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H.K.E. SOCIETY'S

BASAVESHWAR COLLEGE OF EDUCATION,

BVB CAMPUS, MANHALLI ROAD, BIDAR – 585 403 KARNATAKA, INDIA.

(Recognized by SRC NCTE, New Delhi and Permanent Affiliated to Gulbarga University, Kalaburagi)

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CRITERION – II

TEACHING LEARNING AND EVALUATION



2.4: Competency and Skill Development

2.4.5: Adequate skills are developed in students for effective use of ICT for teaching learning process

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Sl. No.	Particulars
D	Identifying and selecting/ developing online learning resources

IQAC Coordinator
H.K.E.S. Basaveshwar College of Education
BIDAR - 585 403 (Karnataka)

PRINCIPAL
H.K.E.S. Basaveshwar College
of Education, BIDAR

ಬಸವೇಶ್ವರ ಶಿಕ್ಷಣ ಮಹಾವಿದ್ಯಾಲಯ, ಬೀದರ.

ಸರ್ಕಾರಿ ಪ್ರೌಢ ಶಾಲೆ, ಅಮಲಾಪೂರ ತಾ|| ಜಿ|| ಬೀದರ

ನೈದಾನಿಕ ಪರೀಕ್ಷೆ -2020-21

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ಸಮಯ: 30 ನಿಮಿಷ

ಅಂಕಗಳು: 25

ಶಿಕ್ಷಣಗಳನ್ನು ಪುಂಜಿ 5 X1=5

1. ಕನ್ನಡದ ವರ್ಣಮಾಲೆಯಲ್ಲಿ-----ಅಕ್ಷರಗಳಿವೆ.
2. ಅ,ಇ,ಉ,ಋ,ಎ,ಓ, ಇವು-----
3. ಆ,ಈ,ಊ,ಋ,ಓ,ಔ ಇವು-----
4. ಅಂ, ಆ: ಇವು-----
5. ನಯನ, ಕನಕ, ಸಮರ, ಭತ್ತ ಇವುಗಳಲ್ಲಿ ಒತ್ತಕ್ಷರ ಇರುವ ಪದ-----

ಗಳಿಗಿನ ಪದಗಳಿಗೆ ಸಮನಾದ ಪದಗಳನ್ನು ಬರೆಯಿರಿ. 5 X1=5

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4. ಜಲ=
5. ಭೂಮಿ=

ಈ ಕೆಳಗಿನ ವಾಕ್ಯಗಳನ್ನು ಸರಿ ಪಡಿಸಿ ಬರೆಯಿರಿ. 5 X1=5

1. ಹೋದನು ರಾಮನು ಕಾಡಿಗೆ
2. ನಮ್ಮ ಬೀದರ ಜಿಲ್ಲೆ
3. ಓದುತ್ತಿದ್ದೇನೆ 8ನೇ ತರಗತಿಯಲ್ಲಿ ನಾನು
4. ಬರೆದವರು ಕುವೆಂಪು ನಾಡಗೀತೆ
5. ಪ್ರೌಢಶಾಲೆ ನನ್ನ ಶಾಲೆಯ ಹೆಸರು ಅಮಲಾಪೂರ ಸರ್ಕಾರಿ

IV. ಈ ಕೆಳಗಿನ ಅಕ್ಷರಗಳನ್ನು ಸರಿಯಾಗಿ ಹೊಂದಿಸಿ ಬರೆಯಿರಿ. 5 x1=5

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V. ಈ ಕೆಳಗಿನ ಪದಗಳಿಗೆ ವಿರುದ್ಧ ಪದಗಳನ್ನು ಬರೆಯಿರಿ. 5 x1=5

1. ರಾತ್ರಿ X

2. ದುಃಖ X

3. ಅಳು X

4. ಸಿಹಿ X

5. ಬೆಳಕು X

Estd : 1980

ಕೃ. ಕ. ಶಿಕ್ಷಣ ಸಂಸ್ಥೆಯ H. K. E. Society

Ph.: 08482 - 235209

ಬಸವೇಶ್ವರ ಶಿಕ್ಷಣ ಮಹಾವಿದ್ಯಾಲಯ, ಬೀದರ

BASAVESHWAR COLLEGE OF EDUCATION, BIDAR

UNIT PLAN / UNIT TEST / RESOURCE UNIT

20²² - 20²³

Name of the Student Teachers Shivani S. Mugte

Roll No. 21

Reg. No. UDUAH22E0021

Subject Biological Science

Method I/II Method - II

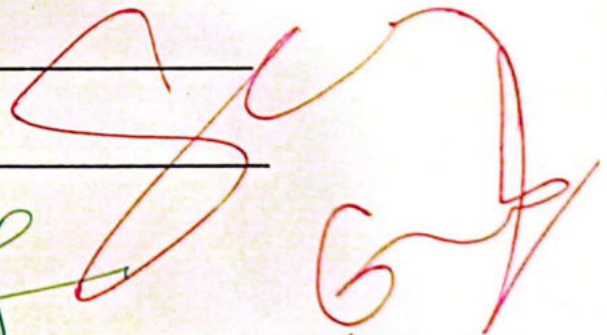

IQAC Coordinator

H.K.E.S. Basaveshwar College of Education

BIDAR - 565 403 (Karnataka)


PRINCIPAL

H.K.E.S. Basaveshwar College
of Education BIDAR


Signature of the Method Master

Unit Plan

⇒ Introduction:

Unit plan plays an important role for the successful execution of a task. It caters to the proper realisation of the aims and objectives of a task. It helps in proper utilisation of time and energy on the part of human and material resources. It is equally true for the process of teaching learning process. The teachers who plan their work properly prove quite effective in their teaching task that is why science teacher concentrates on wise planning of his teaching.

➤ Meaning of Unit Plan:

The term Unit signifies Unity. Unit plan is the proper selection of learning activities. which are closely selected with each other and presents a complete picture. Unit plan is a plan made on the entire Unit which may consist a set of concepts, Principles generalization etc.

