



550A

GOVERNMENT OF KARNATAKA

Karnataka Secondary Education Examination Board

SSLC EXAMINATION : MARCH/APRIL-2017

MAIN ANSWER BOOKLET

ANSWER BOOKLET NUMBER / ಪತ್ರ ಸಂಖ್ಯೆ ನಂಂತಹ

10921122

REGISTER NUMBER / ರಿಜಿಸ್ಟ್ರೇಷನ್ ನಂಂತಹ

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MEDIUM /
ಭಾಷೆ

ENGLISH

SUBJECT / ವಿಷಯ:

SCIENCE.

SUBJECT CODE / ವಿಷಯ ಕೋಡ್: 83E

SL.No of Additional Answer Sheets used ವಿಷಯದಲ್ಲಿ ಮಾತ್ರ ಉತ್ತರಗಳ ಸಂಖ್ಯೆ		No. of Pages used ವಿಷಯದಲ್ಲಿ ಉತ್ತರಗಳ ಪುಟಗಳ ಸಂಖ್ಯೆ		Total no. of pages used ವಿಷಯದಲ್ಲಿ ಮಾತ್ರ ಉತ್ತರಗಳ ಪುಟಗಳ ಸಂಖ್ಯೆ
1	Main Answer Booklet ಮಾತ್ರ ಉತ್ತರ ಪುಟ	Additional Answer Sheets ಮಾತ್ರ ಉತ್ತರಗಳ ಉತ್ತರ ಪುಟ		
2			20	20
3				
4			Certified that the entries made above by the candidate are found to be correct/ ಪ್ರತಿಧಿಸಿದ್ದು ಮಾತ್ರ ನಮ್ಮೆ ದಾಖಲೆಯ ಏಲ್ಲ ಮಾತ್ರಾಗಳು ಸಂಖ್ಯಾತ ಎಂಬುದನ್ನು ಈ ಮೂಲಕ ಪ್ರತಿಭಾವಿಸಿದ್ದು.	
5			<i>RAH 07/04/17</i>	
6			Signature of the Invigilator with date/ ನಿರ್ವಹಿಕ ಸಹಾಯಕರಿಗೆ ನಿರ್ವಹಿಕ ಸಹಾಯಕರಿಗೆ ನಿರ್ವಹಿಕ ಸಹಾಯಕರಿಗೆ ನಿರ್ವಹಿಕ ಸಹಾಯಕರಿಗೆ	

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Q.NO.	Marks													
1	1	11	4	21	2	31	2	41	4	51			61	1
2	1	12	1	22	2	32	2	42	4	52			62	
3	1	13	1	23	2	33	2	43		53			63	
4	1	14	1	24	2	34	2	44		54			64	
5	1	15	1	25	1	35	3	45		55				
6	1	16	1	26	2	36	3	46		56				
7	0	17	1	27	2	37	3	47		57				
8	1	18	1	28	2	38	3	48		58				
9	1	19	1/2	29	1	39	3	49		59				
10	1	20	2	30	2	40	4	50		60			Total Marks	75 1/2

Total Marks in Words: Seventy Six Only

Sno	Signature of Evaluator	Evaluator's Code	Signature of DCE	DCE's Code
1	Savitra S	2000106010560	<i>Admire</i>	19971130204
2	<i>Chaw</i>	200006010018		



Q. No. I).

1). c). Solar energy into electrical energy.

2). A). p-block, 3rd period.

3). A). Reduce the amount of dissolved oxygen content in water.

4). D). RADAR.

5). A). Methane, B). Oxygen, C). Chlorine, D). Glycine, E). A) Glycine.

6). C). Petals are in multiples of three.

7). B). diode offers low resistance.

8). D). Chikungunya, Dengue fever.

9). B). Nickel + Cobalt + Iron + Aluminium

10). C). Replication.



Q. No. II).

11).

A). A.C. Dynamo.

iv). In thermal power

station to produce
alternate current.

B). Step-up transformer.

i). Stepping up the A.C. voltage
to transport electricity to
distant places.

C). D.C. Motor.

vii). In devices like, toys,
tape recorders, etc..

d). Induction coil.

iii). In discharge tube
experiments to obtain
very high Dc voltage
from a low Dc voltage.

