CCE RF
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ಕರ್ನಾಟಕ ಪ್ರೌಢ ಶಿಕ್ಷಣ ಪರೀಕ್ಷಾ ಮಂಡಳಿ, ಮಲ್ಲೇಶ್ವರಂ, ಬೆಂಗಳೂರು – 560 003

KARNATAKA SECONDARY EDUCATION EXAMINATION BOARD, MALLESWARAM, BANGALORE – 560 003

ಎಸ್.ಎಸ್.ಎಲ್.ಸಿ. ಪರೀಕ್ಷೆ, ಮಾರ್ಚ್ / ಏಪ್ರಿಲ್ — 2018

S. S. L. C. EXAMINATION, MARCH/APRIL, 2018

ಮಾದರಿ ಉತ್ತರಗಳು

MODEL ANSWERS

ದಿನಾಂಕ : 02. 04. 2018] ಸಂಕೇತ ಸಂಖ್ಯೆ : **83-E (Bio)**

Date : 02. 04. 2018] **CODE NO. : 83-E (Bio)**

ವಿಷಯ : ವಿಜ್ಞಾನ

Subject : SCIENCE

(ಜೀವಶಾಸ್ತ್ರ / **Biology**)

(ಹೊಸ ಪಠ್ಯಕ್ರಮ / New Syllabus)

(ಶಾಲಾ ಅಭ್ಯರ್ಥಿ & ಪುನರಾವರ್ತಿತ ಶಾಲಾ ಅಭ್ಯರ್ಥಿ / Regular Fresh & Regular Repeater)

(ಇಂಗ್ಲಿಷ್ ಭಾಷಾಂತರ / English Version)

[ಗರಿಷ್ಠ ಅಂಕಗಳು : **80**

[Max. Marks : 80

Qn. Nos.	Value Points	Total
2.	The living component of xylem tissue is *Ans.* : (B) — xylem parenchyma	1
5.	If the stages of human evolution is written in the descending order according to their cranial capacity, then the correct order obtained is *Ans.* : (D) — Homo sapiens, Homo erectus, Homo habilis, Australopithecus.	1
8.	Antheridium of pteridophytes can be compared to *Ans.* : (A) — Stamen of angiosperms.	1
9.	The gas released when the sunlight breaks down chlorofluorocarbons is *Ans.* : (D) — chlorine	1
14.	Name the family and the order to which man belongs. *Ans.* : Family : Hominidae $\frac{1}{2}$ Order : Primates $\frac{1}{2}$	1

Qn. Nos.	Value Points	Total
18.	A person is having the symptoms of thirst and frequent urination for a long time. The blood capillaries in the retina of this person have ruptured causing blood entering into the vitreous humour making it opaque. Name the eye disorder found in this person. *Ans.* : Diabetic retinopathy.	1
20.	In animal breeding, write the two differences between outbreeding and hybridization. *Ans.* :	

Outbreeding	*Hybridization*
i) Crossing of superior males of one breed with superior females of another breed	i) Superior males and females of two different species are mated. 1
ii) Allows the desirable qualities of the two breeds to appear in the offspring.	ii) The progeny are often different from both the parental species 1

2

23. Observe the table in which the sizes of different DNA fragments are given and answer the questions :

DNA fragments	A	B	C
Size (in base pairs)	700	1500	3000

(a) In the process of separating DNA fragments, which fragment moves faster ?

(b) Explain the process of separating the DNA fragments.

Ans. :

a) A 1

b) ★ By gel electrophoresis, the DNA fragments get separated on the basis of their size and net electrical charge. $\frac{1}{2}$