Which in turn together built, themselves into a Unit it is not simply a block of subject matter as viewed earlier but a systematic and scientific arrangement of subject matter.

⇒ Definitions of Unit Plan:

According to Preston:

A unit is the organization of learning materials into large block. A unit is large block of selected subject matter as can over viewed by the learner.

According to Sanford:

A unit is an outline of carefully selected subject matter which has been isolated block of its relationship to pupil need and interest.

According to Cater & Good:

Unit may be described as an organization of various

activities, experiences and types developed co-operatively by a group of pupils under teacher- leadership.

IV) Characteristics of Unit Plan:

The good unit plan should be.

- 1) Meaningful Segment of well organized Subject Matter.
- 2) Organized body of information and experiences
- 3) Outline of carefully selected Subject Matters.
- 4) Large block of selected Subject Matter.
- 5) Not too length or too short.
- 6) Retains the ~~interest~~ of the Subject Students.
- 7) Provide different types of activities and learning Experiences
- 8) Permits to growth from time to time

Importance of Unit Plan:

1. It presents key ideas of subject in more unified and systematic manner
 2. It initiates new activities which are not possible during the class period
 3. It individualizes the instruction at PHS best
 4. It includes joyful types of teaching activities.
 5. It extends structural experiences beyond the limit prescribed by the Syllabus.
- It anticipates future needs and materials to be developed.
- It helps the teacher to realize the instructional objectives.
- It covers all the three domains

Learning Experiences has two dimensions:

1. Teacher activity: The role played by the teacher in class to cause learning is teacher activity. The teacher does many activities in the class like questioning, explaining etc.

• Pupil activity: They very system of education is weaved around a child taken place in classroom. Hence it is expected to find a reaction for every teacher activity by pupil.

evaluation: The purpose of Unit Plan is the achievement of the best result of teaching-learning process. So the teacher should have appropriate evaluation tool to know whether his objectives are achieved or not. This can be done through Unit.

Merits of Unit Plan

- 1) Unit Plan makes the process of learning more interesting.
- 2) The students can apply the gained knowledge. Partially in their life.
- 3) In the process of teaching and learning, the participation of teachers and taught takes place.
- 4) It provides the proper coordination of subject matter with the life of the children and with the other school subject.

Demerits of Unit Plan

- 1) Only experts can teach by this method. which is available less in number.
- 2) Proper evaluation cannot be carried out in the lower classes.
- 3) It is time-consuming.
- 4) There is a lack of freshness and learning becomes monotonous and stereotyped.

Format of Unit Plan:

- 1) Information
- 2) Subject format
- 3) Nature and Objectives of Unit
- 4) Outline of Unit
- 5) Instructional objectives
- 6) Motivation
- 7) Development (or) Presentation
- 8) Activities
- 9) Teaching Aids
- 10) Evaluation
- 11) Unit test
- 12) Conclusion
- 13) References.

MODEL OF UNIT PLAN

Information:

Name of the student teacher : Shivani. S.M.

Name of the school : Kittur Raní Channamma Residential School.

Reg. No : UOUAH22E0021

Subject : Biological Science

Topic : ~~Pollution~~ of Air and water

Class : 8th std.

Subject Format:

SI.No	SubUnits	Date
01	Air pollution	21/2/24.
02	How the air is getting polluted?	21/2/24
03	Green House effect	26/2/24
04	Water Pollution	21/2/24.
05	Potable Water	25/2/24.

Nature and objectives of unit:

-Air pollution is contamination of air by impurities which may have harmful impact on living organisms and the non-living organisms. Pollutants are the substances which contaminate air and water. Carbon monoxide, nitrogen oxides, carbon dioxide, methane and sulphur dioxide are the major pollutants of air. Increasing levels of greenhouse gases like CO₂ are leading to global warming. Water pollution is the contamination of water by substances harmful to life. Water which is polluted and ~~fit~~ for drinking is known as potable water. Water is a precious natural resource. We must learn to conserve it.

Outline of the Unit:

- 1) Sub Unit - I
 - 1) Introduction
 - 2) Air Pollution
 - 3) Air Constituents
- 2) Sub-unit - II
 - 1) Air Pollutants
 - 2) Effects of air pollution
 - 3) CFC's
- 3) Sub-Unit III.
 - 1) Case study on Taj mahal
 - 2) Green House Effect
 - 3) Global Warming

4) Sub-Unit - IV

- 1) Water Pollution
- 2) Water pollutants
- 3) How does water gets polluted?

5) Sub-unit V

- 1) Necessity on water purification
- 2) Potable water
- 3) How water can be prevented from pollution.

Instructional Objectives:

General Objectives.

- 1) To develop the interest about learning Science.
- 2) To develop scientific attitude among students.
- 3) To develop abilities of imagination, reasoning.
- 4) To develop the skill of Science Experiment.
- 5) To increase the knowledge of nature of scientific enterprise
- 6) Imparting the knowledge of fundamental principles and concepts in Sci
- 7) To develop logical thinking among students.
- 8) To develop skill in handling and manipulating apparatus in Science.

Specific Objectives

Knowledge :

- 1) Students are able to State the Air Pollution
- 2) Students are able to Define the Pollutants.
- 3) Students are able to Recognise the green house effect
- 4) Students are able to Denote the water Pollution
- 5) Students are able to Define the Potable Water.

Understand :

- 1) Students are able to explain the Constituents of Air.
- 2) Students are able to observe how the air is getting polluted.
Global Warming.
- 3) Students are able to explain how the water is getting polluted.
- 4) Students are able to explain how the water gets filtered.

57 Application :-

- 1) Students are able to Analyse the Air pollution.
- 2) Students are able to give Examples of the gases which are making the air polluted.
- 3) Students are able to reason the Cause for global warming.
- 4) Students are able to give reason how water is getting polluted.
- 5) Students are able to new idea to prevent water-borne polluted.