(Q.No. II)

12). The naturally occurring heat energy found in the interior of the Earth's crust, within 10 kms is called Geothermal energy.

13). i) Zeolite is used in removal of hardness of water.

ii) Zeolite is used in chromatography.

14). As in mammals, teeths are of different types. i.e. Thecodont, Heterodont and Diphyodont. Hence, Heterodont is found in jaw of an animal. Hence, it belongs to mammals.

	Saturated Hydrocarbon.	Unsaturated hydrocarbon.
i)	They have only single bond between carbon atoms.	They have atleast one double or triple bond between carbon atoms.
ii)	The name ends with 'ane'.	The names ends with 'ene' or 'yne'.



16). Silicon reacts with coke to give Silicon Carbide.
i.e. $\text{Si} + \text{C} \rightarrow \text{SiC}$:- (Endothermic reaction)
The reason is unless quantity of silica
is heated with coke it gives Silicon Carbide.

17). Sympathetic nervous system - Dilution of pupil of eye.
Parasympathetic " " - Constriction of pupil of eye.

18). Faraday's first law of Electrolysis:

The mass of a substance deposited or
collected at either electrodes during electrolysis
is proportional to product current and to time.

(Q. No. 104 IV).

19). Both Boy A and Boy B's argument is
correct. Because As electro magnetic waves
are transverse waves and light waves
are too electromagnetic waves. Hence,
light waves are also transverse waves.
Thus, light wave is a electromagnetic
wave and a transverse wave.

20) Atomic size decreases across a period:
 because electrons are added to the orbitals, makes the nucleus to exert greater inward pull.

2). Atomic size increases down a group:
 There is an increase in the energy level from outermost shell of electrons to the centre of the nucleus.

21).

a) i). Industry and ii). transportation, are the two sources to be monitored to control air pollution.

b), ii). Industries must be established away from towns and cities.
 ii). Educating the people to use public transport and also to bring awareness.

22).	Diesel engine.	Petrol engine:
1).	Does not require spark plug.	Requires spark plug.
2).	Micells of diesel is a fuel.	Petrol vapour is fuel.
3).	Efficiency is more.	Efficiency is less.
4)	Cost is comparatively less	Cost is comparatively high
5).	Pollution intensity is high.	Pollution intensity is low



23). Coloured glass can be obtained by adding some metallic compounds of the metals.

a) Yellow glass: Ferric compound.

b) Blue glass: Cobalt compound.

24). Tendons. ligaments.

i). Tendons have more of white fibres.

Ligaments have more of elastic fibres.

ii). They connect muscles to bones.

They connect bone to bone and helps in the movement of body.

25). Hill A. Hill B.

$$t = 4 \text{ sec. } v = 340 \text{ ms}^{-1}$$

$$t = 6 \text{ sec. } d = 340 \text{ ms}^{-1}$$

$$d = vt$$

$$d = vt$$

$$\therefore d = 340 \times 4^2$$

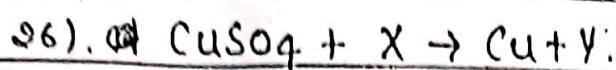
$$\therefore d = 340 \times 6^2$$

$$\therefore d = 1680 \text{ m}$$

$$\therefore d = 1020 \text{ m}$$

\therefore The distance between two hills is

$$1020 - 680 = 340 \text{ m}$$



*. The element represented by X is ~~Fe~~.

*. The molecular formula represented by Y is ~~FeSO_4~~ .

~~Reason: 1) Increasing order of reactivity.~~

2) Ag is a noble gas.

3) They do not form chemical bonds on their own with other elements.

27). The other components of ~~this~~ phloem tissue are:

1). Sieve tubes. 2). Xylem vessels.

2). Sieve plates. 2). Xylem parenchyma.

3). Phloem fibres. 3). Xylem sclereids.

