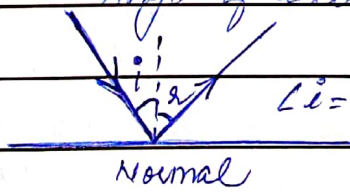


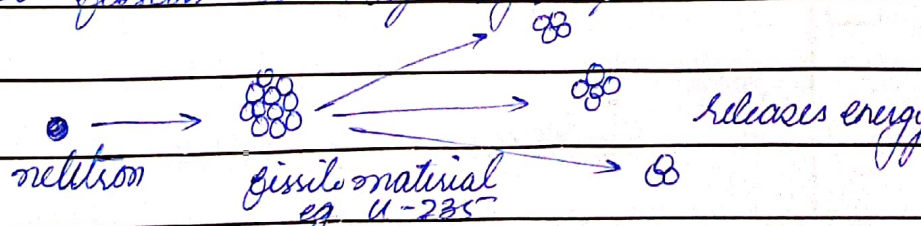
ANUSHA DHIMAN
(dhiman.anusha22@gmail.com)

प्रश्न संख्या	<p style="text-align: center;">मुख्य परीक्षा PAPER - III म.प्र.राज्य लोक सेवा आयोग (PART-A)</p>		हाशिए में न लिखें
2	A	Fundamentally a mixture consists of a	
		solute & a solvent which can either be a	
		solid, liquid or gas. It comprises 2 or more	
		elements	
		Techniques of separation of its components	
		<div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; padding: 5px;">handpicking</div> </div>	
		manually separating elements eg. stones from rice grains.	
		<div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; padding: 5px;">Chromatography</div> </div>	
		chemical process to separate esp. diff. colours	
		<div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; padding: 5px;">winnowing</div> </div>	
		using wind to separate lighter husk from grain.	
		<div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; padding: 5px;">vapourisation</div> </div>	
		eg. salt from water	
		<div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; padding: 5px;">funnel separation</div> </div>	
		used to separate particles of different sizes using funnel.	
		eg. mud particles from water.	
		<div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; padding: 5px;">threshing</div> </div>	
		beating the grain stalk to separate grains	
		<div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; padding: 5px;">fractional distillation</div> </div>	
		<ul style="list-style-type: none"> • separating elements/ components of varied boiling & melting points • element of low bp is vapourised to be collected separately. 	
		Separation techniques depends upon the physical & chemical properties of components of any mixture.	

प्रश्न संख्या	मुख्य परीक्षा म.प्र.राज्य लोक सेवा आयोग	हाशिए में न लिखें
<input type="checkbox"/> B	light is a source of illumination, its	
<input type="checkbox"/>	is a natural agent that stimulates sight and make things visible	
<input type="checkbox"/>	following are the major properties of light -	
<input type="checkbox"/>	(a) It is a source of energy,	
<input type="checkbox"/>	(b) It has dual nature - sometimes behaves like a particles &	
<input type="checkbox"/>	sometimes as wave.	
<input type="checkbox"/>	(c) Travels faster than sound & does not need any medium to travel.	
<input type="checkbox"/>	(d) follows laws of reflection	
<input type="checkbox"/>	$\text{Angle of incidence } (i) = \text{Angle of Reflection } (r)$ $i = r$ 	
<input type="checkbox"/>	(e) follows laws of refraction: light changes angle when passed through different medium.	
<input type="checkbox"/>	(f) Total Internal Reflection: reflects completely at boundary of two medium	
<input type="checkbox"/>	(g) Scattering of light (h) Dispersion & Diffraction	

प्रश्न संख्या	<p style="text-align: center;">मुख्य परीक्षा म.प्र.राज्य लोक सेवा आयोग</p>		हाशिए में न लिखें
<input type="checkbox"/> c	Enzymes & hormones are vital components of human life system, they assist in		
<input type="checkbox"/>	control & coordination, proper functioning of different organs and commanding of		
<input type="checkbox"/>	their action		
<input type="checkbox"/>	Difference comprises:		
<input type="checkbox"/>	Enzymes	Hormones	
<input type="checkbox"/>	catalyses - it stimulates	messengers - response	
<input type="checkbox"/>	functioning of organ	of commands.	
<input type="checkbox"/>	acts at the site of its	forms and acts at	
<input type="checkbox"/>	formation	different sites.	
<input type="checkbox"/>	Acutely effected by	does not effected by	
<input type="checkbox"/>	external forces	such forces.	
<input type="checkbox"/>	formation site: not	forms at endocrine	
<input type="checkbox"/>	exocrine system	system.	
<input type="checkbox"/>	Age do not effect	Age, effects their	
<input type="checkbox"/>	their stimulation	production eg. Puberty.	
<input type="checkbox"/>	Can be reused as	cannot be re-used	
<input type="checkbox"/>	its properties don't	as properties changes	

