Instructions:

1. All questions are compulsory.
2. All questions must be answered in the question booklet itself in the space provided for this purpose.
3. All sub-questions under the main question carry equal marks.
4. Rough work, if required, may be done on the last few pages of this question booklet, provided for the purpose.

Part-A (English)   **35 Marks**

1.	Read the unseen passage below and answer the questions that follow: (10)

Mirrors have been used since ages. It is said that Archimedes used huge mirrors to focus the heat of the sun's rays on the enemy ships to burn them. The same principle is used in solar cookers where mirrors are used to reflect and focus the sun's rays on to cooking containers. Astronomers use huge concave mirrors to focus starlight.

The mirrors used in telescopes are polished by giving a thin coat of silver or aluminum to the glass. With the telescopes, astronomers can see the heavenly bodies but even without the telescopes one can see the moon.

A full moon shining overhead is a beautiful sight, but it is also a puzzle because if the sun and the moon both give the same sunlight, then why is the moonlight more pleasant? The reason is that the moon reflects very little sunlight, in fact, only seven percent of the light is receives. The earth reflects about half of the radiation that it receives from the sun. Imagine how bright the earth will look from the moon? One can even read a book on the moon in the earth light. However, you do not have to travel all the way to the moon to realise how strong the earthlight is. Observe the crescent moon soon after the new moon. The bright

crescent is illuminated by the sun. The rest of the moon is illuminated by earthlight in other words, the light reflected by the earth is falling on the moon which is being reflected back to us and is strong enough to show the moon faintly as the crescent increases in size.

Fresh snow is the best reflector of sunlight in nature, the bright light reflected by it can dazzle and harm the eyes of mountaineers, and therefore they use dark glasses.

(a) What are the three uses of the mirrors indicated in the early paragraphs?

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(b) Which metals may be used to polish mirrors so that they may be used in telescopes?

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(c) Why do mountaineers have to use dark glasses?

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State True or False: (d) One can even read a book on the Earth in the moonlight. (e) The earth reflects about 50% of the radiation that it receives from the sun.	
Identify the word which is similar in meaning to the following words/phrases in the passage: (f) Sickle-shaped (g) A bright light	
2.	**Write an Essay on:** 'Lockdown and its consequences in India?' OR Tell something about three important skills that you have picked up or aspire to pick up in your life. (200 words) (10)

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3.	Convert the following sentences from active voice to passive voice: (6)
a)	They were criticising me unnecessarily. _____ _____
b)	Mr. Kalelkar's evidence might strengthen our case. _____ _____
c)	In the past, people believed that the earth was flat. _____ _____

Question No.	Question	Space for Answer
4.	Replace the infinitives with a gerund in following sentences: (4)	
a)	I prefer to stay home on Sunday.	
b)	To see is to believe.	
5.	Fill in the blank with the most suitable option given: (5)	
a)	Each one of us ___ a story to share. (has/have/having/are having)	
b)	I take my dog ___ walk every morning. (for a/to a/for the/to the)	
c)	She doesn't like sweets, ___ she? (doesn't/does/don't/do)	
d)	Fifteen years ___ a long period of time. (is/are/have/had)	
e)	My hands are dirty because I ___ in the garden. (work /worked/working/was working)	

Part-B (Maths)

30 Marks

Question No.	Question	Space for Answer
1.	Find the answer to the following: (5)	
a)	$\frac{5}{4} = \frac{-15}{?}$	
b)	$\frac{2}{3} + \left(-1\frac{5}{7}\right) = ?$	