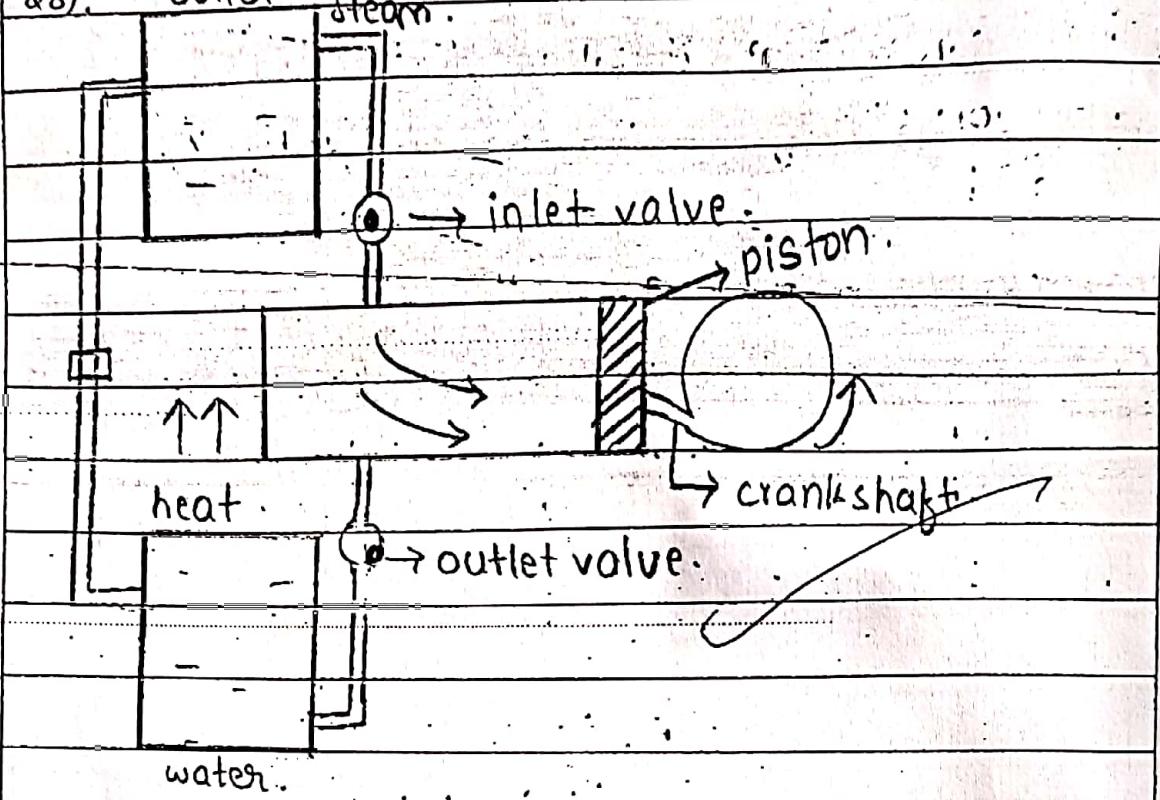
4). Companion cells. 4). Xylem fibres.

*. The part labelled as 'A' is

Its function is conduction of water, minerals and nutrients.

Last page.

28). boiler.



2

29). The size of the balloon increases and then it bursts.

The law which supports the answer is Charles's law.

29). The size of the balloon decreases.