प्रश्न संख्या	<p style="text-align: center;">मुख्य परीक्षा म.प्र.राज्य लोक सेवा आयोग</p>	हाशिए में न लिखें
<input type="checkbox"/> <input type="checkbox"/>	change.	
<input type="checkbox"/> <input type="checkbox"/>	can diffuse through cell membrane	
<input type="checkbox"/> <input type="checkbox"/>	do not diffuses.	
<input type="checkbox"/> <input type="checkbox"/>	eg. lipase, maltase	
<input type="checkbox"/> <input type="checkbox"/>	eg. Amulins, exylin	
<input type="checkbox"/> <input type="checkbox"/>	They plays crucial roles in our body by maintaining and controlling varied functions	
<input type="checkbox"/> <input type="checkbox"/>		
<input type="checkbox"/> <input checked="" type="checkbox"/>	Blood is a vital body fluid in humans & animals that delivers necessary substances such as nutrients & oxygen & transports wastes away from body.	
<input type="checkbox"/> <input type="checkbox"/>		
<input type="checkbox"/> <input type="checkbox"/>	Blood group or type is a classification of blood based on presence & absence of antibodies & antigens on red blood cells surface. such basis divides blood groups as	
<input type="checkbox"/> <input type="checkbox"/>	Blood group A, B, AB and D.	
<input type="checkbox"/> <input type="checkbox"/>	Some of the rarest blood group comprises Bombay blood group and golden blood	
<input type="checkbox"/> <input type="checkbox"/>	group.	

प्रश्न संख्या	<p style="text-align: center;">मुख्य परीक्षा म.प्र.राज्य लोक सेवा आयोग</p>	हाथिए में न लिखें
<input type="checkbox"/> <input type="checkbox"/>	<p>Blood group Antigen Antibody Donor.</p>	
<input type="checkbox"/> <input type="checkbox"/>	<p>A A anti-B A, O</p>	
<input type="checkbox"/> <input type="checkbox"/>	<p>B B anti-A B, O</p>	
<input type="checkbox"/> <input type="checkbox"/>	<p>AB AB A, B AB, O, A, B.</p>	
<input type="checkbox"/> <input type="checkbox"/>	<p>O O nil O</p>	
<input type="checkbox"/> <input type="checkbox"/>		
<input type="checkbox"/> <input type="checkbox"/>	<p style="text-align: center;">Rh factor - Rh antigen on RBC</p>	
<input type="checkbox"/> <input type="checkbox"/>	<p>made to +ve and -ve blood groups.</p>	
<input type="checkbox"/> <input type="checkbox"/>	<p>Rh (Rhesus) present - A+, B+, AB+ or O+</p>	
<input type="checkbox"/> <input type="checkbox"/>	<p>absent - A-, B-, AB-, O-</p>	
<input type="checkbox"/> <input type="checkbox"/>		
<input type="checkbox"/> <input checked="" type="checkbox"/>	<p>Nuclear Reactors are an apparatus in</p>	
<input type="checkbox"/> <input type="checkbox"/>	<p>which a fission reaction is carried out</p>	
<input type="checkbox"/> <input type="checkbox"/>	<p>in controlled or self sustained manner</p>	
<input type="checkbox"/> <input type="checkbox"/>	<p>to produce energy. Types -</p>	
<input type="checkbox"/> <input type="checkbox"/>	<p>→ Thermal Nuclear reactors</p>	
<input type="checkbox"/> <input type="checkbox"/>	<p>→ fast Breeder reactor</p>	
<input type="checkbox"/> <input type="checkbox"/>		
<input type="checkbox"/> <input type="checkbox"/>	<p>Fast Breeder Reactors use neutrons</p>	
<input type="checkbox"/> <input type="checkbox"/>	<p>for fission at very high speed.</p>	
<input type="checkbox"/> <input type="checkbox"/>	 <p style="text-align: center;">neutron fissionable material releases energy eg. U-235</p>	