47 Skill :-

- 1) Students are able to discuss the constituents of Air pollution.
- 2) Students are able to connect the how the air is getting polluted.
- 3) Students are able to connect the green house gases.
- 4) Students are able to ~~connect~~ with the polluted. since specially the ganga is
- 5) Students are able to denote the Purified Water.

नोट्स

Q Name some festival which are celebrated in India?

Ans - Rakhi, Purnima, etc are some festival which are celebrated in India

Q - How are celebrated festivals in India?

Ans - Celebrate festivals by lighting lamps and burning crackers

Q What comes out after bursting the crackers?

Ans - Smoke, dust gases comes out after bursting the crackers

Q What are the effect of smoke, dust on humans?

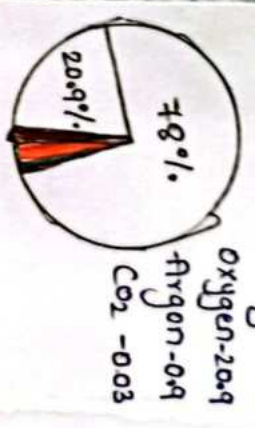
Ans - Smoke, dust causes breathing problem in humans.

Q What are the harmful effects of gases on environment?

Ans - Harmful gases create pollution in environment.

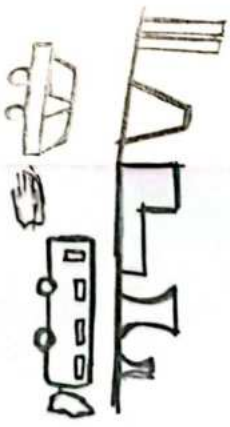
Preparation (or) presentation:

Sl. No.	Topic	Teaching Aids	Co-selection	Time.
1) <u>Air Pollution</u> a) Introduction. b) Air pollution.	- Air Property 1) Air pollution and water pollution was thought by giving examples. 2) Pollutants uses & by lecture method. 3) Introductory Con the board. 4) Air pollution is -ned by PowerPoint. 5) Air pollution is by lecture method. 6) Air pollution was thought uses showing charts. 7) Air Constituents was explained by lecture method. 8) Air Constituents was done by showing image of Air Constituents. 9) Charts were shown.	Teaching Aids Physical, chemical or biological change in the air is called Air pollution	Co-selected with the Environmental Science	15 mins 15 mins



ಪ್ರೊ. ಡಾ. ಬಿ. ಸಂಕರ್ಷಣ್ಣ
 ಬಸವೇಶ್ವರ ಶಿಕ್ಷಣ ಮಹಾವಿದ್ಯಾಲಯ, ಬಸವರ

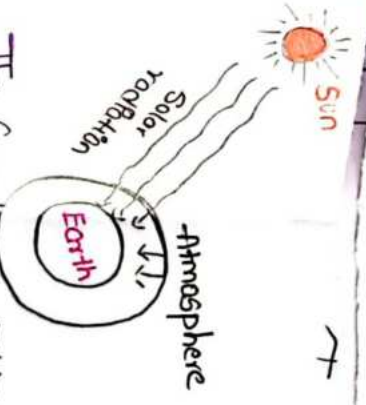
Sl.No	Topic	Activity	Teaching Aids	Co-relection	Time
II	How the air is getting polluted.	Air pollutants were explained by lect	Teaching Aids	Co-relection	Time
1	Air pollutants.	Air pollutants were explained by lect explained by sh choudh.	Affects of Air Pollution	Co-relection	15 min
2	Affects of Air pollution	Air pollution was done by den way explained by showing choudh	Affects of Air Pollution	Co-relection	15 min
3	CFEs.	CFE's was done lect and Pt. Nagam were explained	Air pollutants.	Co-relection	15 min



- Air pollutants.
- 1) Nitrogen dioxide
 - 2) Carbon monoxide
 - 3) Sulphur dioxide
 - 4) Ground level ozone

Used to teach CFE's

Sl.No	Activity	Co-ordination	Time
<p>3) Green House Effect.</p> <p>1) Case Study on Taj Mahal?</p>	<p>1) Taj Mahal case was explained method.</p> <p>2) Taj Mahal coloration was explained using examples.</p> <p>3) Taj Mahal case was shown by c</p>	<p>Carbon Dioxide</p> <p>1) Methane</p> <p>2) Nitrous oxide</p> <p>3) Carbon dioxide</p> <p>4) Ozone</p> <p>5) Carbon Monoxide</p>	<p>15 mins</p>
<p>2) Green house effect.</p>	<p>1) Green house gases were explained.</p> <p>2) Green house gases were thought by method</p> <p>3) Green house gases were explained. Deductive method</p>	<p>Co-ordinated with the Chemical Science</p>	<p>15 mins</p>
<p>3) Global Warming</p>	<p>1) Global warming explained by lecture method</p> <p>2) Global warming seen by class</p> <p>3) Global warming through inductive method</p>	<p>The gradual increase in the Earth's temperature is called global warming.</p>	<p>15 mins</p>



The Greenhouse Effect.

The gradual increase in the Earth's temperature is called global warming.