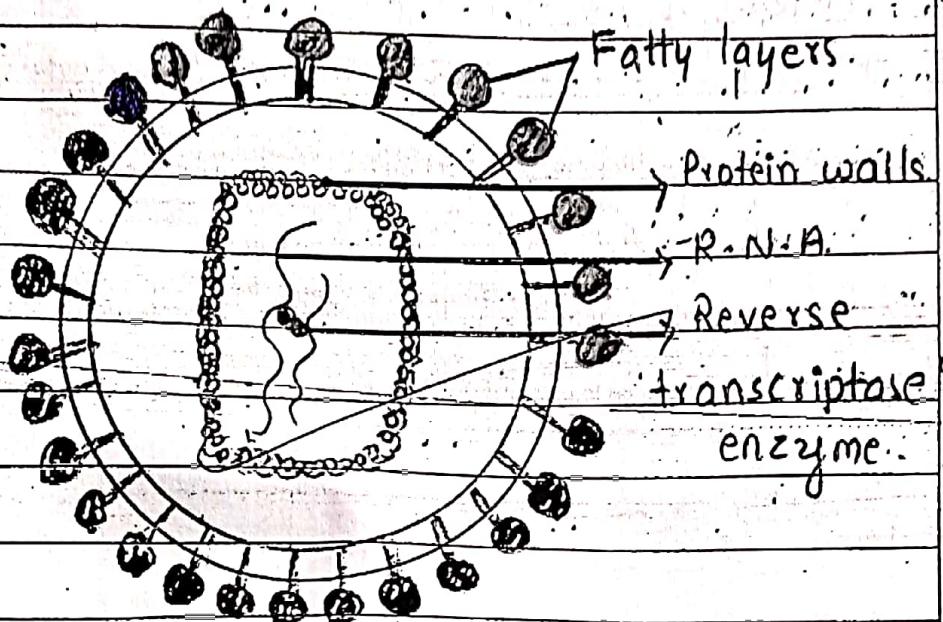
The law which supports the answer is

Boyle's law. It states that.

"At constant temperature, the volume of a fixed mass of dry gas is inversely proportional to its pressure".

$$\text{i.e. } V \propto \frac{1}{P}$$

30)



31). Superconductivity:

The property by virtue of which certain materials show almost zero resistance at a very low temperature is called superconductivity.

Uses of super conductors:

1). Superconductors are used in powerful magnets.

2). They are used in magnetic resonance

Imaging (MRI).

3). They are also used in microwave devices.



-12-

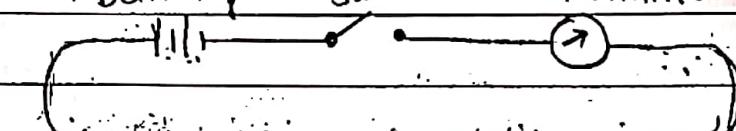
32) Antioxidants are substance added to food containing fat or oil prevents food from developing a foul smell.

21. Colourants:

* They are added to reinforce colour and to look attractive.

* They are also added to colourless food, lost during processing of food.

33) battery switch + Ammetre



Cathode

+ nickel anode

Electrolyte

34) Physical features of Australopithecus:

1). They were relatively short (.4 and $\frac{1}{2}$ feet).

2). The forehead was low.

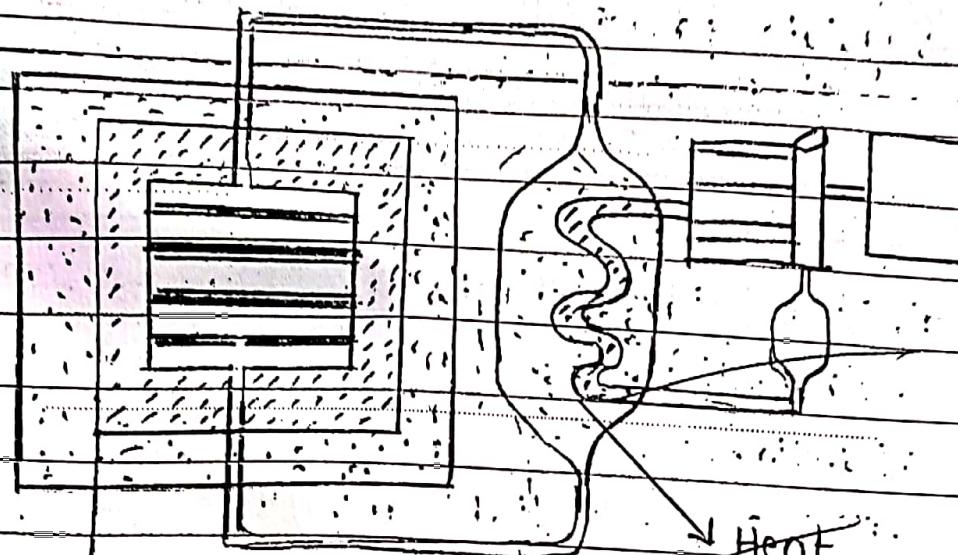
3). The cranial capacity was equal to modern man.

