



Sri Lakshmi Narayana Institute of Medical Sciences

Date:05.09.2020

From

Dr. Tiroumourougane Serane
Professor and Head,
Department of Paediatrics,
Sri Lakshmi Narayana Institute of Medical Sciences
Bharath Institute of Higher Education and Research,
Chennai.

To

The Dean,
Sri Lakshmi Narayana Institute of Medical College
Bharath Institute of Higher Education and Research,
Chennai.

Sub: Permission to conduct value-added course: Developmental Pediatrics Module for Undergraduate students.

Dear Sir,

With reference to the subject mentioned above, the department proposes to conduct a value-added course titled: Developmental Pediatrics for II year MBBS students from Nov 2020- March 2020. Requesting your kind permission for the same.

Kind Regards

Dr. Tiroumourougane Serane

FOR THE USE OF DEANS OFFICE

Names of Committee members for evaluating the course:

The Dean: **Dr. Rajasekar**

The HOD: **Dr. Tiroumourougane Serane**

The Expert: **Dr. Abhijeet Shrivastava**

The committee has discussed about the course and is approved.



Dean

Prof. S. RAJASEKARAN, M.S., (Gen.)
DEAN
Sri Lakshmi Narayana Institute of Medical Sciences
Osudu, Agaram Post, Pondicherry-605 002.



Resource person

ASSISTANT PROFESSOR
DEPARTMENT OF PAEDIATRICS
SRI LAKSHMI NARAYANA INSTITUTE OF
MEDICAL SCIENCES



HOD

PAEDIATRICS HEAD
DEPT. OF PAEDIATRICS
SRI LAKSHMI NARAYANA INSTITUTE OF
MEDICAL SCIENCES
OSUDU, PUDUCHERRY

(Sign & Seal)



OFFICE OF THE DEAN

Sri Lakshmi Narayana Institute of Medical Sciences

OSUDU, AGARAM VILLAGE, VILLIANUR COMMUNE, KUDAPAKKAM POST,
PUDUCHERRY - 605 502.

[Recognised by Medical Council of India, Ministry of Health letter No. U/12012/249/2005-ME (P -II) dt. 11/07/2011]
[Affiliated to Bharath University, Chennai - TN]

Circular

15.10.2020

Sub: Organising Value-added Course: Developmental Pediatrics Module for Undergraduate students reg.,

With reference to the above mentioned subject, it is to bring to your notice that Sri Lakshmi Narayana Institute of Medical Sciences, **Bharath Institute of Higher Education and Research** is organizing **Pediatric Nutrition Module** for Undergraduate students.

The application must reach the institution along with all the necessary documents as mentioned. The hard copy of the application should be sent to the institution by registered/ speed post only so as to reach on or before 30 Oct 2020. Applications received after the mentioned date shall not be entertained under any circumstances.

Prof. S. RAJASEKARAN, M.S., (Gen.)
DEAN
Sri Lakshmi Narayana Institute of Medical Sciences
Osudu, Agaram Post, Pondicherry-605 502.

Dean

Encl: Copy of Course content

Course Proposal

Course Title: Pediatric Nutrition for Undergraduates

Course Objective: Understand about the uniqueness and importance of pediatric nutrition

Course Outcome: On successful completion of the course, the students will have skill in understanding the needs and counselling and managing various aspects of pediatric nutrition.

Course Coordinator: Dr Tiroumourougane Serane

Course Faculties with Qualification and Designation:

- 1. Dr Tiroumourougane Serane – Head of Department**
- 2. Dr. Abhijeet Shrivastava – DNB Paediatrics – Assistant professor**

S.NO	DATE	TOPIC	COORDINATOR	TIME	HOURS
1	20/8/2020	Food pyramid	Dr Tiroumourougane Serane	1pm-5pm	4 hours
2	21/8/2020	Importance of nutrition	Dr Tiroumourougane Serane	2pm-5pm	3 hours
3	24/8/2020	Nutrition assessment	Dr Tiroumourougane Serane	1pm-5pm	4 hrs hours
4	25/8/2020	Anthropometry	Dr Tiroumourougane Serane	1pm-5pm	4 hrs
5	26/8/2020	ICMR guidelines	Dr Tiroumourougane Serane	1pm-5pm	4hrs
6	27/8/2020	Protein and calorie value	Dr Tiroumourougane Serane	1pm-5pm	4 hrs

