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Std IX - Biology worksheet
L-7 Respiration in Plants

Q1) Name the following

- (a) The respiration that takes place in the absence of oxygen.
- (b) The energy currency of the cell.
- (c) The site of Kreb's cycle.
- (d) The end product of glycolysis.
- (e) The respiratory substrate.
- (f) The site of glycolysis.
- (g) The solution that turns milky when CO_2 is passed through the solution.
- (h) The process by which living organisms obtain energy for their life activities.
- (i) One micro-organism that respire anaerobically.
- (j) The chemical generally used to absorb carbon dioxide in respiratory experiments.

Q2) Choose the correct option

- (i) The reaction of Kreb's cycle occur in
(a) Lysosome (b) Lysana (c) Mitochondria (d) Ribosome
- ii) During respiration there is — in dry weight
(a) Increase (b) Decrease (c) No change (d) ~~No~~ increase or decrease.
- iii) In the process of respiration
(a) ADP is converted to ATP.
(b) Glucose is converted into Carbon dioxide.
(c) Glucose is converted into carbon dioxide and water vapour and energy is released.
(d) Pyruvic acid is converted to ATP.
- iv) The openings found in stems for exchange of gases
(a) Stomata (b) Lenticels (c) Guard cells (d) Ribosomes.

Q3) Define the following

(a) Respiration (b) Glycolysis (c) Combustion (d) Photosynthesis

Q4) State three differences between the following

(a) Aerobic Respiration and Anaerobic respiration

(b) Respiration and Combustion

(c) Photosynthesis and Respiration

Q5) Answer the following questions

(a) How is tilling of soil useful for crops?

(b) Write full form of ATP and ADP

(c) Write an equation to represent

(i) Aerobic respiration

(ii) Anaerobic respiration

(d) What is control set-up?

(e) Why is anaerobic respiration less-efficient?

(f) State the location of

(i) Lenticels

(ii) Stomata.

(g) Name the phase of respiration which is common to aerobic respiration and anaerobic respiration.

Note:- Solve this worksheet in Rough Copy

Class 9

Sub: Biology.

Worksheet 1

Answer the following questions:

Ques 1: Differentiate between the following:

- a) Aerobic and anaerobic respiration
- b) Respiration and Burning
- c) Respiration and Photosynthesis
- d) Hypogeal and Epigeal germination

Ques 2: State the function of following:

- a) Soda lime or KOH
- b) Lime water
- c) pyrogalllic acid
- d) carboxylic acid

Ques 3: Give reason why :

- a) one should not sleep under a tree at night?
- b) Dead seeds are used in one flask experiments based on respiration?
- c) experiment is carried out in dark to check respiration?

Ques 4 State whether the statements are true or false :

- a) Aerobic respiration releases 38 ATP energy
- b) Light energy is released during respiration.
- c) End product in anaerobic respiration in plants is lactic acid.
- d) Lime water absorbs carbon dioxide.

Q6.

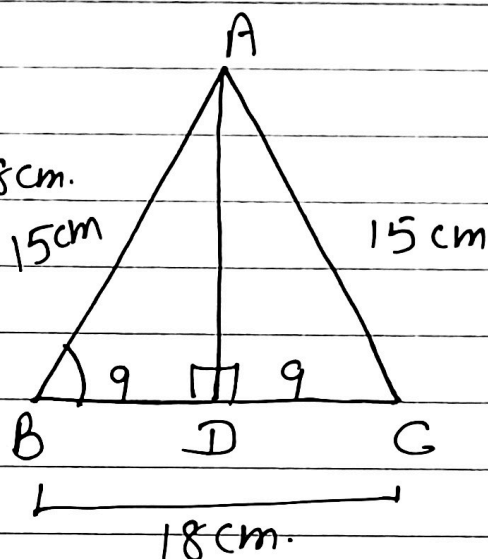
In isosceles $\triangle ABC$,

$$AB = AC = 15 \text{ cm} \text{ \& } BC = 18 \text{ cm.}$$

The perpendicular drawn from the vertex of an isosceles \triangle to base bisects it.

$$AD \perp BC$$

$$\therefore BD = DC = \frac{18}{2} = 9 \text{ cm.}$$



$$\cos \angle ABC = \frac{\text{base}}{\text{Hyp.}} = \frac{BD}{AB} = \frac{9}{15} = \frac{3}{5}.$$

Q8.