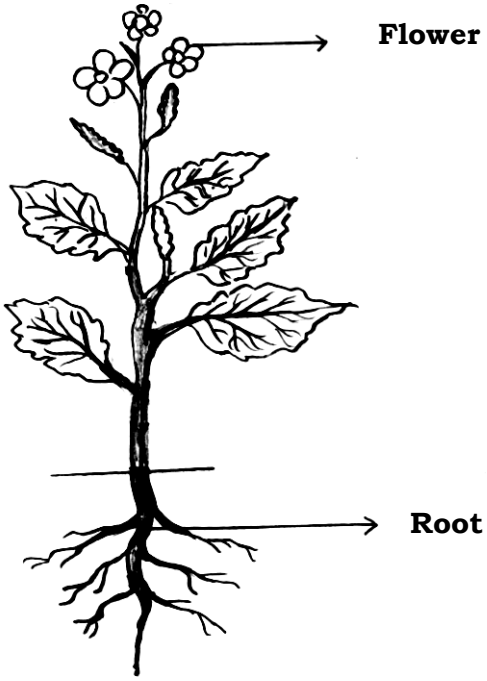
★ Shorter fragments move fast when compared to larger fragments and get arranged to form a series of bands in the form of fingerprint. $\frac{1}{2}$ 2

Qn. Nos.	Value Points	Total
25.	What is monohybrid cross ? Write the genotypic ratio and phenotypic ratio of Mendel's monohybrid cross.	
	OR	
	Carl Correns conducted hybridization experiment using Four O' Clock plants. Draw the checker board of F_2 generation for the incomplete dominance phenomenon, when he crossed a homozygous plant having red flowers (RR) with another homozygous plant with white flowers (WW). Mention its genotypic ratio.	
	Ans. :	
	★ A cross between two plants which differ in one specific character. 1	
	★ Genotypic ratio 1 : 2 : 1 $\frac{1}{2}$	
	★ Phenotypic ratio 3 : 1 $\frac{1}{2}$	2
	OR	
	★	

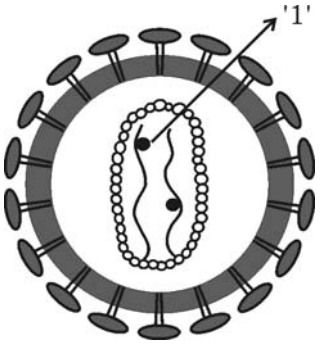
Gametes	*R*	*W*
R	*RR*	*RW*
W	*RW*	*WW*

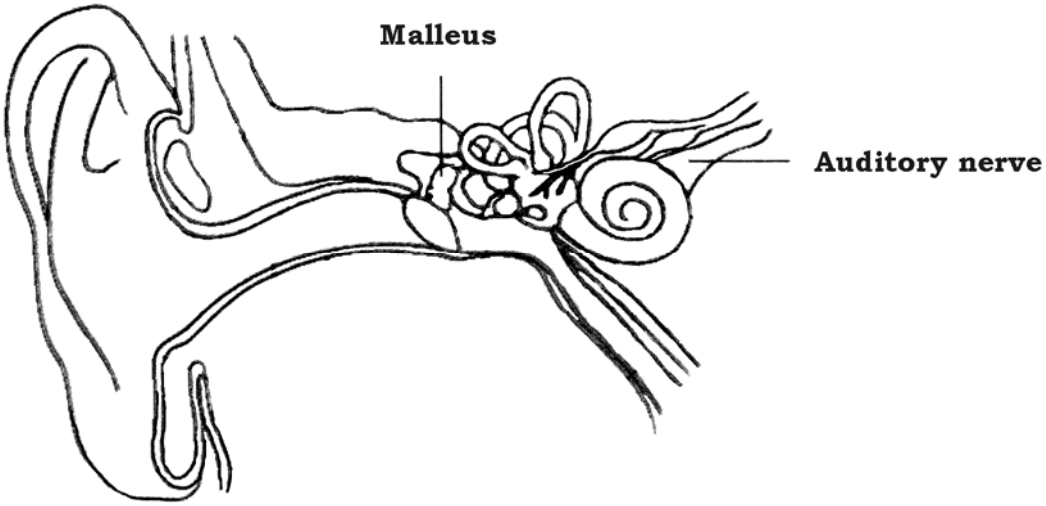
$1\frac{1}{2}$

	★ Genotypic ratio 1 : 2 : 1 $\frac{1}{2}$	2

Qn. Nos.	Value Points	Total
26.	Draw the diagram of a dicot plant and label the following parts : (i) Flower (ii) Root. *Ans.* :  Diagram — 1 Correct parts : $\frac{1}{2} + \frac{1}{2}$	2
29.	How is greenhouse effect caused ? Explain. Name the greenhouse gases. *Ans.* : ★ The infrared rays released due to the heating of the earth by solar radiation, are trapped by some gases in the atmosphere. $\frac{1}{2}$ ★ This results in increase in the atmospheric temperature. This increase is called greenhouse effect. $\frac{1}{2}$ ★ Greenhouse gases — Carbon dioxide, oxides of nitrogen, methane and to some extent ozone (any *two* gases) 1	2