S.No	Topic	Teaching Aids	Co-relation	Time
1)	Water Pollution	1) Lecture method 2) Field visit 3) Case study 4) Group discussion 5) Role play 6) Video 7) PPT 8) Model 9) Demonstration 10) Field trip 11) Guest lecture 12) Seminar 13) Workshop 14) Quiz 15) Debate 16) Group project 17) Case analysis 18) Role play 19) Video 20) PPT 21) Model 22) Demonstration 23) Field trip 24) Guest lecture 25) Seminar 26) Workshop 27) Quiz 28) Debate 29) Group project 30) Case analysis 31) Role play 32) Video 33) PPT 34) Model 35) Demonstration 36) Field trip 37) Guest lecture 38) Seminar 39) Workshop 40) Quiz 41) Debate 42) Group project 43) Case analysis 44) Role play 45) Video 46) PPT 47) Model 48) Demonstration 49) Field trip 50) Guest lecture 51) Seminar 52) Workshop 53) Quiz 54) Debate 55) Group project 56) Case analysis 57) Role play 58) Video 59) PPT 60) Model 61) Demonstration 62) Field trip 63) Guest lecture 64) Seminar 65) Workshop 66) Quiz 67) Debate 68) Group project 69) Case analysis 70) Role play 71) Video 72) PPT 73) Model 74) 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S.NO	Topic	Activity	Teaching -Aids	Co-education	Time
1	<p>Potable Water</p> <p>1) Activity on water pollution.</p> <p>2) Potable Water.</p>	<p>1) Activity method was used to explain the concept</p> <p>2) Experimental method was taught to the concept explain</p> <p>3) Lecture method was used.</p> <p>1) Lecture method was used for explained the concept</p> <p>2) Inductive method was used to explain.</p> <p>3) Charts were shown on while explaining the concept</p>	<p>Potable Water</p> <p>↓</p> <p>Safe to Drink (purified)</p>	<p>Co-education with the ecology and biological study.</p>	15 mins
3	<p>1) How water can be prevented from pollution</p>	<p>1) Lecture method was used to explain.</p> <p>2) Many examples were explained.</p> <p>3) Inductive method was used to explain</p>	<p>REUSE</p> <p>REDUCE</p> <p>RECYCLE</p>		15 mins

Unit test :-

- 1) Unit test is taken at the end of the Unit.
- 2) Unit test is the important evaluation tool.
- 3) Unit test is pre planned and systematic by the teacher.
- 4) Unit test help in seeing the pupils achievement.
- 5) The Unit test helps to the teacher and pupils in the teaching learning process.
- 6) Unit test is based on the Unit of 8th std. describing about the sources of air and water pollution which consist of 26 questions with 25 marks and the time duration of 40 min (or) 45 mins.

Conclusion:

A Unit plan is very useful for both teaching and Learning process and has a lot of advantages for preparing a Unit, which can be create an idea of knowing the instructional objectives, methods of teaching, norms of teachings, teaching aids, teaching points etc. also more important is the achievement of the purpose. It is designed as per the following format of the Unit plan and it is helpful for the preparing the lesson plan easily in a short period of the time.

Referance :

1) Pedagogy of School Subject Biological Science → B.R. Ro machandriah

2) Science text book of 8th class → ~~NCERT~~

3) Internet Sources → Wikipedia .

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Estd : 1980

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BASAVESHWAR COLLEGE OF EDUCATION, BIDAR

UNIT PLAN / UNIT TEST / RESOURCE UNIT

2022 - 2023

Name of the Student Teachers Aishwarya Do Ashok Patil

Roll No. 30

Reg. No. U04AH22E0030

Subject Mathematics

Method I / II Mathematics


IQAC Coordinator

H.K.E.S. Basaveshwar College of Education

BIDAR - 585 483 (Karnataka)


Signature of the Method Master


PRINCIPAL

H.K.E.S. Basaveshwar College
of Education, BIDA

GULBARGA UNIVERSITY
KALABURGI

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KALABURGI-585106

AND

HYDERABAD KARNATAKA EDUCATION SOCIETY'S
BASAVESHWAR COLLEGE OF EDUCATION BIDAR-585 403

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UNIT TEST OF MATHEMATICS

I Introduction.

Unit test means a test which is set after a particular unit is taught during a regular course of teaching to test pupil's assimilation and mastery of that particular unit. Unit testing is a method where components (or) individual unit of software are tested to determine their conformity to the designed specifications and that also includes testing associated data and usage procedure. A unit is simply a small piece of code for any single function.

Q. Meaning of Unit test.

A unit test is a test which is constructed, administered and scored by a teacher after teaching a particular unit to a group of students for whom the unit is taught. A unit test is a test, where items are constructed for the whole unit after the instruction is over, to test the behavioural changes in the children.

A unit test is very useful and helpful to the teacher to know about the performances of pupils on that unit. It also helps the teacher in finding out the deficiency in the student. This will help the teacher to modify the teaching techniques, and students also derive a lot of benefit by making use of this test.

(ii) Definition of Unit tests

1) According to Drayton:-

"Unit test is a large block of related subject matter that can be over viewed by the learners."

2) According to Boring:-

"Unit test consist of a comprehensive series of related and meaningful activities so as to achieve pupil's purpose and provide significant educational experience and results in appropriate behavioural changes."

Characteristics of unit test.

- 1) It should run fast. If the test are slow, they will not be run often.
- 2) The scope should be clear. If the test fails. It's obvious where to look for the problem. It's important to only test one thing in a single test.
- 3) Unit test should be independent from each other.
- 4) Unit test shouldn't be heavily dependent on interface.
- 5) Clearly reveals its intention. Another developer can look at the test and understand what is expected of the production code.
- 6) Integration testing is necessary since unit testing cannot consider all possibilities.
- 7) Unit testing is often tedious, requiring patience and thoroughness.

Q) Importance of Unit test.

- 1) It satisfies the criteria for developing a miniature question paper.
- 2) If administered according to the rules, unit test helps in objective evaluation of the students' achievement throughout the year.
- 3) The unit test also helps the students to review a topic after it is completed in the class, and find their own strength and weakness in it.
- 4) This experience, during the year will prepare the students to face their final examination, with confidence and it will lead to better results.
- 5) The unit test is important because the blue-print of the unit test gives a functional picture of the test.

Steps of Unit test:-

The perfect and valid unit test must have the following test.

1) Plan the design of the test.

2) Editing the unit test.

3) Review test item.

4) Administering the test.

5) Interpret the test result.

1) Plan the design of the test.