प्रश्न संख्या	<p style="text-align: center;">मुख्य परीक्षा म.प्र.राज्य लोक सेवा आयोग</p>	हाशिए में न लिखें
<input type="checkbox"/> <input type="checkbox"/>		
<input type="checkbox"/> <input type="checkbox"/>		
<input type="checkbox"/> <input type="checkbox"/>	<p>→ highly enriched fuel, eg. U-235 is used in fast breeder reactors.</p>	
<input type="checkbox"/> <input type="checkbox"/>	<p>→ It requires a small amount of neutron to sustain long reaction chain.</p>	
<input type="checkbox"/> <input type="checkbox"/>	<p>→ though expensive to build & maintain it produces high amount of energy.</p>	
<input type="checkbox"/> <input type="checkbox"/>	<p>→ No neutron moderator is required as it is self sustainable.</p>	
<input type="checkbox"/> <input type="checkbox"/>	<p>→ Produces less radioactive waste.</p>	
<input type="checkbox"/> <input checked="" type="checkbox"/>	<p>Technology has become a vital component of every aspect of human</p>	
<input type="checkbox"/> <input type="checkbox"/>	<p>from age to age, technology, intervene in medical, agricultural, electronics,</p>	
<input type="checkbox"/> <input type="checkbox"/>	<p>sports, traffic management etc.</p>	
<input type="checkbox"/> <input type="checkbox"/>	<p>Its uses in traffic management comprises</p>	
<input type="checkbox"/> <input type="checkbox"/>	<p>(a) Traffic is majorly controlled by</p>	

प्रश्न संख्या	<p style="text-align: center;">मुख्य परीक्षा म.प्र.राज्य लोक सेवा आयोग</p>	हाथिए में न लिखें
<input type="checkbox"/> <input type="checkbox"/>	Red light system which is the most common technological intervention.	
<input type="checkbox"/> <input type="checkbox"/>	(b) RTS - Road Transport system, a package of technology to decrease traffic burden & reduce travelling costs.	
<input type="checkbox"/> <input type="checkbox"/>	(c) LIDAR - Light detecting & ranging system to detect over speedy vehicles & those jumping red lights.	
<input type="checkbox"/> <input type="checkbox"/>	(d) Automated e-challan system - such as in metropolitan including Bhopal, e-challan is automatically sent to registered address without any physical contact for those breaking rules.	
<input type="checkbox"/> <input type="checkbox"/>	(e) Fast Tag - for easy movements through toll plazas, fast tags are provided for automatic toll deductions.	
<input type="checkbox"/> <input type="checkbox"/>	All these interventions by	
<input type="checkbox"/> <input type="checkbox"/>	technology makes it easy for traffic management.	
<input type="checkbox"/> <input type="checkbox"/>		
<input type="checkbox"/> <input type="checkbox"/>		
<input type="checkbox"/> <input type="checkbox"/>		
<input type="checkbox"/> <input type="checkbox"/>		
<input type="checkbox"/> <input type="checkbox"/>		
<input type="checkbox"/> <input type="checkbox"/>		
<input type="checkbox"/> <input type="checkbox"/>		

प्रश्न संख्या	<p style="text-align: center;">मुख्य परीक्षा म.प्र.राज्य लोक सेवा आयोग</p>	हाशिए में न लिखें
<input type="checkbox"/> 1	GAGAN - GPS Aided Geo Augmented Navigation system.	
<input type="checkbox"/>	It is a navigation system of Government of India in collaboration with Aeronautics Authority of India and Indian Space Research Organisation (ISRO)	
<input type="checkbox"/>	It was established in three phase till 2008. It was the first step towards introduction of accuracy in modern communication, navigation surveillance / air traffic system over Indian airspace	
<input type="checkbox"/>	GAGAN is a first satellite based navigation system to cover equatorial region. It covers area from Africa to Australia	
<input type="checkbox"/>	It makes airline operations more effective & efficient, increases safety & fuel efficiency. It also reduces burden of ground staff of traffic controlling in airspace	
<input type="checkbox"/>		
<input type="checkbox"/>		
<input type="checkbox"/>		
<input type="checkbox"/>		
<input type="checkbox"/>		
<input type="checkbox"/>		
<input type="checkbox"/>		