7	28/8/2020	Protein energy malnutrition	Dr Tiroumourougane Serane	1pm-5pm	4 hrs
8	29/8/2020	Severe acute malnutrition	Dr Tiroumourougane Serane	2pm-5pm	3 hrs
				Total Hours	30

Course Curriculum/Topics with schedule (Min of 30 hours)

REFERENCE BOOKS:

- 1. Nelson textbook of pediatrics – 20th edition**
- 2. Elizabeth textbook of nutrition**

VALUE ADDED COURSE

1. Name of the programme & Code

Developmental Paediatrics (Module on developmental Paediatrics) , PECO2

2. Duration & Period

30 hrs , Nov 2020- March 2021

3. Information Brochure and Course Content of Value Added Courses

Enclosed as Annexure- I

4. List of students enrolled

Enclosed as Annexure- II

5. Assessment procedures:

Multiple choice questions- *Enclosed as Annexure- III*

6. Certificate model

Enclosed as Annexure- IV

7. No. of times offered during the same year:


One

8. Summary report of each program year-wise

Value Added Course- Nov 2020 – March 2021					
Sl. No	Course Code	Course Name	Resource Persons	Target Students	Strength & Year
1	PECO2	developmental paediatrics (Module on developmental Paediatrics)	Dr.Abijeeth	II MBBS	10 candidate November 2020 –March 2021

9. Course Feed Back

Enclosed as Annexure



RESOURCE PERSON

ASSISTANT PROFESSOR
DEPARTMENT OF PAEDIATRICS
SRI LAKSHMI NARAYANA INSTITUTE OF
MEDICAL SCIENCES



COORDINATOR

PAEDIATRICS HEAD
DEPT. OF PAEDIATRICS
SRI LAKSHMI NARAYANA INSTITUTE OF
MEDICAL SCIENCES
OSUDU, PUDUCHERRY

DEVELOPMENTAL PEDIATRICS
Annexure -2



COURSE DETAILS

Course title	Developmental paediatrics
Course code	PECO2
Objective	<ol style="list-style-type: none">1. Laws of development2. Neonatal reflexes3. Motor development4. Fine motor development5. Language and social development6. Vision and hearing assessment7. History and examination8. 360 degree examination9. Developmental scales

	10. Upper age limit for attainment of milestone
Further learning opportunities	Neurology assessment
Key competencies	On successful completion of course the students will have skill in assessment of development in children, and early identification of developmental delay
Target student	Second year MBBS
Duration	30hrs, Nov 2020-March 2021
Theory / practical session	30 hrs
Assessment procedure	Multiple choice questions

Development is a continuous process beginning in utero and progressing till maturity.

Sequence of attainment of milestones is essentially the same in all children. (Variation only in time and manner of attainment)

Development proceeds in a cephalo caudal direction - head control precedes trunk control which precedes limb control

Control of limbs in a proximodistal fashion where hand use is learnt before finger control.

Certain primitive reflexes have to be lost before appropriate milestone is achieved.

Initial disorganized mass activity is gradually replaced by more specific activity

Control of limbs in a proximal to distal fashion where hand use is learnt before finger control.

Certain primitive reflexes have to be abolished to achieve milestone

REFLEXES

- Palmar grasp - appears 28 weeks, disappears 2-3 months
- Rooting - appears 32 weeks, less prominent after 1 month

- Moro - appears 28 - 32 weeks, disappears 5 - 6 months
- Asymmetric Tonic neck reflex (ATNR) - appears 35 weeks, disappears 2 - 3 months
- Landau - appears 3 months, disappears around 1 year
- Parachute - appears 6 - 9 months, remains throughout life.

MORO'S REFLEX



GRASP REFLEX





Developmental domains

1. Gross Motor

2. Fine motor
3. Personal and social development and general understanding
4. Language
5. Vision and hearing
6. Gross Motor
7. Fine motor
8. Personal and social development and general

understanding

9. Language and hearing

DEVELOPMENTAL ASSESSMENT

Pull to sit-

- Newborn complete head lag, back rounded
- 6 weeks - head control begins

Ventral suspension-

- Newborn head flops down
- 6 weeks momentarily holds in horizontal plane
- PULL TO SIT

Infant gently pulled to sitting position.