Planning of an activity is important to achievement of the test result. It also plays an very important role to plan the design of the unit test. It involves following sub point which are as follows.

A) Unit - Analysis :

Based on the scope and significance the unit must be organized into convenient number of subunits.

B) Content - Analysis :

It can be done for each subunit by identifying and analyzing important facts principle and concept.

C) Weightage of Objective :

On the basis of NCERT norms, the suitable weightage should be given all important objectives of teaching mathematics. It involves the objectives, marks and the percentage of the weightage. So the weightage to objective is as shown in table given below.

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Objectives	Marks	% in weightage
Knowledge	7	28%
Understanding	10	40%
Application	3	12%
Skill	5	20%

D) Weightage to the Content:

Depending on the scope of the lesson proper weightage should be given to all subunits and no unit left in weightage.

Subunit	Marks	% in weightage
Subunit -1	10	P
Subunit -2	X	P
Subunit -3	Y	P
Subunit -4	Z	P

E) Weightage to the questions.

Proper Weightage should be given to all type of questions like objective type, Short answer type and essay type.

Question type	Marks	% in weightage
Objective type	10	40%
Short answer type	10	40%
Essay type	5	20%
Total	25M	100%

F) Blue Print.

The blue print is the three dimensional chart showing the weightage given to the content, type of question and objectives in terms of marks. It is also called "table of Specification" as it relates outcomes to the content and it also indicates the relative weightage of subunit.

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Objectives Content	Knowledge			Understanding			Application			Sum			Total	Percentage (%)
	OT	TA	AA	OT	TA	AA	OT	TA	AA	OT	TA	AA		
Sub-Unit - I													20	
Sub-Unit II													15	
Sub-Unit III													20	
Sub-Unit IV													15	
Total													100%	

2) Editing the unit test :-

A. Construction of item:

The teacher should construct all possible number of question on the unit under different objectives like objective type, short answer type and Essay type.

B. Selection of test item:

Based on the blue print, the teacher has to select required number of test item.

C. Instruction of test item:

For each question, instruction must be written clearly.

D. Preparing marking and Scoring test:

The teacher should pre-determined the scheme of evaluation and Scoring keys, expected answer and marks allotted.

E. Question Papers:

Question Papers should print legibly in different section like

Part A, B, C, etc.

5) Interpret the test results.

The test result has to be interpreted by some statistical analysis based on central tendency, quartiles, MPC and difficulty etc.

Importance of Unit test.

- 1) It help in knowing the pupils achievement.
- 2) It help in classifying the standard and provide remedial.
- 3) Teaching for slow learner and enrichment for gifted children.
- 4) It is best self learner evaluation for both pupil and teacher.
- 5) It is useful to know the weakness and strength of the teacher.

4) Merits and Demerits of Unit Test.

(i) Merits of Unit Test.

- 1) Students can study seriously.
- 2) Parents can analyze the performance of the student.
- 3) Identifying knowledge and learning gaps.
- 4) Issues are found at early stage.

(ii) Demerits of Unit Test:-

- 1) Pressure on students and parents.
- 2) Students feel demotivated due to low scores.
- 3) Some schools conduct frequently.
- 4) Unable to prepare a proper study plan.

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MODEL OF UNIT TEST

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Blue Print

1. Weightage of questions.

Type of questions	No. of questions	Marks	Percentage
Objective	10	10	40%
Short answers	05	10	40%
Essay type	01	05	20%
Total	16	25M	100%

II. Weightage of Objectives.

Objectives	Questions	Marks	Percentage
Knowledge	6	7	28%
Understanding	7	10	40%
Application	2	3	12%
Skill	1	5	20%
Total	16	25M	100%

iii. Weightage of Subunit / Content.

Sr. No.	Sub-Unit	Questions	Marks	Percentage
1	Introduction of Surface area and Volume	4	4	16%
2	Surface Area and Volume of a Cuboid	3	4	16%
3	Example On Surface Area and Volume of a Cuboid.	1	2	8%
4	Surface Area and Volume of a Cylinder	3	7	28%
5	Example On Surface Area and Volume of a Cylinder	2	4	16%
6	Surface Area and Volume of a Cone	1	1	4%
7	Example On Surface Area and Volume of a Cone	1	1	4%
8	Surface Area and Volume of a Sphere.	1	2	8%
	Total	16	25	100%

Objective Sub-unit	Knowledge			Understanding			Application			Skill			Total	%	
	O.T	S.A	L.A	O.T	S.A	L.A	O.T	SA	LA	O.T	SA	LA			
Introduction of Surface Area and Volume	2(2)			2(2)									4(2)	16%	
Surface Area and Volume of a Cuboid	1(1)			1(1)	1(2)								3(3)	12%	
Example On Surface Area and Volume of cuboid					1(2)								1(2)	8%	
Surface Area and Volume of a cylinder	1(1)			1(1)								1(5)	5(7)	20%	
Example On Surface Area and Volume of cylinder		1(2)						1(2)					3(4)	12%	
Surface Area and Volume of a Cone	1(1)												1(1)	4%	
Example On Surface Area and Volume of cone								1(1)					1(1)	4%	
Surface Area and Volume of a Sphere					1(2)								1(3)	8%	
Total		6(7)			7(10)			2(3)					1(5)	16(25)	100%
Percentage (%)		28%			40%			12%					20%	100%	

Note: Outside the brackets are questions (Q) {Q(M)}
 Inside the brackets are marks (M)

UNIT TEST

CLASS : 9th

TIME : 45 min

SUBJECT: MATHEMATICS

TOTAL MARKS : 25

INSTRUCTION : 1. Write all questions compulsory.

2. Mention the correct question number.

1) FILL IN THE BLANKS.

1X5=5

1. The Total Surface Area of a Cube is _____.
2. The Volume of cuboid is _____.
3. The Curved Surface Area of a Cylinder is _____.
4. The Total Surface Area of a cone is _____.
5. The Volume of Sphere is _____.