प्रश्न संख्या	<p style="text-align: center;">मुख्य परीक्षा म.प्र.राज्य लोक सेवा आयोग</p>	हाशिए में न लिखें
<input type="checkbox"/> J	Nanotechnology is a technological intervention through nanoparticles of	
<input type="checkbox"/>	sizes less than 100 ^(nm) nanometre. It is	
<input type="checkbox"/>	manipulation of products at atomic level	
<input type="checkbox"/>	$1 \text{ nm} = 10^{-9} \text{ metres}$.	
<input type="checkbox"/>	Advantages:	
<input type="checkbox"/>	(a) light weight products and increased durability due to its compact sizes.	
<input type="checkbox"/>	(b) highly efficient and fast in its working eg. micro chips in computers,	
<input type="checkbox"/>	TV, laptops increases its efficiency.	
<input type="checkbox"/>	(c) medical intervention of nanotechnology	
<input type="checkbox"/>	gives humans an upper hand over	
<input type="checkbox"/>	diseases eg. precision in surgeries for	
<input type="checkbox"/>	cancerous cells, can be done at	
<input type="checkbox"/>	affected sites with accuracy.	
<input type="checkbox"/>	(d) Agricultural surplus increased	
<input type="checkbox"/>	through various mechanical implements & equipments.	
<input type="checkbox"/>	(e) Nanotechnology is cost effective &	
<input type="checkbox"/>	space effective in nature.	
<input type="checkbox"/>		
<input type="checkbox"/>		

प्रश्न संख्या	मुख्य परीक्षा म.प्र.राज्य लोक सेवा आयोग	हाशिए में न लिखें
<input type="checkbox"/> K	Field of energy has been boosted	
<input type="checkbox"/>	by various technological interventions & inventions such as-	
<input type="checkbox"/>	(a) solar energy - cost effective &	
<input type="checkbox"/>	efficient solar panels have increased production of solar energy.	
<input type="checkbox"/>	(b) Wind energy - use of nanotechnology	
<input type="checkbox"/>	in blades of wind mills gives them long life, light weight & durability.	
<input type="checkbox"/>	(c) Green/Bio-gas energy - Bio-gas	
<input type="checkbox"/>	plants using cow dung, waste products gives a clean alternative of non-renewable	
<input type="checkbox"/>	energy.	
<input type="checkbox"/>	(d) Nuclear energy - Nuclear reactors have	
<input type="checkbox"/>	are now designed with safety & precautions hence increasing efficiency & production.	
<input type="checkbox"/>	(e) Hydro-electric power plants - Producing	
<input type="checkbox"/>	energy from water has become a major source of energy.	
<input type="checkbox"/>	Technology has ailed & paced human lives	

प्रश्न संख्या

मुख्य परीक्षा
म.प्र.राज्य लोक सेवा आयोग

हाशिए में न लिखें

4

let piece of work done by man in one day be M & that by boy be B .

According to question,

[6 men + 8 boys] takes 10 days to complete a work.

$$\Rightarrow (6M + 8B) \times 10 = \text{work done} \quad - (1) \text{ eq.}$$

similarly,

$$(26M + 48B) \times 2 = \text{work done} \quad - (2) \text{ eq.}$$

Equating eqⁿ (1) & (2)

$$(6M + 8B) \times 10 = (26M + 48B) \times 2$$

$$60M + 80B = 52M + 96B$$

$$60M - 52M = 96B - 80B$$

$$8M = 16B$$

$$1M = 2B \quad \left\{ \begin{array}{l} \text{1 man is equivalent} \\ \text{to 2 Boys.} \end{array} \right.$$

$$\text{hence total work} = 60M + 80B$$

$$= 60M + 40M = 100M$$

$$\text{so for } 15M + 20B = 15M + 10M = 25M$$

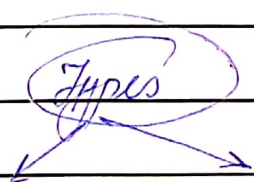
$$\text{Time taken} = \frac{100M}{25M}$$