$$\tan x = \frac{3}{4}$$

$$\frac{\text{perp}}{\text{Base}} = \frac{3}{4}$$

$$\Rightarrow \frac{BC}{AB} = \frac{3}{4}$$

$$\Rightarrow BC : AB = 3 : 4$$

Let x be the common ratio.

$$\therefore BC = 3x \text{ \& } AB = 4x$$

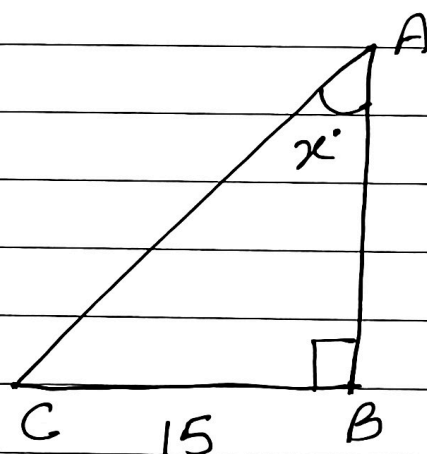
$$BC = 15 \text{ (given)}$$

$$\Rightarrow 3x = 15 \Rightarrow x = 5$$

$$AB = 4x = 4 \times 5 = 20 \text{ cm.}$$

By Pyth. Theo; $AC^2 = AB^2 + BC^2$

$$\Rightarrow AC^2 = (20)^2 + (15)^2$$



$$\Rightarrow AC^2 = 400 + 225$$

$$\Rightarrow AC^2 = 625$$

$$\Rightarrow AC = 25 \text{ cm.}$$

Q9.

In $\triangle BCD$, $\angle C = 90^\circ$

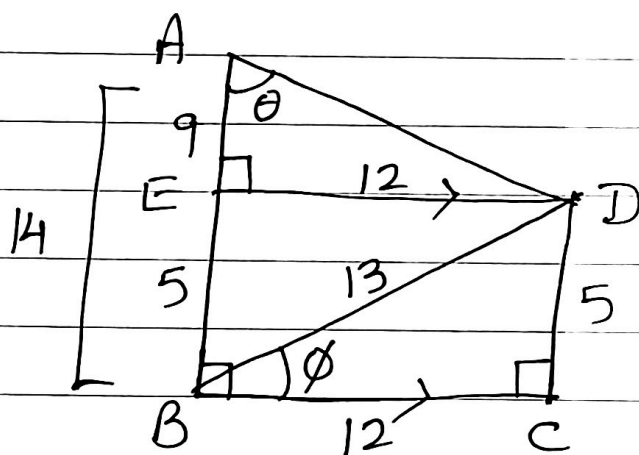
By Pyth. theo,

$$BD^2 = BC^2 + CD^2$$

$$\Rightarrow (13)^2 = (12)^2 + CD^2$$

$$\Rightarrow 169 - 144 = CD^2$$

$$\Rightarrow CD^2 = 25 \Rightarrow CD = 5.$$



$$\sin \phi = \frac{P}{H} = \frac{CD}{BD} = \frac{5}{13}$$

Draw $DE \parallel CB$

$$\therefore \angle AED = \angle B \quad [\text{corresp. angles}]$$

$$\Rightarrow \angle AEB = 90^\circ$$

Since BDE is rectangle.

$$\text{So, } ED = BC = 12 \text{ cm}$$

$$\& BE = DC = 5 \text{ cm.}$$

} opp. sides.

$$AE = 14 - 5 = 9 \text{ cm.}$$

$$\tan \theta = \frac{P}{B} = \frac{ED}{AE} = \frac{12}{9} = \frac{4}{3}$$

$$\text{cii) } \frac{H}{B} = \sec \theta \Rightarrow \frac{AD}{AE} = \sec \theta$$

$$\Rightarrow AD = AE \times \sec \theta \Rightarrow AD = 9 \sec \theta.$$

$$\frac{H}{P} = \operatorname{cosec} \theta$$

$$\Rightarrow \frac{AD}{ED} = \operatorname{cosec} \theta \Rightarrow AD = AE \times \operatorname{cosec} \theta$$

$$\Rightarrow AD = 12 \operatorname{cosec} \theta$$

Q11.

$$\sin A + \operatorname{cosec} A = 2$$

squaring both sides.