2) MATCH THE FOLLOWING .

1X5=5

- | | | |
|----|--------------------|--|
| | | B |
| A | L.S.A of cube | 1. $\frac{1}{2} * l * 2\pi r(\pi r l)$ |
| b) | T.S.A of cuboid | 2. 4(side ²) |
| c) | Volume of cylinder | 3. 2(lb+bh+hl) |
| d) | C.S.A of cone | 4. $\pi r^2 l$ |
| e) | T.S.A of sphere | 5. $4\pi r^2$ |

3) SOLVE THE FOLLOWING QUESTIONS .

2X5=10

1. Harry's bookshelf is 40cm long ,50cm wide , and 90cm high . What is the volume of the bookshelf?
2. Find the lateral surface area and total surface area of a cube of edge 10cm?
3. The diameter of a right circular cylinder is 21cm and its height is 8cm.Find the volume of a cylinder?
4. If the diameter of the box of a cone is 10.5cm,and its slant height is 10cm.Find the curved surface area of a cone?

5.Find the c.s.a and T.s.a of a hemisphere of radius 2cm?

4) SOLVE THE FOLLOWING QUESTIONS.

5X1=5

- 1) A soft drink is available in two parks.
a) A tin can with a rectangular box of length 5cm and width 4cm, having a height of 15cm
b). A plastic cylinder with circular box of diameter 7cm and height 10cm.

which container has greater capacity and by how much?

I →

1) $6a^2$

2) $2l^2bh$

3) $2\pi rh$

4) $\pi r(l+r)$

5) $\frac{4}{3}\pi r^3$

II →

1) ~~$4(\text{side})^2 (cb)$~~

2) ~~$2(lb+bh+hl)(cc)$~~

3) $\pi r^2h(d)$

4) $\pi rl(a)$

5) $4\pi r^2(e)$

III →

1) →

Given length = 40cm, width = 50cm, height = 90cm

Volume of bookshelf = $l \times b \times h$

= $40 \times 50 \times 90$

= $1,80,000 \text{ cm}^3$

2) →

Given, edge = 10cm,

Lateral Surface Area of a Cube = $4(\text{side})^2$

= $4 \times (10)^2$

= 4×100

= 400 cm^2

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2) Solⁿ Total Surface Area of a cube = $6(\text{side})^2$
 $= 6 \times 10\text{cm} \times 10\text{cm}$
 $= 600\text{cm}^2$.

3) Solⁿ Given, diameter = 21cm, height = 8cm, radius = $\frac{21}{2} = \frac{21}{2}$.
 Volume of cylinder = $\pi r^2 h = \frac{22}{7} \times \frac{21}{2} \times \frac{21}{2} \times 8$
 $= 2772\text{cm}^3$.

4) Solⁿ Given Diameter of a Cone = 10.5cm, Radius = $\frac{d}{2} = \frac{10.5}{2}\text{cm}$
 Slant height (l) = 10cm,
 Curved Surface area of Cone = $\pi r l$
 $= \frac{22}{7} \times \frac{10.5}{2} \times 10$
 $= 165\text{cm}^2$.

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$$\text{Given Radius of hemisphere} = 21\text{cm}$$

$$\text{CSA of hemisphere} = 2\pi r^2 = 2 \times \frac{22}{7} \times 21 \times 21$$

$$= 462 \times 63\text{cm}$$

$$= 2772\text{cm}^2$$

$$\text{TSA of hemisphere} = 3\pi r^2 = 3 \times \frac{22}{7} \times 21 \times 21$$

$$= 66 \times 63\text{cm}$$

$$= 4158\text{cm}^2$$

(ii) Given length of a rectangular box = 5cm, width = 4cm, height = 15cm.
 Volume of cuboid = $l \times b \times h$
 $= 5\text{cm} \times 4\text{cm} \times 15\text{cm}$
 $= 300\text{cm}^3$

(ii) Diameter of a cylinder = 7cm, Radius of a cylinder = $\frac{7}{2} = \frac{d}{2}$, height = 10cm.
 Volume of a cylinder = $\pi r^2 h$
 $= \frac{22}{7} \times \frac{7}{2} \times \frac{7}{2} \times 10$
 $= 11 \times 35\text{cm}$
 $= 385\text{cm}^3 \rightarrow$

A Plastic cylinder has a greater capacity than
 by $385 - 300 \Rightarrow 85\text{cm}^3$

Chapter - 12

Surface Area of a sphere
Fast Rec. & Short cut
Class 9 - 9
Area of sphere
Sub. results



I) Fill in the blanks 2/26 175 = 5

- 1) $6a^2$
- 2) $l \times b \times h$
- 3) $2\pi rh$
- 4) $\pi r^2 (l + r)$
- 5) $\frac{4}{3} \pi r^3$

II) match the following 175 = 5

- 1) $4(\text{side})^2$ (b)
- 2) $2(lb + bh + hl)$ (k)
- 3) $\pi r^2 h$ (d)
- 4) πrl (a)
- 5) $4\pi r^2$ (e)

III) solve the problems following questions 285

1) — 9

soln:- length = 40cm

width = 50cm

height = 90cm

volume of bookshelf = 9

bookshelf of volume = $l \times b \times h$

= $40 \times 50 \times 90$

= 180000 cm³

2) ~~4000~~

L.S.A of cube = $4(a^2)$
 $= 4 \times (10)$
 $= 4 \times 100$
 $= 400 \text{ cm}^2$