In newborns, head completely lags behind



PULLTOSIT



DEVELOPMENT AT 8 WEEKS



- Prone position face lifted up to 45 degree
- Ventral suspension
–can maintain head in line with body
- Social- Social smile



- Pull to sit- head steady
- Prone position -face, head and chest off the pouch
- Ventral suspension head above the plane of trunk
- Fine motor- Bidextrous appra



- Prone position can lift chin and greater part of chest while supporting weight on extended arms.
- Sits with support (tripod sitting)
- Fine Motor- Holds cube crudely - Unidextrous

DEVELOPMENT AT 8 WEEKS





- Pull to sit- head steady
- Prone position -face, head and chest off the pouch
- Ventral suspension head above the plane of trunk
- Fine motor- Bidextrous approach



PINCER GRASP



Gross motor—sitting without support.



- Gross motor: stands holds on (with support)
- Fine motor: immature pincer grasps
- Social : waves bye bye

PINCER GRASP

- Language: says bisyllables(mama,baba,



- Pick things up with thumb and index finger.
- Immature- at 9 months
- Mature- at 1 year

PEEK-A-BOO



DEVELOPMENT AT 12 MONTHS



Stands without support

Walks alone but falls

Mature pincer grasp

Play simple ball game

1-2 words with meaning

DEVELOPMENT AT 18 MONTHS



- Runs, explore drawers
- Domestic mimicry
- 8-10 words

DEVELOPMENT AT 2 YEARS



- Walks up and down stairs (2 feet/step)
- Tower of 6 blocks
- Pulls people to show toys
- Sentences

DEVELOPMENT AT 3 YEARS



- Rides tricycle
- alternate foot going upstairs
- Tower of 9 blocks
- Copies circle
- Knows name and gender

DRAWING A CIRCLE



DEVELOPMENT AT 4 YEARS



- Hops on one foot
- Alternate foot going downstairs
- Copies cross
- Group play
- Says poem

DEVELOPMENT AT 4 YEARS
Hopsononefoot4yrs



Fine Motor

- Can draw a rectangle
- Can copy a cross

DEVELOPMENT AT 5 YEARS



- Gross motor- Play skipping rope
- Fine motor- Copies triangle
- Social- Dress and undress
- Language- Ask meaning of words
- Identify 4 colors



- A) Ask for risk factors affecting development
- B) Attainment of milestones. **Differentiate between delay and regression**
- C) Form a gross estimation of developmental age: Ask for attained milestones and ascertain if development age matches with chronological age.

DEVELOPMENTAL EVALUATION



EXAMINATION:

A. Physical examination: Look for stigmata of intrauterine infection, hypothyroidism.

A. Assess physical growth and head circumference.

C. Screen for vision and hearing

D. Neurological examination and primitive reflexes

EQUIPMENT FOREVALUATION



KIT -

1. Red ring(diameter 6-7cm) tied to a string
2. Nine red cubes
3. Paper pellets
4. Spoon
5. Cup with handle
6. Book with thick pages
7. Picture book
8. Red pencil, paper
9. Doll, mirror

10. Developmental milestones list



Prerequisites -

1. Child should not be hungry or tired
2. Playful mood with mother around.
3. Adequate time to make the baby comfortable.
4. Observe for alertness, concentration and skills of the baby.

DEVELOPMENTAL QUOTIENT



- After evaluation ascertain the child's developmental age.
- Check if development corresponds to chronological age. If not the developmental quotient can be applied for every sphere.
- $DQ = [\text{Developmental Age} / \text{Chronological age}] \times 100$

UPPER LIMIT AGE OF ATTAINMENT OF MILESTONES
{RED FLAG SIGNS}



MILESTONE

- Visual fixation
- Vocalisation
- Sitting without support
- Standing with support
- Hands and knees crawling
- Standing alone
- Walking alone
- Single word
- Imaginative play

AGE

- 2 months
- 6 months
- 10 months
- 12 months
- 14 months
- 17 months
- 18 months
- 18 months
- 3 years