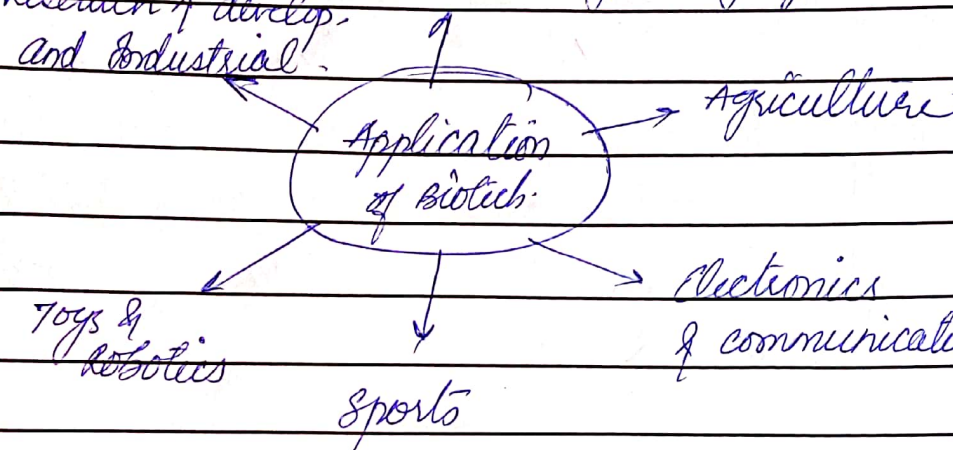
$$\text{Time taken by 15 men \& 20 Boys} = \underline{\underline{4 \text{ days}}}$$

प्रश्न संख्या	मुख्य परीक्षा म.प्र.राज्य लोक सेवा आयोग	हाशिए में न लिखें
1 A	QR code = Quick Response codes are an array of black and white boxes matrix barcode designed in Japan. They are machine readable optical information.	
<input type="checkbox"/> <input type="checkbox"/>		
<input type="checkbox"/> <input type="checkbox"/>		
<input type="checkbox"/> B	Those which fix atmospheric nitrogen in soil in form of nitrate or nitrates in nitrogen cycle. eg. Azotobacter, Cyanobacteria, Rhizobium	
<input type="checkbox"/> <input type="checkbox"/>		
<input type="checkbox"/> <input type="checkbox"/>		
<input type="checkbox"/> C	Fullerene, is an allotrope of carbon which normally occurs in spherical in shape. Buckminster fullerene generally, comprises 60 C-atoms.	
<input type="checkbox"/> <input type="checkbox"/>		
<input type="checkbox"/> <input type="checkbox"/>		
<input type="checkbox"/> D	Plant Hormones majorly 5 in types Auxin, Gibberellins, Ascorbic Acid etc.	
<input type="checkbox"/> <input type="checkbox"/>	They help in growth, support, strength & metabolism in plants.	
<input type="checkbox"/> <input type="checkbox"/>		
<input type="checkbox"/> E	Electrical charge test is the physical property of matter that causes to experience	

प्रश्न संख्या	<p style="text-align: center;">मुख्य परीक्षा म.प्र.राज्य लोक सेवा आयोग</p>	हाशिए में न लिखें
<input type="checkbox"/> 8	a force when placed in dielectric field,	
<input type="checkbox"/> 9	It is one of the largest Non-governmental organization in India working for biodiversity conservation. It is a partner of Bird-life International. Established in 1880s.	
<input type="checkbox"/>		
<input type="checkbox"/>		
<input type="checkbox"/> 11	Disease caused by excessive increase of cadmium in human body. It implies 'It pains'. Bone joints, spinal cord experience a strong pain.	
<input type="checkbox"/>		
<input type="checkbox"/>		
<input type="checkbox"/> I	Spleen is an organ in human body situated in left upper abdomen behind stomach. It works for blood filtration & is related to Erythrocytes (RBCs) and immune system.	
<input type="checkbox"/>		
<input type="checkbox"/>		
<input type="checkbox"/> J	Quantity which have both magnitude & direction. eg. Displacement, velocity, Thrust, force is vector vector quantity whereas scalar quantity have magnitude only. eg. distance, speed etc.	
<input type="checkbox"/>		
<input type="checkbox"/>		
<input type="checkbox"/>		