T.S.A of cube = $6(a^2)$
 $= 6(10)^2$
 $= 6 \times 100$
 $= 600 \text{ cm}^2 //$

3) diameter = 21 cm

height = 8 cm

volume of cylinder = $\pi r^2 h$

Radius = $\frac{21}{2}$

21

Volume of cylinder = $\pi r^2 h$

~~$= \frac{22}{7} \times \frac{21}{2} \times \frac{21}{2} \times 8$~~

~~$= 11 \times 3 \times 21 \times 4$~~

~~$= 33 \times 84$~~

~~$= 2772 \text{ cm}^3 //$~~

4) Diameter = 10.5 cm

Slant height = 10 cm

C.S.A of cone = $\pi r l$

$r = \frac{10.5}{2}$

C.S.A of cone = $\pi r l$

~~$= \frac{22}{7} \times \frac{10.5}{2} \times 10$~~

~~$= 110 \times 1.5$~~

~~$= 165.0 = 165 \text{ cm}^2 //$~~

5) radius = 21cm

C.S.A of hemisphere = 9

T.S.A. of hemisphere = 9

C.S.A. of hemisphere = $2\pi r^2$

= $2 \times 22 \times 21 \times 21$

= 44×63

= 2772 cm²

T.S.A of hemisphere = $3\pi r^2$

= $3 \times 22 \times 21 \times 21$

= 66×63

= 4158 cm²

IV) Solve the following 5x1 = 5

9) $l = 5\text{cm}$

$w = 4\text{cm}$

$h = 15\text{cm}$

T.S.A of cuboid = $2(lb + bh + hl)$

Volume of cuboid = $l \times b \times h$

= $5 \times 4 \times 15$

= 300cm^3

99) Diameter = 7cm = $\frac{7}{2}$

$h = 10\text{cm}$

Volume of cylinder = $\pi r^2 h$

= $22 \times 22 \times 10 \times \frac{7}{2} \times \frac{7}{2}$

= 11×35

= 385cm^3

Class: 8th Std, Max Marks - 25M

Subject: Physical Science

Max marks obtained

1) Sachin vs Sachin	24
2) Sachin vs Pujkumar	23
3) Mahadui vs Ishantkumar	21
4) Rangula vs Sangherkumar	19
5) Poojyashankar vs Subbappa.	25
6) Buvni H, Tukaram.	20
7) Arjuna vs Sachin	23
8) Sangha vs Baburao	24
9) Akshay vs Sachin.	25
10) Deshpande vs Pandurangh	21
11) Rangula vs Pujkumar	20
12) Chahar vs Sachin	19
13) Gauri vs Baburao	22
14) Sachin vs Sachin	18
15) Sachin vs Sachin	22
16) Sachin vs Sachin	21
17) Sachin vs Sachin	24
18) Sachin vs Sachin	23
19) Sachin vs Sachin	20
20) Sachin vs Sachin	22.

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Sl No.	Name of the Student	Questions																Total Attempted
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
1	Sanchita	✓	✓	✓	✓	✓	✓	✗	✓	✓	✓	✓	✓	✓	✓	✓	✓	15
2	Vaisha	✓	✓	✗	✓	✓	✗	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	14
3	Mahadevi	✓	✓	✗	✓	✗	✓	✗	✓	✗	✓	✓	✓	✓	✓	✓	✓	12
4	Sarguta	✓	✓	✓	✗	✓	✗	✓	✓	✗	✓	✓	✗	✓	✗	✗	✓	10
5	Bhagyalaruni	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	16
6	Swati	✓	✓	✓	✓	✓	✓	✓	✗	✓	✗	✓	✗	✓	✗	✗	✓	11
7	Anjali	✓	✓	✓	✓	✗	✓	✓	✗	✓	✓	✓	✓	✓	✓	✓	✓	14
8	Soniya	✓	✓	✓	✓	✓	✓	✓	✓	✓	✗	✓	✓	✓	✓	✓	✓	15
9	Akshata	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	16
10	Dupika	✓	✓	✗	✓	✗	✗	✓	✓	✗	✓	✓	✓	✓	✓	✓	✓	12

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Sl No.	Name of the Student	Questions																Total Attempted
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
11	Ranjeta	x	x	✓	✓	✓	✓	x	✓	✓	x	✓	✓	x	✓	✓	✓	11
12	Shalini	✓	✓	✓	x	✓	✓	x	✓	✓	x	x	✓	x	x	✓	✓	10
13	laxmi	✓	✓	✓	x	✓	✓	✓	✓	✓	x	✓	✓	x	✓	✓	✓	13
14	Nandini	✓	x	x	✓	x	✓	✓	x	✓	✓	x	✓	x	x	✓	✓	9
15	lavanya	✓	✓	✓	✓	x	✓	✓	x	✓	✓	✓	✓	x	✓	✓	✓	13
16	Vishnawi	✓	✓	✓	✓	✓	x	✓	✓	x	✓	x	✓	x	✓	✓	✓	12
17	Ashwini	x	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	15
18	Yallalingshwanii	✓	✓	✓	x	✓	✓	✓	✓	✓	x	✓	✓	✓	✓	✓	✓	14
19	Dnyashree	✓	x	✓	x	✓	x	✓	x	✓	✓	✓	x	✓	✓	✓	✓	11
20	Ankita.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	x	✓	✓	x	✓	x	13

Calculation

Raw Scores.

24, 23, 21, 19, 25, 20, 23, 24, 25, 21, 20, 19, 22,
 18, 22, 21, 24, 23, 20, 22.

Total Number of Scores - 20.

$$\begin{aligned} \text{Range} &= \text{Highest Value} - \text{Lowest Value} \\ &= 25 - 18 \\ &= 7 \end{aligned}$$

$$\text{Number of class Interval} = \frac{\text{Range}}{\text{Size of C.I.}} = \frac{7}{3} = 2.3$$

$$\text{Size of class Interval} = 3.$$

$$\text{Number of class Interval} = 3.$$

Frequency Distribution Table.