$$(\sin A + \operatorname{cosec} A)^2 = (2)^2$$

$$\Rightarrow \sin^2 A + \operatorname{cosec}^2 A + 2 \times \sin A \times \operatorname{cosec} A = 4$$

$$\sin A = \frac{1}{\operatorname{cosec} A}$$

$$\Rightarrow \sin^2 A + \operatorname{cosec}^2 A + 2 \times \frac{1}{\operatorname{cosec} A} \times \operatorname{cosec} A = 4$$

$$\Rightarrow \sin^2 A + \operatorname{cosec}^2 A = 4 - 2$$

$$\Rightarrow \sin^2 A + \operatorname{cosec}^2 A = 2.$$

Q13.

$$4 \sin \theta = 3 \cos \theta$$

$$\Rightarrow \frac{\sin \theta}{\cos \theta} = \frac{3}{4}$$

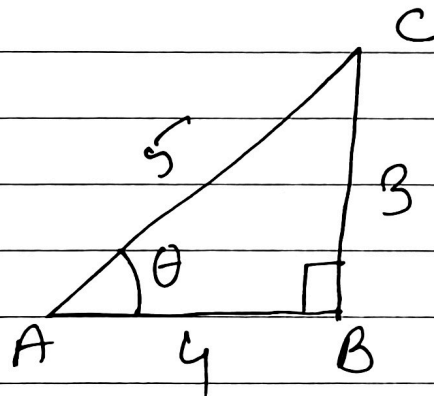
$$\Rightarrow \tan \theta = \frac{3}{4}$$

$$\Rightarrow \frac{P}{B} = \frac{3}{4}$$

$$\Rightarrow \frac{BC}{AB} = \frac{3}{4} \Rightarrow BC = 3$$

$$AB = 4$$

By Pyth. theorem, $AC^2 = AB^2 + BC^2$



$$\begin{aligned} AC^2 &= (3)^2 + (4)^2 \\ \Rightarrow AC^2 &= 9 + 16 \\ \Rightarrow AC^2 &= 25 \\ \Rightarrow AC &= 5 \end{aligned}$$

$$(i) \sin \theta = \frac{P}{H} = \frac{BC}{AC} = \frac{3}{5}$$

$$(ii) \cos \theta = \frac{B}{H} = \frac{AB}{AC} = \frac{4}{5}$$

$$\begin{aligned} (iii) \cos^2 \theta - \operatorname{cosec}^2 \theta &= \left(\frac{B}{H}\right)^2 - \left(\frac{H}{P}\right)^2 = \left(\frac{4}{5}\right)^2 - \left(\frac{5}{3}\right)^2 \\ &= \frac{16}{25} - \frac{25}{9} = -\frac{9}{9} = -1 \end{aligned}$$

$$(iv) 4 \cos^2 \theta - 3 \sin^2 \theta + 2$$

$$= 4 \left(\frac{4}{5}\right)^2 - 3 \left(\frac{3}{5}\right)^2 + 2$$

$$= \frac{4 \times 16}{25} - \frac{3 \times 9}{25} + 2 = \frac{64}{25} - \frac{27}{25} + \frac{2}{1}$$

$$= \frac{64 - 27 + 50}{25} = \frac{87}{25} = 3\frac{12}{25}$$

Q15:

$$5 \cos A - 12 \sin A = 0$$

$$\Rightarrow 5 \cos A = 12 \sin A$$

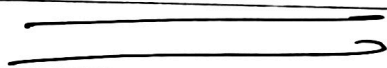
$$\Rightarrow \frac{5}{12} = \frac{\sin A}{\cos A} \Rightarrow \tan A = \frac{5}{12}$$

$$\therefore \frac{\sin A + \cos A}{2 \cos A - \sin A} \quad \text{Divide each term by } \cos A$$

$$= \frac{\frac{\sin A}{\cos A} + \frac{\cos A}{\cos A}}{\frac{2 \cos A}{\cos A} - \frac{\sin A}{\cos A}} = \frac{\tan A + 1}{2 - \tan A}$$

$$= \frac{\frac{5}{12} + 1}{2 - \frac{5}{12}} = \frac{\frac{5+12}{12}}{\frac{24-5}{12}} = \frac{\frac{17}{12}}{\frac{19}{12}}$$

$$= \frac{17}{12} \times \frac{12}{19} = \frac{17}{19}$$



H.W.: \Rightarrow Do remaining sums of Ex-22(B)

St. Joseph's High School

Mandi Dabwali.

Revision Worksheet

Class-IX

Date-21/7/23

Subject:English-II

Teacher:Miss Aarti

Oliver Asks for More

Q.Answer the following questions:

- 1.What main differences do you notice between the children and the master? (Observe the physical appearances, dress, behaviour, etc.) What can you infer from these differences?
- 2.How were the children fed in the workhouse?
- 3.How did the master react to the request of Oliver?
- 4.What did Mr. Bumble ultimately decide to do with Oliver?
- 5.Is the title of the story appropriate?Express your views.