Qn. Nos.	Value Points	Total
31.	Among the following, identify the wrong statements with respect to a whale and write them correctly. (i) A pair of lungs are respiratory organs (ii) They do not have mammary glands (iii) Heart is four chambered (iv) They are oviparous. OR The organisms, (i) Amphioxus, (ii) Balanoglossus, belong to which sub-phyla of Chordata and why ? *Ans.* : Corrected statements : i) They have mammary glands 1 ii) They are viviparous. 1 OR i) Sub-phylum Cephalochordata. The notochord is present throughout the length of the body. $\frac{1}{2}+\frac{1}{2}$ ii) Sub-phylum Hemichordata. The notochord is restricted to the anterior half of the body. $\frac{1}{2}+\frac{1}{2}$	2 2
36.	Explain the Haversian system of bone tissue. OR Explain the structure of cartilage tissue. *Ans.* : i) There is a central Haversian canal containing blood vessels and nerves. ii) It is surrounded by a matrix called ossein which contains chiefly calcium phosphate. iii) Ossein is arranged in the form of concentric layers called lamellae. iv) Between the lamellae are fluid filled spaces called lacunae.	

Qn. Nos.	Value Points	Total
	v) Each lacuna has an osteocyte. vi) All the lamellae are interconnected by fine canals called canaliculi. vii) The osteocytes are interconnected by protoplasmic strands extending through the canaliculi. viii) The Haversian canals of adjoining Haversian systems are connected by Volkman's canal. (Any *six*) $6 \times \frac{1}{2}$ OR i) Presence of transluscent glossy matrix composed by chondrin. ii) The matrix has cells called chondrocytes in spaces called lacunae. iii) Cells may be present singly or in groups. iv) In the matrix, elastic and collagen fibres are present / white and yellow fibres are present. v) These fibres are not visible in cartilage because of the same refractive index of matrix and fibres. vi) Cartilage is externally surrounded by a connective tissue layer called perichondrium. $6 \times \frac{1}{2}$	3 3
38.	Observe this figure and answer the questions given below :  (i) Name the part labelled as '1'. (ii) Name the heredity material of this virus. (iii) 'The person infected by this virus is attacked by various diseases.' Explain. *Ans.* : i) Reverse transcriptase enzyme / enzyme 1 ii) RNA 1 iii) ★ With the help of the enzyme RNA synthesizes DNA in the host cell. $\frac{1}{2}$	

Qn. Nos.	Value Points	Total
	★ This virus gets adapted to the host body and the body cells fail to identify this as intruder. $\frac{1}{2}$ ★ The virus destroys the natural immunity of the body. This leads to secondary infections. (any *two*)	3
42.	Draw the diagram showing the internal structure of human ear and label the following parts. (i) Malleus (ii) Auditory nerve. *Ans.* :  For diagram — 3 For each correct part — $2 \times \frac{1}{2}$	4

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MODEL ANSWERS

ದಿನಾಂಕ : 02. 04. 2018] ಸಂಕೇತ ಸಂಖ್ಯೆ : **83-E (Chem.)**

Date : 02. 04. 2018] **CODE NO. : 83-E (Chem.)**

ವಿಷಯ : ವಿಜ್ಞಾನ

Subject : SCIENCE

(ರಸಾಯನಶಾಸ್ತ್ರ / **Chemistry**)

(ಹೊಸ ಪಠ್ಯಕ್ರಮ / New Syllabus)