Sl. No.	Class Interval	Frequency	Tally
1	18 - 20	6	
2	21 - 23	9	
3	24 - 26	5	

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ಕ್ರ. ಸಂ.	C.I	f	x	fx
1	18-20	6	19	114
2	21-23	9	22	198
3	24-26	5	25	125

$\Sigma fx = 437$

$$M_{\text{mean}} = \frac{\Sigma fx}{N}$$

$$= \frac{437}{20}$$

$$= 21.85$$

$$M_{\text{mean}} = 21.85$$

ಕ್ರ. ಸಂ.	C.I	f	C.f.
1	18-20	6	6
2	21-23	9	15
3	24-26	5	20

$$M_{\text{Median}} = l + \left[\frac{\frac{N}{2} - f}{f} \right] \times i$$

$$= 20.5 + \left[\frac{10 - 6}{9} \right] \times 3$$

$$= 20.5 + \left[\frac{4}{3} \right] \times 3$$

$$= 20.5 + 1.33$$

$$= 21.83$$

Mode

$$M_{\text{Mode}} = 3M_{\text{dn}} - 2M_{\text{ion}}$$

$$= 3(21.83) - 2(21.85)$$

$$= 65.55 - 43.7$$

$$= 21.85$$

Interpretation.

The Central tendency are.

$M_{\text{Mean}} = 21.85, M_{\text{Median}} = 21.83, M_{\text{Mode}} = 21.85$

Interpretation = Highest Value - Lowest Value.

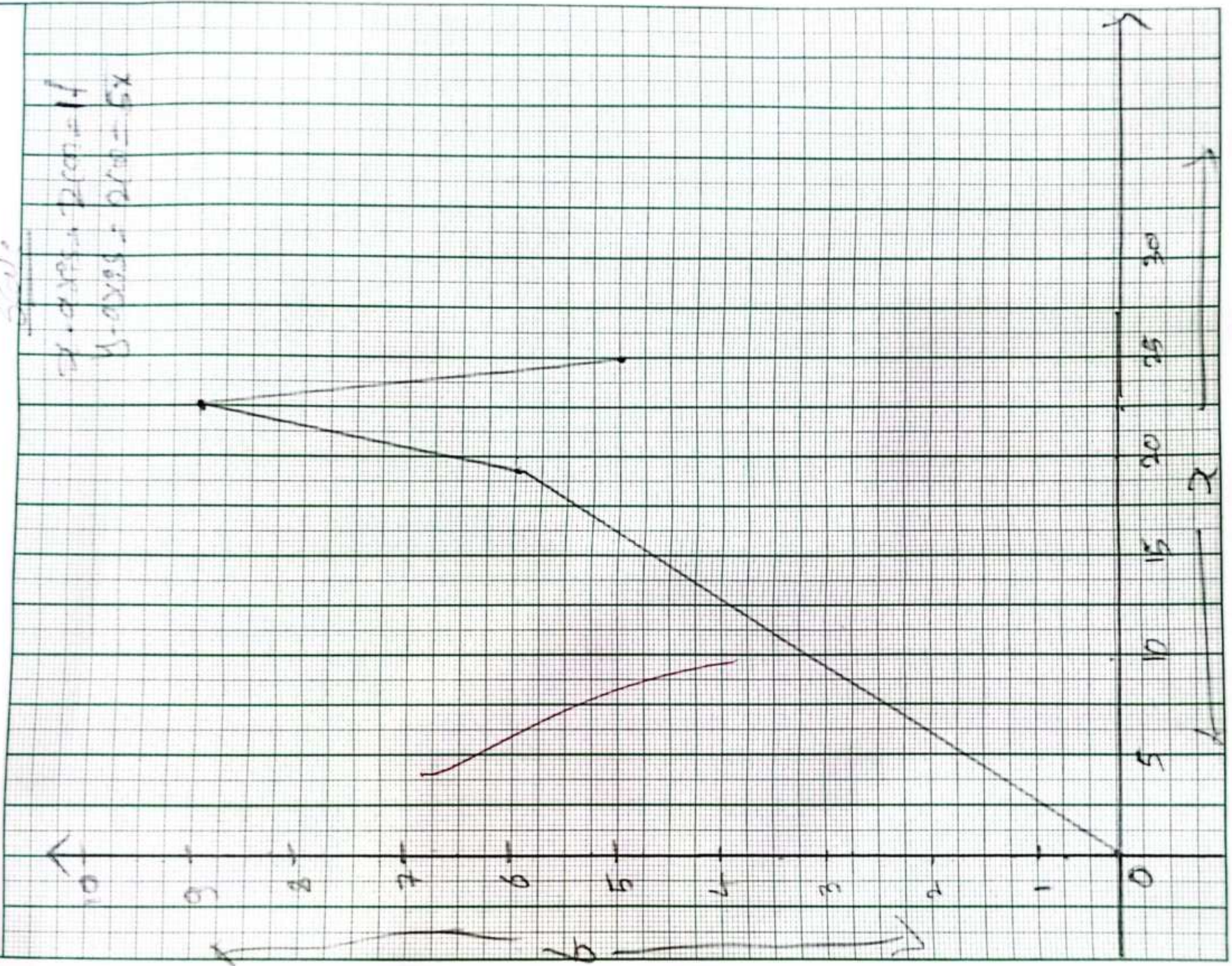
$$= 21.85 - 21.83$$

$$= 0.02$$

Here, it follows MPC Curve as it is in the range 30.1.

Conducted Unit test on Surface Area and Volume for 9th Std.

(2)



35

Conducted Unit test On Surface Area and Volume for 9th std.



Conclusion

The unit test is the important Evaluation tool, the unit test is pre-planned and systematically arrangement done by the teacher. This also help to see the Pupil's achievement and Performance. The unit test also help to the teacher and pupil in the teaching learning Process. As I conducted unit test for 8th std students after the analysis of questions most of the students are not attempted some questions. So I have to do the remedial classes based on that particular topic to the student.

4. Reference.

1) Pedagogy of School Subject Mathematics.

- B.R. Ramachandiah.

2) Internet Source.

- Wikipedia.

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