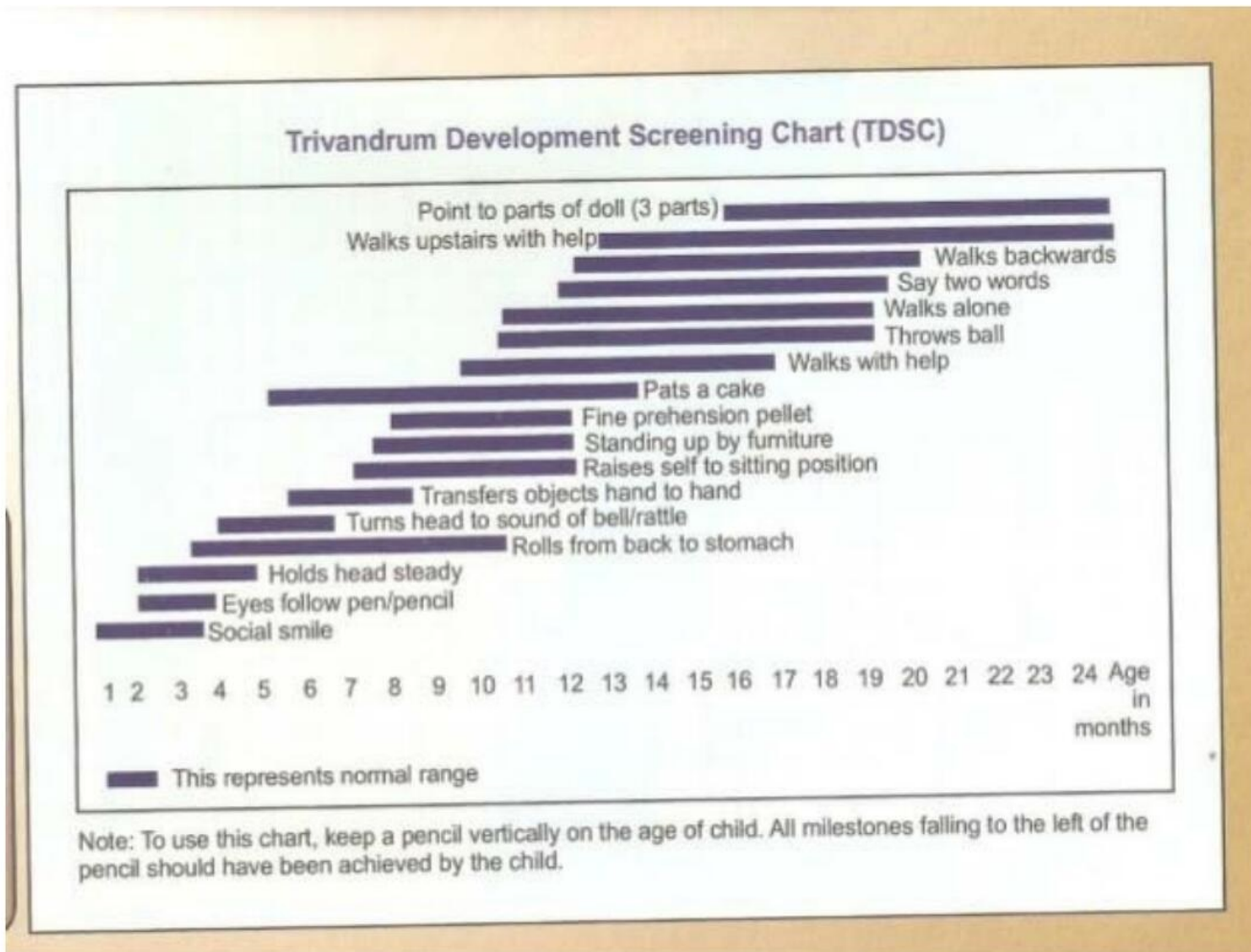
DEVELOPMENTAL SCREENING



Brief assessment procedure design to identify children who require more intensive diagnosis or assessment viz.,

- Phatak's Baroda screening tests
- Denver developmental screening test
- Trivandrum developmental screening tests
- Good enough screening tests

TRIVANDRUM DEVELOPMENT SCREENING CHART (TDSC)





DEVELOPMENTAL SCREENING

HIGH RISK CLINIC AT OUR HOSPITAL



WHO ALL TO BE SCREENED

Ideally all children should be screened at periodic intervals

At least

- Children with perinatal risk factors
- Children with r

Thank You



VALUE ADDED COURSE

Developmental Paediatrics (Module on developmental Paediatrics) PECO2
List of Students Enrolled (November 2020-March 2021)

