Learning

Rating - (B): Below Expectations, (M): Meets Expectations, (E): Exceeds Expectations

Sl. No	Date	Competency addressed	learning resources used	Concepts learned	performance Rating	Initial of faculty and date	Feedback Received Initial of learner
1.	8/11/2023	PY 3.13	textbook, ppt, oral.	Musular dystrophy	E	8/11/23	
2.	31/01/2024		textbook ppt, oral.	cardio-respiratory changes during exercise.	M	31/01/24	
3.	7/6/24		Textbook	compare & contrast male & female reproductive system, sex determination & differentiation & puberty.	M		
4.	11/6/24		Textbook PPT	Brain death	M	APH 14/6	
5.	12/6/24		Textbook PPT	Effect of removal of gonads on physiological function, Hormonal changes during menopause & Premenopause	M	P	

EARLY CLINICAL EXPOSURE - Reflection

Session number: 1 Date: 27/10/23

Department visited/ activity Blood Bank - Hospital

Objectives

1. Physiological basis of blood grouping
2. Indications for blood transfusion
3. Investigations to be done and precautions to be taken befor blood transfusion
4. Method of blood storage in blood bank

1. Briefly describe what you learnt from this activity.

I have learnt the various rooms and compartment of Blood bank like serology, Donor room and blood grouping room. I have also learnt the various test conducted for the blood sample and its precaution.

2. How do you apply your knowledge of Physiology in this case?

I have learnt blood grouping procedure. That is how to identify the ABO and Rh antigen by various test. I have learnt the physiological aspect of the various test and the environment at which we store the blood.

3. What knowledge/skill do you need to develop to handle similar situation in future

I would have to caution not to make any mistake while handling the blood sample. I also need to make myself very sure with the theory and I have to read the chapter properly before I attend such visit.

4. Apart from the above learning, what did you observe that influenced you?

I saw a donor, who was donating her blood for the first time. She was a very young girl and was probably very scared. While donating her blood, her blood press we fell down and she felt gidy. I have learnt to be careful with the donor and make sure they are comfortabl and alright while donating their blood from this experience.

Competency addressed	Rating (B): Below Expectations, (M):Meets Expectations, (E): Exceeds Expectations					Initial of faculty and date	Feedback Received Initial of learner
	Critical appraisal	Utilization of learning resources	Active participation	Attitude & Communication Skill	Overall performance		
Blood Transfusion	M	M	M	M	M		

EARLY CLINICAL EXPOSURE - Reflection

Session number: 3 Date: 29/2/24

Department visited/ activity Dialysis centre

Objectives

1. what is artificial kidney? what is physiological significance of artificial kidney.
2. Types of dialysis
3. what is hemodialysis.

1. Briefly describe what you learnt from this activity.

The different types of dialysis conducted that is hemodialysis and peritoneum dialysis. The case where dialysis is taken place.

2. How do you apply your knowledge of Physiology in this case?

~~The~~ learnt about artificial kidney and how diffusion and osmosis takes place in the artificial kidney. I saw that edema was a common symtom for dialysing patient.

3. What knowledge/skill do you need to develop to handle similar situation in future

More knowledge about the physiology about artificial kidney and the venous and arterial connection with it.

4. Apart from the above learning, what did you observe that influenced you?

The patient's weight was also regularly checked and accordingly the amount of fluid to be filtered was decided. this plays an important role (blood) in dialysis

Competency addressed	Rating (B): Below Expectations, (M):Meets Expectations, (E): Exceeds Expectations					Initial of faculty and date	Feedback Received
	Critical appraisal	Utilization of learning resources	Active participation	Attitude & Communication Skill	Overall performance		Initial of learner
	M	M	M	M	M	db 29/2/24	

Self Directed Learning

Rating - (B): Below Expectations, (M): Meets Expectations, (E): Exceeds Expectations