(ಶಾಲಾ ಅಭ್ಯರ್ಥಿ & ಪುನರಾವರ್ತಿತ ಶಾಲಾ ಅಭ್ಯರ್ಥಿ / Regular Fresh & Regular Repeater)

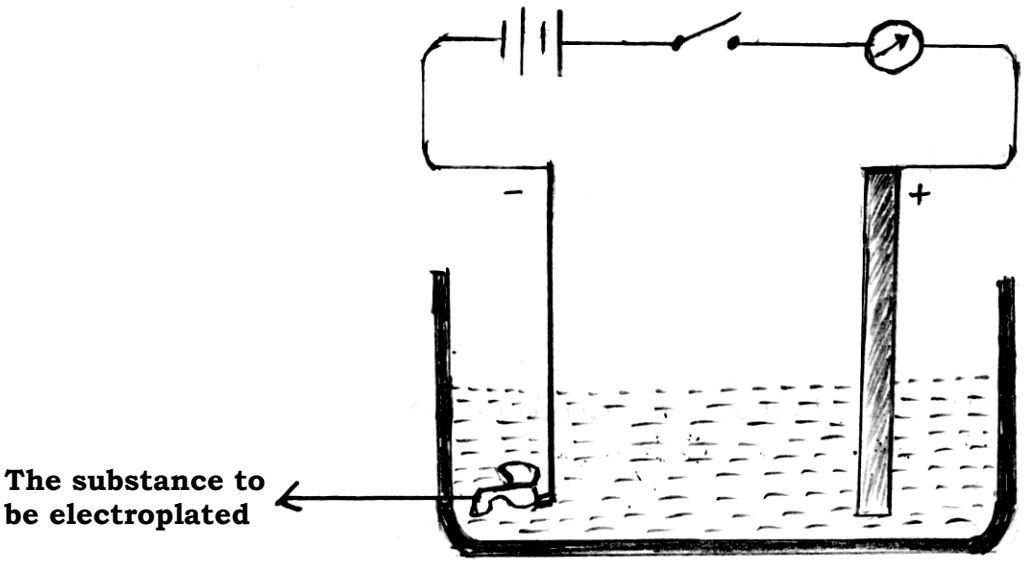
(ಇಂಗ್ಲಿಷ್ ಭಾಷಾಂತರ / English Version)

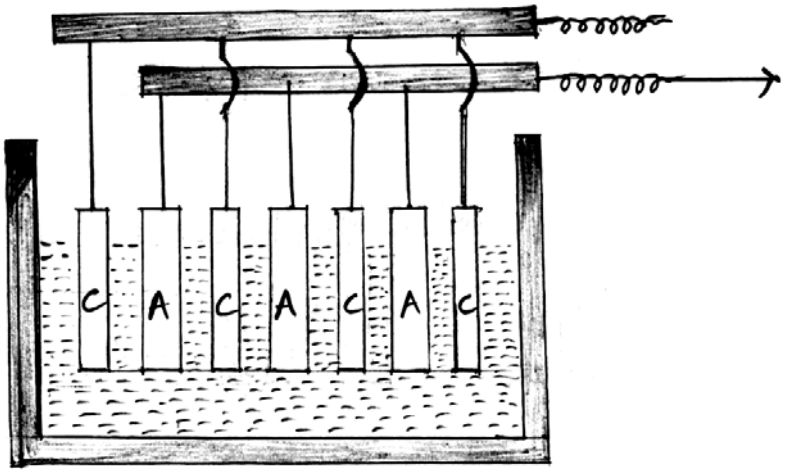
[ಗರಿಷ್ಠ ಅಂಕಗಳು : **80**

[Max. Marks : 80

Qn. Nos.	Value Points	Total
3.	Identify a property of amorphous silicon in the following. *Ans.* : (C) — Oxidizes at the surface level when heated in the air	1
10.	The group of compounds which dissociate partially in aqueous solution is *Ans.* : (B) — Carbonic acid, Phosphoric acid	1
11.	The processes related to organic compounds are given in **Column-A** and their procedures are given in **Column-B**. Match them and write the answer along with its letters : ***Column - A*** / ***Column - B*** (A) Preparation of Methane gas — (i) Production of salts of fatty acids starting from oils or fats (B) Substitution reaction — (ii) Conversion of liquid oils into solid saturated fats (C) Hydrogenation — (iii) Heating fused sodium acetate with sodalime	