2 nd Year MBBS Student			Signature
Sl. No	Name of the Student	Roll No	
1	AASHIK MUKESH. M. S	U14MB201	
2	ABEETHA.M	U14MB202	
3	ABHINAV. S	U14MB203	
4	ABINAYA. M	U14MB204	
5	ABISHEK. R	U14MB205	
6	ABIRAMI. S	U14MB206	
7	AGALYA. S	U14MB207	
8	AJAY PANDIAN. V	U14MB208	
9	AJEETH. R	U14MB209	
10	AJITH KUMAR. M.K.	U14MB210	
11	AKSHAI. S	U14MB211	
12	ALLEN DANIEL XAVIER.]	U14MB212	
13	ALTHAF AHMED	U14MB213	
14	AMARA LOKESH	U14MB214	
15	AMRESH. K	U14MB215	
16	ANANT SURYA. R	U14MB216	
17	ANDREW MARIE XAVIER.V	U14MB217	
18	APSARA. P	U14MB218	
19	ARPUDHA. A	U14MB219	
20	ARUL PRABHA MADHIVADHANI. M	U14MB220	



Dr. Abhijeet Shrivastava
RESOURCE PERSON

ASSISTANT PROFESSOR
DEPARTMENT OF PAEDIATRICS
SRI LAKSHMI NARAYANA INSTITUTE OF
MEDICAL SCIENCES



Dr. Tiroumourougane
COORDINATOR

PAEDIATRICS HEAD
DEPT. OF PAEDIATRICS
SRI LAKSHMI NARAYANA INSTITUTE OF
MEDICAL SCIENCES
OSUDU, PUDUCHERRY



**SRI LAKSHMI NARAYANA INSTITUTE OF HIGHER EDUCATION
AND RESEARCH**

Abhinaya . M
U 14MB204

Annexure - III

ALL ABOUT DEVELOPMENTAL PEDIATRICS (MODULE ON DEVELOPMENTAL
PAEDIATRICS)

MULTIPLE CHOICE QUESTIONS

Course Code: PEC02

9/10 ✓

I. ANSWER ALL THE QUESTIONS

Questions

1. Waves bye bye at ----- months
A- 5 months
B- 9 months ✓
C- 7 months
D- 14 months
2. Roll over attained at ----- months
A- 5 months
B- 3 months ✓
C- 7 months
3. Eye contact attained at ----- months
A- 2 months ✓
B- 6 months
C- 4 months
4. Rides tricycle at ----- years
A- 3 years
B- 5 years ✓
C- 2 years
5. Upper age limit for walking ----- months
a- 18 months
b- 20 months ✓
c- 23 months



SRI LAKSHMI NARAYANA INSTITUTE OF HIGHER
EDUCATION AND RESEARCH



SRI LAKSHMI NARAYANA INSTITUTE OF HIGHER EDUCATION
AND RESEARCH

Abhinav S

V14 MB 203

Annexure - III

ALL ABOUT DEVELOPMENTAL PEDIATRICS (MODULE ON DEVELOPMENTAL
PAEDIATRICS)

MULTIPLE CHOICE QUESTIONS

Course Code: PEC02

8/10

I. ANSWER ALL THE QUESTIONS

Questions

1. Waves bye bye at months
A- 5 months
☒ B- 9 months
C- 7 months
D- 14 months
2. Roll over attained at months
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☒ B- 3 months
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A- 2 months
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C- 4 months
4. Rides tricycle at years
A- 3 years
☒ B- 5 years
C- 2 years
5. Upper age limit for walking months
☒ a- 18 months
b- 20 months
c- 23 months



Sri Lakshmi Narayana Institute of Medical Sciences

Affiliated to Bharath Institute of Higher Education & Research
(Deemed to be University under section 3 of the UGC Act 1956)



CERTIFICATE OF MERIT

This is to certify that _____AMARA LOKESH_____ has actively participated in the Value Added Course on *Developmental Paediatrics* (held during Nov 2020 – March 2021 Organized by Sri Lakshmi Narayana Institute of Medical Sciences, Pondicherry- 605 502, India.

Dr. Abijeeth

RESOURCE PERSON

Dr. Tiroumourougane Serane

COORDINATOR



Sri Lakshmi Narayana Institute of Medical Sciences

Affiliated to Bharath Institute of Higher Education & Research

(Deemed to be University under section 3 of the UGC Act 1956)



CERTIFICATE OF MERIT

This is to certify that _____ARPUDHA. A U14MB219_____ has actively participated in the Value Added Course on *Developmental Paediatrics* (held during Nov 2020 – March 2021 Organized by Sri Lakshmi Narayana Institute of Medical Sciences, Pondicherry- 605 502, India.