**St. Joseph's High School
Mandi Dabwali.**

Revision Worksheet

Class-IX

Date-21/7/23

Subject:English-I

Teacher:Miss Aarti

Topic:Agreement of Verb with Subject

Q1.Tick the correct form of the verb that agrees with the subject in the following sentences:

1. One of my friends (has/have) gone to France.
2. Each of the boys (were /was) given a present.
3. Neither of the contestants (was/were) able to win a decisive victory.
4. Oil and water (do/does) not mix.
5. He and I (were/was) at Oxford together.
6. Slow and steady (win/wins) the race.
7. Neither Peter nor James (has/have) any right to the property.
8. No prize or medal (was/were) given to the boy, though he stood first in the examination.
9. Either Mary or Alice (is/are) responsible for this.
10. Neither the Minister nor his colleagues (were/was) present.

Active -Passive

Q2.Change the following sentences in passive voice:

- 1.I watch television every night.
- 2.She is feeding the poor.
- 3.Take medicine on time.
- 4.Are you taking the exam?
- 5.The Indian Army will have pushed back the Chinese Army by then.
- 6.Shut the door.
- 7.Your boss will question you.
- 8.Who likes her?
- 9.Such an accident had been predicted by a pilot.(Change to active voice)
- 10.All the questions were correctly answered by Parul.(Change to active voice)

Revision Worksheet-3

Chapter - 5 (History)

The Sangam Age

Q1. What is meant by the Sangam Age?

Ans.1) The Sangam Age refers to the period when most of the Tamil literature was composed by a body of Tamil scholars and poets in three successive literary gatherings called Sangam.

Q2. Name the authors of Tirukkural.

Ans.2) Thiruvalluvar wrote Tirukkural.

Q3. Mention any one archaeological source of Sangam Age.

Ans.3) Megaliths

Q4. Define megaliths.

Ans.4) A megalith is a large stone that has been used to construct a structure or monument either alone or together with other stones.

Q5. Define Frescoes.

Ans:5) The art of painting on freshly spread plaster is called frescoes.

Q6. What were Mandalams?

Ans:6) The empire was divided into provinces during the Sangam Age. These provinces were also called Mandalams.

Q7. Name three main occupations during Sangam Age.

Ans:7) Agriculture
Spinning
Weaving

Q8. What is the subject matter of Silappadikaram?

Ans:8) Silappadikaram includes details about the classical and folk forms of dances and music.

Q9. Who built Thanjavur temple?

Ans:9) Raja Raja Chola built Thanjavur temple.

Important topics of the Chapter are:-

→ Tirukkural

→ Megaliths

→ Society

→ Economy

→ Religion

STD 9th Subject Hindi Date-21-7-2023

अनौपचारिक पत्र

आप का मित्र किसी चित्र प्रतियोगिता में भाग लेने के लिए विदेश जा रहा है उसे शुभकामनाएं देते हुए पत्र लिखिए।

ST. Joseph's High School

Worksheet-1

Subject- Physics

Standard- IX

Note: Solve these questions on your fair notebook

- 1. What are the advantages of using mercury in simple barometer?**
- 2. How Fortin barometer is better than simple barometer?**
- 3. What signifies on the barometer that it may be possibility of**
 - 1) heavy rain and storm**
 - 2) Hot dry weather**
 - 3) weather will remain same**
- 4. Give significance of altimeter.**

Class - IX

CH-3 (Jainism and Buddhism)

Answer the following questions:-

Q-1: State three causes for the rise of Jainism and Buddhism.

Q2: State five vows which a Jain householder has to take.

Q3: What was the impact of Buddhism and Jainism on the socio religious life of the people?

Q4: What is the Eight fold Path?

Q5: Define the term "Great Renunciation".