Qn. Nos.	Value Points	Total
	(D) Saponification (iv) Heating an aqueous solution of ammonium cyanate (v) Burning of methane in air (vi) Heating ethanol in the presence of acidified potassium permanganate (vii) Exposing the mixture of methane and chlorine to ultraviolet light. *Ans.* : *Column-A* — *Column-B* (A) (iii) Heating fused sodium acetate with sodalime 1 (B) (vii) Exposing the mixture of methane and chlorine to ultraviolet light. 1 (C) (ii) Conversion of liquid oils into solid saturated fats 1 (D) (i) Production of salts of fatty acids starting from oils or fats 1	4
16.	How is silicon carbide prepared ? Write one of its uses. Ans. : Heating the mixture of silicon and coke in an electric furnace. $\frac{1}{2}$ or $Si + C \rightarrow SiC$ Silicon carbide is used in i) cutting and grinding tools, ii) polishing granite. (any *one*) $\frac{1}{2}$	1
17.	In the manufacture of sugar, the container of the sugarcane juice is connected to a vacuum pump. Why ? *Ans.* : ★ to evaporate water at low temperature / pressure ★ to obtain sugar at low temperature ★ evaporation is smooth. (any *two*) $\frac{1}{2}+\frac{1}{2}$	1
19.	"Manufacture of ethyl alcohol from molassess is a good example for fermentation." Give reasons. *Ans.* : As in fermentation, ★ Sucrose undergoes decomposition reaction by the action of yeast 1 ★ Temperature range is maintained around 308 K 1 ★ Molasses is diluted with water 1 ★ Carbon dioxide gas is liberated during the reaction 1 ★ The enzymes (invertase, zymase) take part in this reaction. 1 (Any *two*)	2

Qn. Nos.	Value Points	Total
24.	Draw the diagram of the apparatus used in electroplating and label the following part : The substance to be electroplated. *Ans.* :  For the figure — $1\frac{1}{2}$ Correct part — $\frac{1}{2}$	2
27.	State Boyle's law. Write the mathematical form of Boyle's law. Give an example for this law. OR State Graham's law of diffusion. Write the mathematical form of Graham's law of diffusion. Give an example for this law. *Ans.* At constant temperature, the volume of a given mass of dry gas is inversely proportional to its pressure. 1 $V \propto \frac{1}{P}$ OR $V = K \times \frac{1}{P}$ OR $PV = K$. $\frac{1}{2}$	

Qn. Nos.	Value Points	Total
	Examples : ★ Deep sea fishes die when they brought suddenly to surface ★ Scuba diver's life is under threat when he suddenly come to the surface quickly ★ Popping of balloon when squeezed ★ We often feel a very uneasy pain in ears while in a plane during ascending or descending. (Any other suitable example) (any *one*) $\frac{1}{2}$	2
	OR The rate of diffusion of a gas is inversely proportional to the square root of its density at the given temperature and pressure. 1 $r \propto \frac{1}{\sqrt{d}}$ or $r = K \times \frac{1}{\sqrt{d}}$ or $K = r\sqrt{d}$ or $r \propto \frac{1}{\sqrt{m}}$ (any *one*) $\frac{1}{2}$ *Examples* : ★ HCl vapour diffuses slowly than ammonia $\frac{1}{2}$ (any other suitable example)	2
30.	Draw the diagram of an electrolytic cell used in the purification of copper and label the electrode having impure copper. *Ans.* :  For the figure — $1\frac{1}{2}$ Correct part — $\frac{1}{2}$	2