प्रश्न संख्या	<p style="text-align: center;">मुख्य परीक्षा म.प्र.राज्य लोक सेवा आयोग</p>	हाशिया में न लिखें
<input type="checkbox"/> <input type="checkbox"/>	$\frac{20x}{100} = y - 30$ - eq ⁿ (1)	
<input type="checkbox"/> <input type="checkbox"/>	$\frac{32x}{100} = y + 42$	
<input type="checkbox"/> <input type="checkbox"/>	$\frac{20x - 32x}{100} = -30 - 42$	
<input type="checkbox"/> <input type="checkbox"/>	$\frac{-12x}{100} = -72 \Rightarrow x = 600$	
<input type="checkbox"/> <input type="checkbox"/>	hence total marks or maximum marks that can be scored is <u>600 marks</u> .	
<input type="checkbox"/> <input type="checkbox"/>		
<input type="checkbox"/> <input type="checkbox"/>	Whole numbers - any number from 0, 1, 2, 3, ... 100, ... 1000 etc. There is no fractional or decimal or negative numbers.	
<input type="checkbox"/> <input type="checkbox"/>	Integers are like whole numbers but also includes negative numbers but no fractions.	
<input type="checkbox"/> <input type="checkbox"/>	eg. $\{-1, -2, -3, 0, 1, 2, 5, \dots \text{etc}\}$.	
<input type="checkbox"/> <input type="checkbox"/>		
<input type="checkbox"/> <input type="checkbox"/>		
<input type="checkbox"/> <input type="checkbox"/>		
<input type="checkbox"/> <input type="checkbox"/>		

प्रश्न संख्या	<p style="text-align: center;">मुख्य परीक्षा म.प्र.राज्य लोक सेवा आयोग</p>	हाशिए में न लिखें
3 B	<p>Biotechnology is usage of biological system, living organisms and related aspects to produce such products using technology which uses living</p>	
<input type="checkbox"/>		
<input type="checkbox"/>		
<input type="checkbox"/>	<p>The technology is not new to mankind. Since ancient times various aspects such as yeast to</p>	
<input type="checkbox"/>	<p>carryout process of yeast fermentation, is in use.</p>	
<input type="checkbox"/>		
<input type="checkbox"/>	<p>In India in 1986 a separate department of biotechnology, (DBT) has</p>	
<input type="checkbox"/>	<p>been established under ministry of science & technology to boost the</p>	
<input type="checkbox"/>	<p>research & development in the field.</p>	
<input type="checkbox"/>	<p style="text-align: center;">Types</p> 	
<input type="checkbox"/>	<p>Gene transfer involving Gene.</p>	<p>Non-gene transfer involving embryo, organ</p>
<input type="checkbox"/>	<p>eg. in Gene therapy CRISPR - Cas 9.</p>	<p>etc</p>
<input type="checkbox"/>		

प्रश्न संख्या	<p style="text-align: center;">मुख्य परीक्षा म.प्र.राज्य लोक सेवा आयोग</p>	हाशिए में न लिखें
□ □	<p>technique :- Genetic Engineering,</p>	
□ □	<p>Recombinant DNA technology, embryo transfer, hybridism technology etc.</p>	
□ □	<p>Research & develop. and Industrial. medical - target surgery</p>	
□ □	<p style="text-align: center;">  </p>	
□ □	<p>Application of Biotech.</p>	
□ □	<p>toys & Robotics</p>	
□ □	<p>Sports</p>	
□ □	<p>Importance of biotechnology in Agriculture includes -</p>	
□ □	<p>(a) supplying adequate amount of fertilizer & pesticide in regulated amount according to soil & crop type</p>	
□ □	<p>(b) Genetically modified crop to increase their efficiency & resistance to climate. eg. Bt cotton.</p>	
□ □	<p>(c) Increase life cycle of crops by changing harmful genes in it.</p>	
□ □	<p></p>	
□ □	<p></p>	

प्रश्न संख्या	<p style="text-align: center;">मुख्य परीक्षा म.प्र.राज्य लोक सेवा आयोग</p>	हाशिए में न लिखें
<input type="checkbox"/> <input type="checkbox"/>	(1) Increases taste & shelf life of agricultural products.	
<input type="checkbox"/> <input type="checkbox"/>	(2) Increasing weather resistance & pest resistance.	
<input type="checkbox"/> <input type="checkbox"/>	(3) Wide hybridization, fast multiplication.	
<input type="checkbox"/> <input type="checkbox"/>	(4) Cloning of same species of plants.	
<input type="checkbox"/> <input type="checkbox"/>	(5) Early flowering and variation in species.	
<input type="checkbox"/> <input type="checkbox"/>	Biotechnology has made agriculture more efficient, safer and fruitful.	
<input type="checkbox"/> <input type="checkbox"/>		
<input type="checkbox"/> <input type="checkbox"/>		
<input type="checkbox"/> <input type="checkbox"/>		
<input type="checkbox"/> <input type="checkbox"/>		
<input type="checkbox"/> <input type="checkbox"/>		
<input type="checkbox"/> <input type="checkbox"/>		
<input type="checkbox"/> <input type="checkbox"/>		
<input type="checkbox"/> <input type="checkbox"/>		