4). The brain capacity was equal to $\frac{1}{3}$ of gorilla.



(Q.No. 35.V).

35). Nuclear reactor.



3

a). Reflector

36) a) Steps of manufacturing sugar from sugarcane

i). Extraction of the juice from the source.

2). Purification of the juice

3). Concentration and crystallisation

4). Separation and drying of crystals

b) Activated carbon

i). Norit:

Animal charcoal or coconut shell which is called Norit is added to decolourize

Sugar, to get white crystals of sugar.

ii). Calcium hydroxide:

Beranted juice is made alkaline with calcium hydroxide and steamed to coagulate protein.

It is also added to lighten the dark colour.

37). a). Four flight adaptations in birds.

1). Streamlined body.

2). Forelimbs modified into wings.

3). presence of flight muscles.

4). Reduced body weight.

5). Long bones are pneumatic, filled with air.

6). Absence of teeths; replaced by beak.

b). Based on the composition of endoskeleton fishes are divided into two groups.

They are:

1). Cartilagenous fishes.

2). Bony fishes



38). Blast furnace used in the extraction of Iron.



a) molten
iron.

b) slag.

39).

1). Carl Correns conducted a hybridization experiment using Four o'clock plant. He crossed a homozygous plant with red flowers (RR) and another homozygous plant with white flowers (WW).

2). In the F₁ generation, he found that all plants with pink flowers. In the F₂ generation, he found plants with red, pink and white flowers in the ratio 1:2:1.

Schematic representation:
Gametes.

R and W

Cross pollination.

(F₁ generation) RW. (all plants with pink flowers)

Self-pollination.

(F₂ generation) RR, RW, RW, WW. (1 Red, 2 pink & 1 white flowers).

Phenotypic ratio: 1:2:1.

Genotypic ratio: 1:2:1.

Q. No. VII).

40) a) Big Bang theory:

- 1). like, in the stars the supernova explosion, it is said that Earth had also begun with the explosion. This is known as Big Bang theory.
- 2) It was studied in 1930s, and it was Edwin P. Hubble who explained about Big Bang theory and said the Earth is expanding.
- 3). At the beginning of the Earth, all the things that is in the Earth, were of matters compressed into a fire ball called Primordial fire ball.
- 4). When Primordial ball was triggered, there occurred a huge explosion. This is called Big Bang theory.

b) Geostationary satellites:

- 1). They are the artificial satellites whose orbital period is 24 hrs and the period of revolution of Geostationary satellite is equal to period of rotation of the Earth.

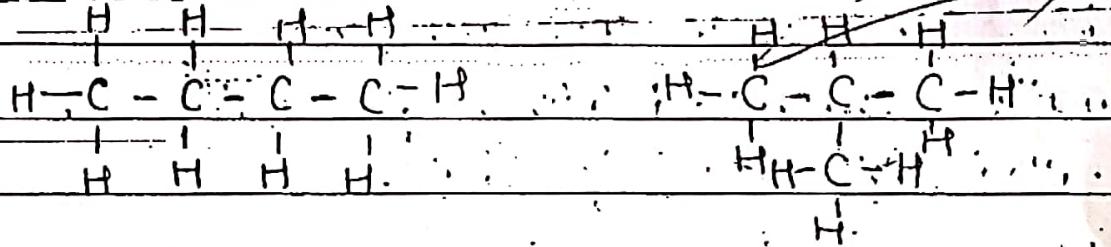


Geostationary satellites are called communication satellites as they provide relay facilities for international communication.

41) a). Isomerism:

The compounds having same molecular formula with different structural arrangement is called Isomerism.

Isomers of Butane. C_4H_{10}



b). The air pollutant liberated in the incomplete combustion of methane is carbon particles especially carbon monoxide (CO).

P.T.O.

c). Importance of Hydrogenation of oils.

1). Hydrogenation of oils have high melting point.

2). They are used in preparation of pastries.

3). They are stable.

4). They do not go rancid.

~~5). They make the food~~

6). They increase the shelf-life of food

7). They are used to prepare

~~Vanaspati ghee from vegetable oil.~~

P.T.O ...