Qn. Nos.	Value Points	Total
32.	The molecular formula of the first member of a certain group of organic compounds is CH_2O (HCHO). Determine the name and the molecular formula of the third member of this group if the members of this group are in homologous series. What is the general name for this group of organic compounds ? *Ans.* : Name $\rightarrow$ Propanal / Propanaldehyde. $\frac{1}{2}$ Molecular formula $\rightarrow$ C_3H_6O (C_2H_5CHO) (Any *one*) 1 Aldehydes. $\frac{1}{2}$	2
33.	How is safety glass manufactured ? Mention the use of safety glass. OR Name the types of paper having the following properties and mention one use of each. (i) Porous and semipermeable (ii) Non-sticking property. *Ans.* : Safety glass is made by sandwiching thin layer of synthetic vinyl plastic in between the glass sheets. $\frac{1}{2}$ It is subjected to slight pressure and is heated till the glass layers $\frac{1}{2}$ and plastic layers merge into one another. On cooling glass becomes tough. $\frac{1}{2}$ It is used in automobiles & aeroplane industries as wind shield. $\frac{1}{2}$ OR i) Filter paper $\frac{1}{2}$ Used to separate fine solids from liquids or air / used in dip tea bags. (any *one*) $\frac{1}{2}$ ii) Wax paper $\frac{1}{2}$ Used in wrapping food for storage such as ice-creams and cookies. $\frac{1}{2}$	2 2

Qn. Nos.	Value Points	Total
39.	The atomic numbers of five elements *A, B, C, D* and *E* are 6, 8, 3, 7 and 9 respectively. (i) Which is the element having the highest electropositivity among these elements ? Why ? (ii) Which is the element having the least metallic character among these elements ? Why ? (iii) What is your conclusion about the relationship between metallic character and electropositivity of an element ? *Ans.* : i) *C.* $\frac{1}{2}$ This element comes first in the second period / The electropositivity decreases along the period / It has only one electron in the outermost shell & can donate electron. $\frac{1}{2}$ ii) *E.* $\frac{1}{2}$ This element is towards the end of second period / The metallic character decreases along the period / It accepts electrons. $\frac{1}{2}$ iii) As the electropositivity increases metallic character also increases. or As the electropositivity decreases, metallic character also decreases. or Electropositivity and metallic character are directly related. 1	3

Qn. Nos.	Value Points	Total
41.	(a) Observe the following chemical equations : (i) $Al_2O_3 + 2NaOH \rightarrow 2NaAlO_2 + H_2O$ (ii) $Al_2O_3 + 6HCl \rightarrow 2AlCl_3 + 3H_2O$. What is the conclusion that you take about the nature of aluminium oxide with the help of these equations. Give reason for your conclusion. (b) Molten cryolite is mixed with molten alumina in the extraction of aluminium by electrolysis. Why ? Name the substances that are used as anode and cathode in this method. *Ans.* : a) Aluminium oxide is amphoteric in nature. 1 Aluminium oxide is reacting with base in the first equation to give salt & water. $\frac{1}{2}$ It is reacting with acid in the second equation to give salt and water. $\frac{1}{2}$ Hence it is an amphoteric oxide. b) ★ Molten cryolite acts as a solvent for alumina. It forms an electrolyte at low temperature. $\frac{1}{2}$ ★ High temperature electrolysis can be avoided, which prevents the loss of aluminium in the form of vapours. $\frac{1}{2}$ ★ Anode $\rightarrow$ Graphite rods $\frac{1}{2}$ ★ Cathode $\rightarrow$ Carbon lining. $\frac{1}{2}$	4

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MODEL ANSWERS

ದಿನಾಂಕ : 02. 04. 2018] ಸಂಕೇತ ಸಂಖ್ಯೆ : **83-E (Phy)**

Date : 02. 04. 2018] **CODE NO. : 83-E (Phy)**

ವಿಷಯ : ವಿಜ್ಞಾನ

Subject : SCIENCE

(ಭೌತಶಾಸ್ತ್ರ / **Physics**)

(ಹೊಸ ಪಠ್ಯಕ್ರಮ / New Syllabus)