Question No.	Question	Space for Answer
c)	$\frac{-7}{12} \div \left(\frac{-2}{13}\right) = ?$	
d)	Express 432 as a product of powers of prime factors.	
e)	If p=-2, find the value of $-3p^2 +4p+7$	
2.	**Fill in the blanks:** (5)	
a)	If CP=SP, then there is ___ profit.	
b)	If two sides of a triangle are 2 cm and 3 cm, the third side should necessarily be greater than ___ cm.	
c)	A line that intersects two or more lines at distinct points is called a _____.	
d)	Supplementary angle of 80° would be ___.	
e)	The standard form of $\frac{-3}{-15}$ is ___.	
3.	**Answer the following:** (10)	
a)	If angles of a triangle are in the ratio 2:3:4, find the value of each angle.	
b)	Considering a man's speed to be $1/6^{th}$ of a Cheetah's speed, find the speed of latter, if the man's speed is 25 kmph.	
c)	The population of a city decreased from 25,000 to 24,500. Find the percent decrease?	
d)	A vehicle covers a distance of 43.2 km in 2.4 litres of petrol. How much distance will it cover in 3 litres petrol?	
4.	**Find the answer to the following problems:** (10)	

Question No.	Question	Space for Answer
a)	If the diameter of the circle in adjacent figure is 14 cm, find the area of the figure, in which half the circle is superimposed onto the square.	
b)	Mrs. Roy spent Rs. 44,620 on Deepawali shopping , Rs.32,764 on buying laptop and the remaining 32% of the total amount she had as cash with her .What was the total amount and how much cash is she left with?	

Part-C (Social Science)

20 Marks

Question No.	Question	Space for Answer
1.	**Select and write the correct answer:** (5)	
a)	When the river tumbles at steep angle over hard rocks, it forms a _____. (glacier/meander/waterfall)	
b)	The centre established by Baba Guru Nanak on the banks of river Ravi was at _____. (Amritsar/Kartarpur/Talwandi)	
c)	If a lady is a homemaker, she is a _____ person. (working/non working/hardly working)	

Question No.	Question	Space for Answer
d)	If a person's kidneys fail, their blood is periodically filtered through an artificial kidney through a process called _____. (diagnosis/dementia/dialysis)	
e)	The periodic motion of a simple pendulum is known as _____. (vibration/oscillation/observation)	
2.	**State TRUE or FALSE:** (5)	
a)	In a democracy, there is no place for public protest.	
b)	Savannah of Africa is an example of Tropical Grasslands.	
c)	Ananga Pala from the Tomara dynasty of Rajputs first established his capital at Delhi.	
d)	If dipped into it, a lime water solution will have no effect on a strip of red litmus paper.	
e)	Increased wind speed is accompanied by a reduced air pressure.	
3.	**Answer the following questions:** (10) **(Each question carries 5 marks. Attempt ANY TWO. 200 words)**	
a)	Discuss the working of a State Government in India.	

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b)	Why do we respire? Bring out the difference between aerobic and anaerobic respiration.

c)	Explain the difference between Physical and Chemical changes giving two examples of each.

Part-D (General Knowledge)   **15 Marks**

Question No.	Question	Space for Answer
1.	**Identify the following famous Indians :** (5)	
a)	The Gandhian leader who started the *Bhoodan Movement* to collect land for the landless people of the country.	
b)	The great Hindu religious priest who established the four famous *mathas* at Sringeri, Dwarka, Puri and Joshimath.	
c)	The great social worker who served to improve the life of leprosy patients in his ashram *'Anandwan'* at Chandrapur, Maharashtra.	
d)	The great freedom fighter, also known as the Iron Man of India.	
e)	The tenth and last Guru of the Sikhs who created the Khalsa to defend the week.	
2.	**State TRUE or FALSE:** (5)	
a)	St. John was the disciple of Jesus Christ who came to India.	
b)	*Ornithology* is the study of structure of the Earth.	
c)	Thar desert is the largest desert in India.	
d)	Professional rider in a horse race is known as the Ballet.	
e)	Kuala Lumpur is the capital of Indonesia.	
3.	**Answer the following questions:** (5)	
a)	Who is the first woman Fighter pilot of India to feature at the Republic Day parade?	

Question No.	Question	Space for Answer
b)	'Desert Knight-21', which was making news recently, is the Military exercise between India and which country?	
c)	The recent New Education Policy has been issued in which year?	
d)	Where is the headquarters of the 'National AIDS Control Organisation (NACO)' located?	
e)	Who is the current Home Minister of India?	

SPACE FOR ROUGH WORK