Sl. No	Date	Competency addressed	learning resources used	Concepts learned	performance Rating	Initial of faculty and date	Feedback Received Initial of learner
1.	16/9/23	PY1.9		Cell and application to cell research.	M	16-09-2023	
2.	8/11/23	PY 3, 13	Textbook	Muscular dystrophy and myopathies	E	18/11/23	
3.	10/11/23		Textbook and ppt	Compare and contrast in skeletal and smooth muscle.	M	10/11/23	
4.	31/1/24	PY 11.4	Textbook & ppt	Cardiovascular changes and respiratory changes during exercise.	E		
5.	3/4/24		Textbook	Compare and contrast olfactory and gustation.	E	NSD	

EARLY CLINICAL EXPOSURE - Reflection

Session number:

Date: 26/10/23

Department visited/ activity

Objectives

1. Basis of blood grouping
2. Indications of blood transfusion
3. Hazards of blood transfusion

1. Briefly describe what you learnt from this activity.
   criteria for blood donation, blood bag types, procedure & equipment used, tests done for groupin, cross matching & tests for blood based & discases
2. How do you apply your knowledge of Physiology in this case?
   Knowledge acquired from blood grouping, we get to watch the theory learnt in class in action further solidifying our concept
3. What knowledge/skill do you need to develop to handle similar situation in future
   learning how to insert needles to draw blood, studying the forms submitted & making required reports to be maintained.
4. Apart from the above learning, what did you observe that influenced you?
   It is necessary to be quick & steady during the procedure despite the pace, attention must be paid to prevent mixing of the samples, as it can cause major issues in the near future

Competency addressed	Rating (B): Below Expectations, (M):Meets Expectations, (E): Exceeds Expectations					Initial of faculty and date	Feedback Received Initial of learner
	Critical appraisal	Utilization of learning resources	Active participation	Attitude & Communication Skill	Overall performance		
	M	M	M	M	M	26/10/23	

EARLY CLINICAL EXPOSURE - Reflection

Session number: 3

Date: 1-03-20

Department visited/ activity Dialysis

Objectives

1. what is dialysis
2. Indications
3. principle

1. Briefly describe what you learnt from this activity.

→ We learned types of dialysis & how dialysis changes a person's life

2. How do you apply your knowledge of Physiology in this case?

→ We apply renal physiology and perform functions of kidney using different apparatus

3. What knowledge/skill do you need to develop to handle similar situation in future

→ clinical physiology

→ Renal functions & compensatory mechanisms

4. Apart from the above learning, what did you observe that influenced you?

→ How certain mechanisms were invented for easy use of dialysis.

→ How different patients are treated differently.

Competency addressed	Rating (B): Below Expectations, (M):Meets Expectations, (E): Exceeds Expectations					Initial of faculty and date	Feedback Received Initial of learner
	Critical appraisal	Utilization of learning resources	Active participation	Attitude & Communication Skill	Overall performance		
	M	M	M	M	M		

Self Directed Learning

Rating - (B): Below Expectations, (M): Meets Expectations, (E): Exceeds Expectations

Sl. No	Date	Competency addressed	learning resources used	Concepts learned	performance Rating	Initial of faculty and date	Feedback Received Initial of learner
1.	16-9-2023	PY-1.9	PUB-MED & Internet resources	cells and its applications in clinical research and apoptosis.	M	16/9/23.	
2.	08-1[illegible]-2023	PY-3.13	Gk pal and ppt.	Muscular dystrophy; myopathy muscle sprain and cramps	E	8/11/23	
3.	10-11-2023		Internet sources and ppt.	comparision between smooth, skeletal & cardiac muscles. and contraction of smooth muscles	E		
4.	31-01-2024		PPt.	cardio-respiratory changes during excessise	M	31/01/24	
5.	5-4-24		text book oral	Compare & contrast b/w gestation & olfaction			

EARLY CLINICAL EXPOSURE - Reflection

Session number: 2 Date: 26-10-23

Department visited/ activity

Objectives

1. Basis of blood grouping
2. indications of blood transfusion
3. Hazards of blood transfusion

1. Briefly describe what you learnt from this activity.

I was able to understand the rules and conditions of the blood donation centre. also the systematic progression of the place.