Dr. Abijeeth
RESOURCE PERSON

Dr. Tiroumourougane Serane
COORDINATOR

Student Feedback Form

Course Name: **DEVELOPMENTAL PEDIATRICS**

Subject Code: **PEC02**

Name of Student: Abhinav . S Roll No.: U14MB203

We are constantly looking to improve our classes and deliver the best training to you. Your evaluations, comments and suggestions will help us to improve our performance

	Particulars	1	2	3	4	5
	Objective of the course is clear			✓		
	Course contents met with your expectations				✓	
	Lecturer sequence was well planned				✓	
	Lectures were clear and easy to understand			✓		
	Teaching aids were effective			✓	✓	
	Instructors encourage interaction and were helpful				✓	
	The level of the course			✓		
8	Overall rating of the course	1	2	3	4	5

Rating: 5 - Outstanding; 4 - Excellent; 3 - Good; 2 - Satisfactory; 1 - Not-Satisfactory

Suggestions if any:

Student Feedback Form

Course Name: DEVELOPMENTAL PEDIATRICS

Subject Code: PEC02

Name of Student: Abhinaya - M Roll No.: U14MB204

We are constantly looking to improve our classes and deliver the best training to you. Your evaluations, comments and suggestions will help us to improve our performance

Sl. NO	Particulars	1	2	3	4	5
1	Objective of the course is clear			✓		
2	Course contents met with your expectations			✓	✓	
3	Lecturer sequence was well planned				✓	
4	Lectures were clear and easy to understand				✓	
5	Teaching aids were effective				✓	
6	Instructors encourage interaction and were helpful			✓	✓	
7	The level of the course			✓		
8	Overall rating of the course	1	2	3	4	5

* Rating: 5 - Outstanding; 4 - Excellent; 3 - Good; 2 - Satisfactory; 1 - Not-Satisfactory

Suggestions if any:

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ALL ABOUT DEVELOPMENTAL PEDIATRICS (MODULE ON DEVELOPMENTAL
PAEDIATRICS)

MULTIPLE CHOICE QUESTIONS

Course Code: PEC02

I. ANSWER ALL THE QUESTIONS

Questions

1. Waves bye bye at ----- months
A- 5 months
☒ B- 9 months
C- 7 months
D- 14 months
2. Roll over attained at ----- months
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4. Rides tricycle at ----- years
A- 3 years
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5. Upper age limit for walking ----- months
☒ a- 18 months
☒ b- 20 months
c- 23 months



Ashimaya M
U 14 MB 204

**SRI LAKSHMI NARAYANA INSTITUTE OF HIGHER EDUCATION
AND RESEARCH**

Annexure - III

**ALL ABOUT DEVELOPMENTAL PEDIATRICS (MODULE ON DEVELOPMENTAL
PAEDIATRICS)**

MULTIPLE CHOICE QUESTIONS

Course Code: PEC02

I. ANSWER ALL THE QUESTIONS

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4. Rides tricycle at ----- years
A- 3 years
☒ B- 5 years
C- 2 years

5. Upper age limit for walking ----- months
a- 18 months
☒ b- 20 months
c- 23 months

Date: 01.04.2021

From

Dr. Tiroumourougane Serane
Professor and Head,
Department of Paediatrics,
Sri Lakshmi Narayana Institute of Medical Sciences
Bharath Institute of Higher Education and Research,
Chennai.

Through Proper Channel

To

The Dean,
Sri Lakshmi Narayana Institute of Medical Sciences
Bharath Institute of Higher Education and Research,
Chennai.

Sub: Completion of value-added course: Developmental Pediatrics for Undergraduates

Dear Sir,

With reference to the subject mentioned above, the department has conducted the value-added course titled: Pediatric Nutrition for II MBBS students from Nov 2020 to March 2021 for 10 Third Year MBBS students. We solicit your kind action to send certificates for the participants, that is attached with this letter. Also, I am attaching the photographs captured during the conduct of the course.

Kind Regards,



Dr. Tiroumourougane Serane

**PAEDIATRICS HEAD
DEPT. OF PAEDIATRICS
SRI LAKSHMI NARAYANA INSTITUTE OF
MEDICAL SCIENCES
OSUDU, PUDUCHERRY**

Encl: Certificates

Photographs

PECO2 –DEVELOPMENTAL
PAEDIATRICS