15 ਟੈਲੀਵਿਜ਼ਨ ਕੇਂਦਰ ਦੇ ਡਾਇਰੈਕਟਰ ਨੂੰ ਇਕ ਪੱਤਰ ਲਿਖੋ ਜਿਸ ਵਿਚ ਦਿੱਤੇ ਜਾ ਰਹੇ ਪ੍ਰੋਗਰਾਮਾਂ ਦੀਆਂ ਤਰੁਟੀਆਂ ਦੱਸ ਕੇ ਸੁਧਾਰ ਦੀ ਮੰਗ ਕਰੋ।

ਪ੍ਰਮੁੱਖ ਨੁਕਤੇ :

ਟੈਲੀਵਿਜ਼ਨ ਇਕ ਅਮੋਲਕ ਕਾਢ ਪੱਛਮੀ ਸੱਭਿਅਤਾ ਦਾ ਪ੍ਰਭਾਵ ਇਸਤਿਹਾਰਬਾਜ਼ੀ ਅਸਲੀਲਤਾ ਦਾ ਬਲਬਾਲਾ ਪ੍ਰੋਗਰਾਮ ਬਿਹਤਰ ਬਣਾਉਣ ਦੀ ਗੁੰਜਾਇਸ਼।

ਪ੍ਰੀਖਿਆ ਭਵਨ,
ਜਲੰਧਰ।

ਮਿਤੀ 9 ਦਸੰਬਰ, 20.....

ਸੇਵਾ ਵਿਖੇ

ਡਾਇਰੈਕਟਰ,
ਦੂਰਦਰਸ਼ਨ ਕੇਂਦਰ,
ਜਲੰਧਰ।

ਵਿਸ਼ਾ : ਟੀ.ਵੀ. ਪ੍ਰੋਗਰਾਮਾਂ ਦੀਆਂ ਉਣਤਾਈਆਂ ਸਬੰਧੀ।

ਸ਼੍ਰੀਮਾਨ ਜੀ,

ਵਿਗਿਆਨਕ ਉੱਨਤੀ ਨੇ ਨਿਰਸੰਦੇਹ ਸਾਨੂੰ ਟੈਲੀਵਿਜ਼ਨ ਦੀ ਅਮੋਲਕ ਕਾਢ ਦਿੱਤੀ ਹੈ। ਸਾਨੂੰ ਇਸ ਦੀ ਵਰਤੋਂ ਆਪਣੀ ਸੱਭਿਅਤਾ ਅਨੁਸਾਰ ਕਰਨੀ ਚਾਹੀਦੀ ਹੈ। ਸਾਡੀ ਸੱਭਿਅਤਾ ਵਿਚ ਆਦਿ-ਕਾਲ ਤੋਂ ਸਾਦਗੀ ਤੇ ਉੱਚ-ਸੋਚਣੀ ਪ੍ਰਧਾਨ ਰਹੀ ਹੈ। ਇਸ ਵਿਚ ਕੁਬੋਲ, ਹਿੰਸਾ, ਨੰਗੇਪਨ ਤੇ ਅਸਲੀਲਤਾ ਆਦਿ ਨਾਲ ਦੂਰ ਦਾ ਵੀ ਵਾਸਤਾ ਨਹੀਂ ਹੈ। ਹੁਣ ਦਿਖਾਏ ਜਾ ਰਹੇ ਪ੍ਰੋਗਰਾਮਾਂ ਤੋਂ ਇਉਂ ਲਗਦਾ ਹੈ ਕਿ ਦਸ-ਪੰਦਰਾਂ ਸਾਲਾਂ ਬਾਅਦ ਪੱਛਮੀ ਸੱਭਿਅਤਾ ਸਾਰੀ ਦੁਨੀਆਂ ਵਿਚ ਛਾ ਜਾਵੇਗੀ ਤੇ ਅਸੀਂ ਆਪਣਾ ਰਸਮੋ-ਰਿਵਾਜ ਤੇ ਸੱਭਿਅਤਾ ਭੁੱਲ ਜਾਵਾਂਗੇ।

ਟੈਲੀਵਿਜ਼ਨ ਦੇ ਪ੍ਰੋਗਰਾਮਾਂ ਰਾਹੀਂ ਅਸੀਂ ਅਨਪੜ੍ਹ ਬੱਚਿਆਂ, ਨੌਜਵਾਨਾਂ ਤੇ ਬੁੱਢਿਆਂ ਨੂੰ ਪੜ੍ਹਾ ਸਕਦੇ ਹਾਂ। ਇਸ ਪਾਸੇ ਬਹੁਤ ਘੱਟ ਧਿਆਨ ਦਿੱਤਾ ਜਾ ਰਿਹਾ ਹੈ।