2. How do you apply your knowledge of Physiology in this case?

I applied my knowledge to know the normal temperature at which the blood is stored and about the different blood groups, cross matching

3. What knowledge/skill do you need to develop to handle similar situation in future

I must know how to collect blood and separate the components. I must also know to test it for various diseases, proffer storing etc.

4. Apart from the above learning, what did you observe that influenced you?

the calm, quiet atmosphere of the centre and the patients ready willingness to donate blood with a kind heart influenced me the most.

Competency addressed	Rating (B): Below Expectations, (M):Meets Expectations, (E): Exceeds Expectations					Initial of faculty and date	Feedback Received Initial of learner
	Critical appraisal	Utilization of learning resources	Active participation	Attitude & Communication Skill	Overall performance		
Blood Bank	M	M	M	M	M	26/10/23	

EARLY CLINICAL EXPOSURE - Reflection

Session number: Date: 27-2-24

Department visited/ activity – dialysis unit

Objectives

1. what is artificial kidney. explain physysiological basis of artificial kidn
2. What are the indications of dialysis?
3. explain briefly haemodyalysis.

1. Briefly describe what you learnt from this activity.

I learnt the different types of dialysis - haemodyalysis and peritoneal dyalysis, and also the precautions taken before dialysis

2. How do you apply your knowledge of Physiology in this case?

• the components of the dialysing fluid what to anticoagulant has to be injected, in case of surgeries, saline, hypotension, muscle cra

3. What knowledge/skill do you need to develop to handle similar situation in future

I must know the basic skills, what vein to connect the dialysing tube, the duration of dialysis, proper history of the patient, any past surgeries.

4. Apart from the above learning, what did you observe that influenced you?

I observed the well planned and systematic environment around, also the generosity of the patients to let us study the dialysis in them.

Competency addressed	Rating (B): Below Expectations, (M):Meets Expectations, (E): Exceeds Expectations					Initial of faculty and date	Feedback Received Initial of learner
	Critical appraisal	Utilization of learning resources	Active participation	Attitude & Communication Skill	Overall performance		
dialysis unit	M	M	M	M	M	27/2/24	Sparsha

Self Directed Learning

Rating - (B): Below Expectations, (M): Meets Expectations, (E): Exceeds Expectations

Sl. No	Date	Competency addressed	learning resources used	Concepts learned	performance Rating	Initial of faculty and date	Feedback Received Initial of learner
1.	16-9-23	PY 1.9	PUBMED and other internet sources	•Types of stem cells and afflication •methods to study a cell •apoptosis and molecular mechanism	M	16/9/23	sharsh
2.	8-11-23		GK Pal	• Muscular dystrophy, its types • myopathy, types • Focal dystonia, muscle sprain, and muscle cramp.	E	8/11/23	sharsh
3.	10-11-23		PPT based. internet based.	• Comparision between skeletal and smooth muscles	E		sharsh
4.	31-1-23		Indu Khurana, GK. Pal	• Cardiovascular and respiratory changes during exercise	M		sharsh
5.	3/1/24		Text Book	Compare and Contrast Olfaction & Gustation	M		sharsh

EARLY CLINICAL EXPOSURE - Reflection

Session number: 1 Date: 20-10-23

Department visited/ activity

Objectives

1. Classify anemia based on morpholical features of RBC
2. describe erythropoises and it's regulation
3. explain the physiological basis for deficiency anemias and it's managment.

1. Briefly describe what you learnt from this activity.

We learnt about Causes of anemias different kind of anemia & treatment's given to anemic Patievent's.

2. How do you apply your knowledge of Physiology in this case?

This class of physiology helped me to understand how body works in health & how it respond's to daily

3. What knowledge/skill do you need to develop to handle similar situation in future challenges

* Communication & networking skills
* teamwork & interpersonal skills
* Problem Solving.