27). The other components are:

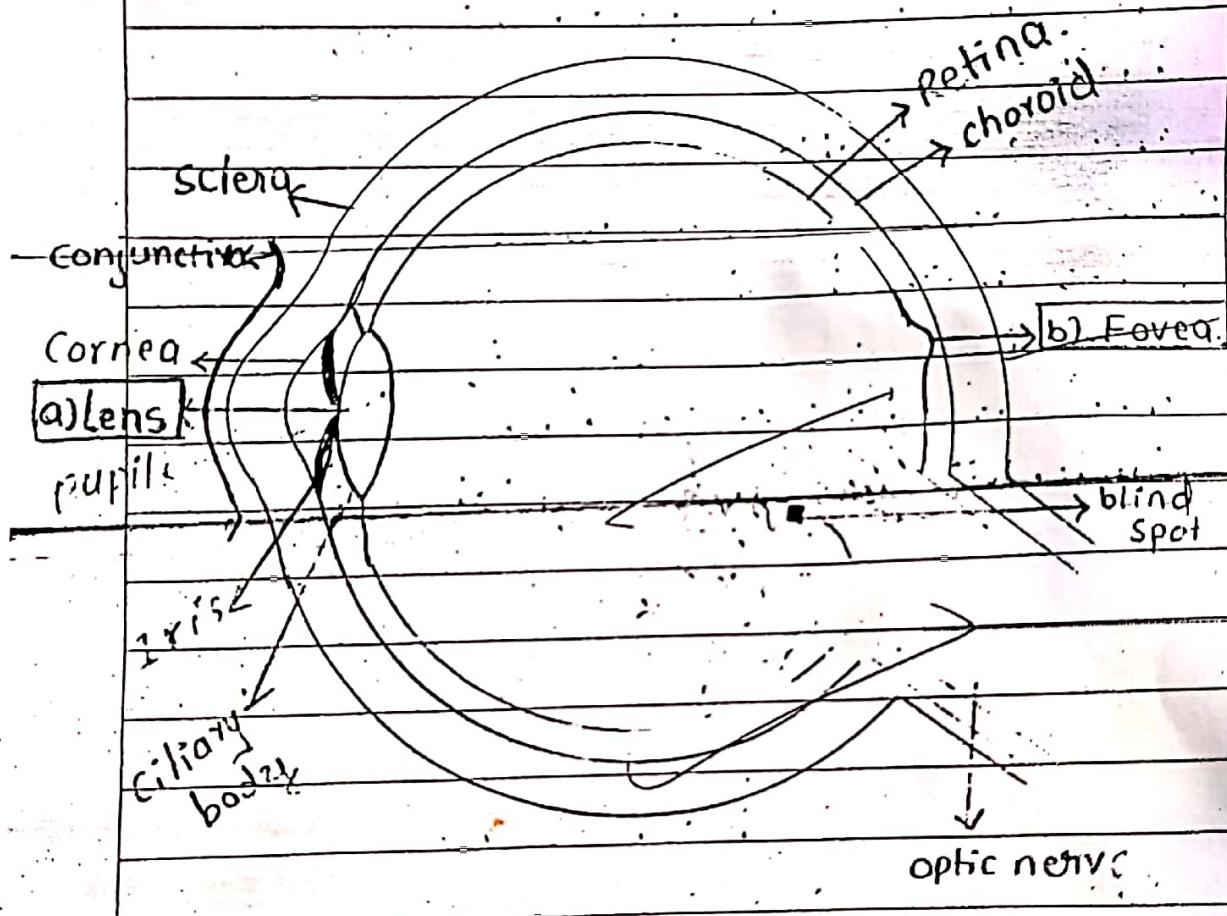
1). Phloem fibres. 2). Sieve tubes. 3). Sieve plates.

4). Companion cells.

A → Sieve plates.

Its function: Conduction of food, minerals
and nutrients.

42). Vertical section of human eye:



19). The argument of Boy A is correct.

Q.

Because, light waves propagates in the form of crests & trough and particles vibrate in the direction perpendicular to the direction of wave propagation and alternate crests & trough constitute a wave.

20.05.2017 - 20/07/2017

→ X →

1/2
1/4
1/8