ਧਾਰਮਿਕ ਸਿੱਖਿਆ ਦੇ ਪ੍ਰੋਗਰਾਮ ਦੁਆਰਾ ਟੀ.ਵੀ. ਲੋਕਾਂ ਨੂੰ ਚੰਗੇ ਇਨਸਾਨ ਬਣਾ ਸਕਦਾ ਹੈ ਪਰ ਅਜੋਕੇ ਰੁਮਾਂਚਵਾਦੀ ਤੇ ਹਿੰਸਾ-ਭਰਪੂਰ ਪ੍ਰੋਗਰਾਮ ਸਾਨੂੰ ਲੋਫ਼ਰ, ਡਾਕੂ, ਅੱਤਵਾਦੀ ਬਣਾ ਰਹੇ ਹਨ।

ਦਿਲਪ੍ਰਚਾਵੇ ਦੇ ਪ੍ਰੋਗਰਾਮ ਵੀ ਹੋਣ ਪਰ ਉਨ੍ਹਾਂ ਨੂੰ ਆਪਣੇ ਪਰਿਵਾਰ ਵਿਚ ਬੈਠ ਕੇ ਦੇਖਿਆ ਤਾਂ ਜਾ ਸਕੇ।

ਇਸਤਿਹਾਰਬਾਜ਼ੀ ਟੀ.ਵੀ. ਦੀ ਆਮਦਨ ਵਧਾਉਣ ਲਈ ਜ਼ਰੂਰੀ ਹੈ ਪਰ ਇਸ ਦੁਆਰਾ ਚੰਗੇ ਸਿੱਖਿਆਦਾਇਕ ਪ੍ਰੋਗਰਾਮਾਂ ਦੀ ਨਿਰੰਤਰਤਾ ਨੂੰ ਨਾ ਤੋੜਿਆ ਜਾਵੇ।

ਟੈਲੀਵਿਜ਼ਨ ਦੇ ਪ੍ਰੋਗਰਾਮ ਅਜਿਹੇ ਆਦਰਸ਼ਕ ਹੋਣੇ ਚਾਹੀਦੇ ਹਨ ਕਿ ਮਾਪੇ ਬੱਚਿਆਂ ਨੂੰ ਅਵਾਜ਼ਾਂ ਮਾਰ-ਮਾਰ ਕੇ ਬੁਲਾਉਣ ਕਿ ਆਉਂਦੇ ਦੇਖੇ ਲਾਹੇਵੰਦੇ ਪ੍ਰੋਗਰਾਮ। ਅਜੋਕੇ ਪ੍ਰੋਗਰਾਮਾਂ ਦੀਆਂ ਘਾਟਾਂ ਕਰਕੇ ਮਾਪੇ ਬੱਚਿਆਂ ਨੂੰ ਦੂਰਦਰਸ਼ਨ ਦੇ ਪ੍ਰੋਗਰਾਮ ਵੇਖਣੋਂ ਵਰਜਦੇ ਹਨ।

ਨਿਰਸੰਦੇਹ ਤੁਹਾਨੂੰ ਆਦਰਸ਼ਕ ਪ੍ਰੋਗਰਾਮ ਲਈ ਉੱਚ-ਕੋਟੀ ਦੇ ਵਿਅਕਤੀ ਖੋਜਣੇ ਪੈਣਗੇ ਤੇ ਉਨ੍ਹਾਂ ਨੂੰ ਲਿਖਣ ਲਈ ਪ੍ਰੇਰਨਾ ਪਵੇਗਾ ਪਰ ਚੰਗੀ ਚੀਜ਼ ਲਈ ਸਦਾ ਮਿਹਨਤ ਕਰਨੀ ਹੀ ਪਿਆ ਕਰਦੀ ਹੈ।

ਮੈਂ ਖੁੱਲ੍ਹ ਕੇ ਅਜੋਕੇ ਪ੍ਰੋਗਰਾਮਾਂ ਨੂੰ ਕੋਸਣਾ ਨਹੀਂ ਚਾਹੁੰਦਾ ਤੇ ਨਾ ਹੀ ਅਜਿਹਾ ਕਰਨਾ ਸੋਚਦਾ ਹੈ ਪਰ ਪ੍ਰੋਗਰਾਮਾਂ ਨੂੰ ਬਿਹਤਰ ਬਣਾਉਣ ਦੀ ਬੜੀ ਗੁੰਜਾਇਸ਼ ਹੈ ਤੇ ਤੁਸੀਂ ਉਹ ਗੁੰਜਾਇਸ਼ ਰਹਿਣ ਨਾ ਦਿਓ।

ਧੰਨਵਾਦ ਸਹਿਤ,

ਆਪ ਦਾ ਸ਼ੁੱਭਚਿੰਤਕ,
ਨਾਮ.....