4. Apart from the above learning, what did you observe that influenced you?

To ask about family history, mentrual cycle and food habit's also ask about Veg/Non veg and not only about the examinations to be done.

Competency addressed	Rating (B): Below Expectations, (M):Meets Expectations, (E): Exceeds Expectations					Initial of faculty and date	Feedback Received
	Critical appraisal	Utilization of learning resources	Active participation	Attitude & Communication Skill	Overall performance		Initial of learner
	E	E	E	E	E	20/10/23	

EARLY CLINICAL EXPOSURE - Reflection

Session number: 2 Date: 24/10/23

Department visited/ activity blood bank visit.

Objectives

1. Basis of classication of blood group
2. Indications for blood transfutions
3. hazzard's of blood mismatch

1. Briefly describe what you learnt from this activity.
I learnt the different stages that have to be followed in the process of blood trasfusion.
2. How do you apply your knowledge of Physiology in this case?
The basis of blood trasfution that I learnt in the Physiology lecture helped us alot.
3. What knowledge/skill do you need to develop to handle similar situation in future
To collect blood from the donor before hand I must know to find the hemoglobin status.
4. Apart from the above learning, what did you observe that influenced you?
I observed that a female donor who had started to donate blood experienced dizziness and an alaram was raised for the same.

Competency addressed	Rating (B): Below Expectations, (M):Meets Expectations, (E): Exceeds Expectations					Initial of faculty and date	Feedback Received Initial of learner
	Critical appraisal	Utilization of learning resources	Active participation	Attitude & Communication Skill	Overall performance		
	M	M	M	M	M		

15.03.24.

EARLY CLINICAL EXPOSURE - Reflection

Session number: 3 Date: 6/02/24

Department visited/ activity: Stimulation centre - Onclase scenario

Objectives

1. To elicit appropriate history
2. To identify the signs and Symptoms & diagnosis
3. demonstrate effective communication and treatment

1. Briefly describe what you learnt from this activity.

I was able to learn how important it is to have presence of mind in emergency situations.

2. How do you apply your knowledge of Physiology in this case?

The situation was where a lady is admitted to hospital after meeting with road accident. Undoubtly she had lost lot of blood hence I came into conclusio

3. What knowledge/skill do you need to develop to handle similar situation in future

- Knowledge about different types of Shock and their diagnosis and treatment plan's.
- Skill to grasp seriousness to situation and act upon it.

4. Apart from the above learning, what did you observe that influenced you?

- Importance of Calm and clear mind without upon the words in the emergency.
- To respect and act upon the words of knowledged and experienced person they might be nurse or ward boy

Competency addressed	Rating (B): Below Expectations, (M):Meets Expectations, (E): Exceeds Expectations					Initial of faculty and date	Feedback Received Initial of learner
	Critical appraisal	Utilization of learning resources	Active participation	Attitude & Communication Skill	Overall performance		
hypo volumic Shock.	M	M	M	M	M		

CERTIFICATION SHEET

Name of Student: Vinayak Garg Phase of MBBS: 1st

Subject: Anatomy (Histology)

Skill: Identify the epithelium under the microscope & describe the various types that correlate to its function.

Competency Number: 65.1

Grading of Student (please circle the appropriate letter – A, B, C, D)

A	Student has performed the assessment without any error
B	Student has performed the assessment with minor errors that need to be rectified
C	Student has performed the assessment with major errors
D	Student has not been able to perform the assessment

SKILL CHECKLIST

Satisfactory (✓), unsatisfactory (X)

Steps	**Attempt I Date:**	**Attempt II Date:**	**Attempt 'n' ..... Date:**
• •			
Grade	D		
Name and Signature of the assessor Dr. Soumen Das			
I have received detailed feedback on my performance including my grade, the errors that I have committed and actions to be taken. (student's signature)			

Certifiers name and signature with date of certification:

Signature, name and Roll No. of student Garg, Vinayak Garg, 144