प्रश्न संख्या	<p style="text-align: center;">मुख्य परीक्षा म.प्र.राज्य लोक सेवा आयोग</p>	हाशिए में न लिखें
3 c	<p>Earth is full of varied number of elements right from its core to surface. any element present globally is found in the form of ore.</p>	
<input type="checkbox"/>		
<input type="checkbox"/>		
<input type="checkbox"/>	<p style="text-align: center;">(Ore)</p> <pre> graph TD Ore((Ore)) --> Mineral[Mineral] Ore --> Element[Element ore] Element --> Metal[metal] Element --> NonMetal[Non-metal] Metal --> Al[eg. Aluminium] NonMetal --> C[eg. Carbon] Al --> Bauxite[from Bauxite] C --> Coke[from Coke] </pre>	
<input type="checkbox"/>		
<input type="checkbox"/>		
<input type="checkbox"/>		
<input type="checkbox"/>	<p>metals are those elements which shows properties such as electropositivity, lustre, ductility.</p>	
<input type="checkbox"/>		
<input type="checkbox"/>	<p>Non - metals do not show such properties.</p>	
<input type="checkbox"/>		
<input type="checkbox"/>	<p>Periodic table contains all these elements according to their physical & chemical properties. left side have metals, right portion</p>	

प्रश्न संख्या	<p style="text-align: center;">मुख्य परीक्षा म.प्र.राज्य लोक सेवा आयोग</p>	हाशिए में न लिखें
<input type="checkbox"/> <input type="checkbox"/>	have, non-metals & metalloids or semi-metals separating the two.	
<input type="checkbox"/> <input type="checkbox"/>	Physical & chemical properties of metals -	
<input type="checkbox"/> <input type="checkbox"/>	◦ Physical:	
<input type="checkbox"/> <input type="checkbox"/>	① occurs in solid state, except mercury, in natural form.	
<input type="checkbox"/> <input type="checkbox"/>	② malleable; can be beaten into sheets eg. Aluminium, Gold.	
<input type="checkbox"/> <input type="checkbox"/>	③ ductile; stretched into thin wires eg. copper, silver.	
<input type="checkbox"/> <input type="checkbox"/>	④ sonorous; produces sound when hit with any object.	
<input type="checkbox"/> <input type="checkbox"/>	⑤ Good conductor of heat and electricity eg. silver.	
<input type="checkbox"/> <input type="checkbox"/>	⑥ They are shiny & lustrous so they reflect light.	
<input type="checkbox"/> <input type="checkbox"/>	⑦ They are very strong & hard except sodium.	
<input type="checkbox"/> <input type="checkbox"/>	⑧ high melting & boiling points.	
<input type="checkbox"/> <input type="checkbox"/>	◦ Chemical:	
<input type="checkbox"/> <input type="checkbox"/>	① Corrodes easily & fastly.	
<input type="checkbox"/> <input type="checkbox"/>	② loses electrons easily. valency is 1, 2 or 3.	

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<input type="checkbox"/> <input type="checkbox"/>	(3) forms metal oxides when reacted with oxygen.	
<input type="checkbox"/> <input type="checkbox"/>	(4) they are electropositive elements	
<input type="checkbox"/> <input type="checkbox"/>	(5) good reducing agents.	
<input type="checkbox"/> <input type="checkbox"/>	Physical & chemical properties of Non-metals.	
<input type="checkbox"/> <input type="checkbox"/>	• Physical	
<input type="checkbox"/> <input type="checkbox"/>	(1) brittle, break into pieces when beaten w. sulphur	
<input type="checkbox"/> <input type="checkbox"/>	(2) non-ductile, non-lustrous	
<input type="checkbox"/> <input type="checkbox"/>	(3) poor conductor of electricity & heat except graphite.	
<input type="checkbox"/> <input type="checkbox"/>	(4) can be solid, liquid or gaseous	
<input type="checkbox"/> <input type="checkbox"/>	(5) Non-malleable, & transparent	
<input type="checkbox"/> <input type="checkbox"/>	• Chemical	
<input type="checkbox"/> <input type="checkbox"/>	(1) reacts with oxygen to form acidic oxide.	
<input type="checkbox"/> <input type="checkbox"/>	(2) electronegative	
<input type="checkbox"/> <input type="checkbox"/>	(3) Good oxidising agents	
<input type="checkbox"/> <input type="checkbox"/>	(4) do not react with water.	
<input type="checkbox"/> <input type="checkbox"/>	Both these elements plays a vital	
<input type="checkbox"/> <input type="checkbox"/>	role in everyday life.	

प्रश्न संख्या	<p style="text-align: center;">मुख्य परीक्षा म.प्र.राज्य लोक सेवा आयोग</p>	हाशिए में न लिखें
<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> 3 A	<p>Sustainable development is managing needs of present without compromising the needs of future generation.</p>	
<input type="checkbox"/> <input type="checkbox"/>	<p>The concept is though old in human civilisations but is widely & formally accepted through Brundtland Commission in 1980s.</p>	
<input type="checkbox"/> <input type="checkbox"/>	<p>The concept calls for a collective inclusive & resilient future for people & planet.</p>	
<input type="checkbox"/> <input type="checkbox"/>	<p>Reformation of destructed Harmony</p>	
<input type="checkbox"/> <input type="checkbox"/>	<p>Economic Growth sustainable livelihood</p>	
<input type="checkbox"/> <input type="checkbox"/>	<p>Appropriate technology social inclusion</p>	
<input type="checkbox"/> <input type="checkbox"/>	<p>As Gandhiji said, "There is enough for everyone's need but not for everyone's greed". It is alarming ^{not} to introduce sustainable sustained growth & development.</p>	

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<input type="checkbox"/> <input type="checkbox"/>	Need:	
<input type="checkbox"/> <input type="checkbox"/>	① Scarcity of resources	
<input type="checkbox"/> <input type="checkbox"/>	② ongoing over exploitation of natural resources & wildlife	
<input type="checkbox"/> <input type="checkbox"/>	③ Uneven rate pace of infrastructural development compromising resources	
<input type="checkbox"/> <input type="checkbox"/>	④ exploitation of non-renewable gifts of mother earth.	
<input type="checkbox"/> <input type="checkbox"/>	⑤ uneven distribution of such resources creating problems of poverty, hunger, mortality.	
<input type="checkbox"/> <input type="checkbox"/>	⑥ climate changes & occurrence of calamities - calamities frequently	
<input type="checkbox"/> <input type="checkbox"/>	such as earthquakes, floods, landslides, Tsunami etc.	
<input type="checkbox"/> <input type="checkbox"/>	⑦ Rivalry & competition has increased to capture already limited resources.	
<input type="checkbox"/> <input type="checkbox"/>	⑧ Lower rung of society, women, girl child lacks fruits of growth & development.	
<input type="checkbox"/> <input type="checkbox"/>	All these needs forces global community to work towards more inclusive	

प्रश्न संख्या	<p style="text-align: center;">मुख्य परीक्षा म.प्र.राज्य लोक सेवा आयोग</p>	हाशिए में न लिखें
<input type="checkbox"/> <input type="checkbox"/>	and equitable development.	
<input type="checkbox"/> <input type="checkbox"/>	Goals of sustainable development have been framed by united nations in the form of millennium development goals & sustainable development goals.	
<input type="checkbox"/> <input type="checkbox"/>	-SDG.. these goals are 17 in number and deemed to be fulfilled by 2030 countries. Such goals includes -	
<input type="checkbox"/> <input type="checkbox"/>	(1) No poverty	
<input type="checkbox"/> <input type="checkbox"/>	(2) No hunger	
<input type="checkbox"/> <input type="checkbox"/>	(3) Health	
<input type="checkbox"/> <input type="checkbox"/>	(4) Education	
<input type="checkbox"/> <input type="checkbox"/>	(5) Gender equality	
<input type="checkbox"/> <input type="checkbox"/>	(6) Water & sanitation	
<input type="checkbox"/> <input type="checkbox"/>	(7) Energy	
<input type="checkbox"/> <input type="checkbox"/>	(8) Economic growth & employment	
<input type="checkbox"/> <input type="checkbox"/>	(9) Industry, Infrastructure	
<input type="checkbox"/> <input type="checkbox"/>	(10) Reducing inequalities	
<input type="checkbox"/> <input type="checkbox"/>	(11) Sustained societies	
<input type="checkbox"/> <input type="checkbox"/>	(12) Production.	
<input type="checkbox"/> <input type="checkbox"/>	These goals contribute to a sustainable growth & development.	
<input type="checkbox"/> <input type="checkbox"/>		