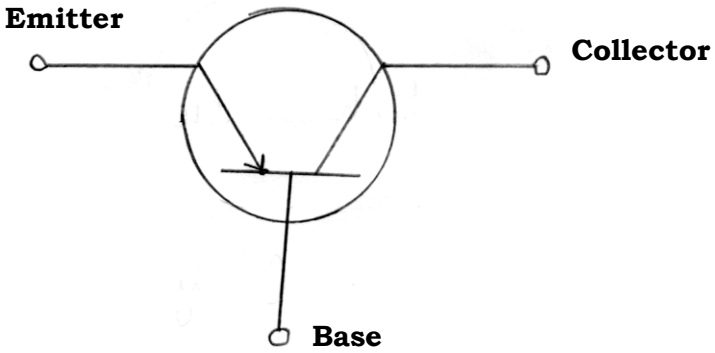
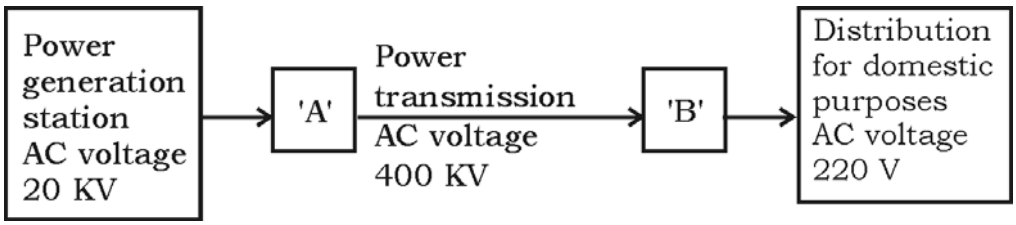
(ಶಾಲಾ ಅಭ್ಯರ್ಥಿ & ಪುನರಾವರ್ತಿತ ಶಾಲಾ ಅಭ್ಯರ್ಥಿ / Regular Fresh & Regular Repeater)

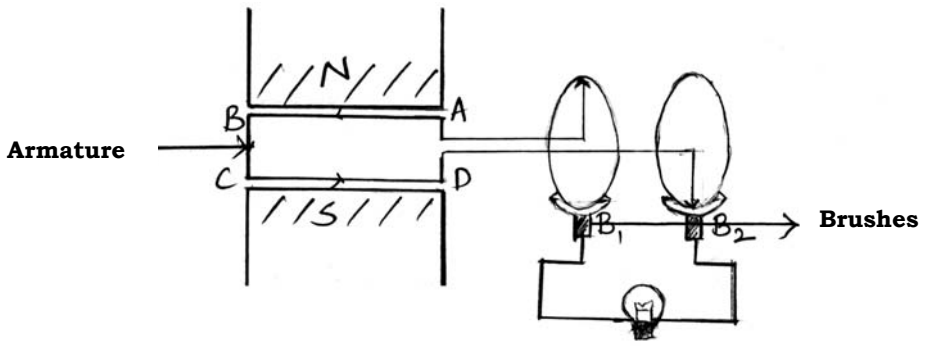
(ಇಂಗ್ಲಿಷ್ ಭಾಷಾಂತರ / English Version)

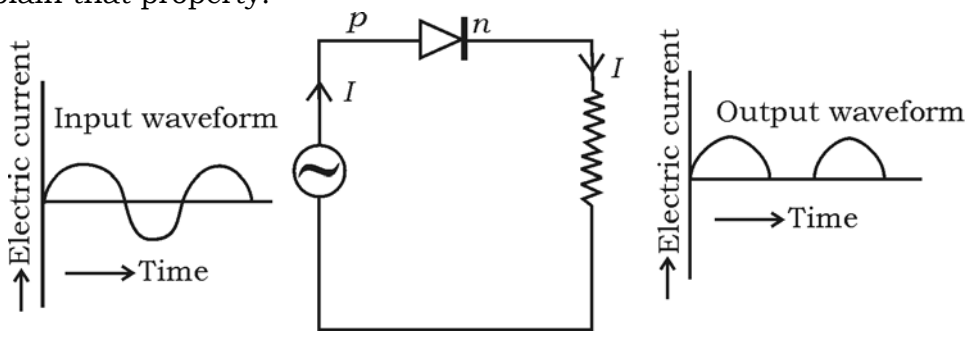
[ಗರಿಷ್ಠ ಅಂಕಗಳು : **80**

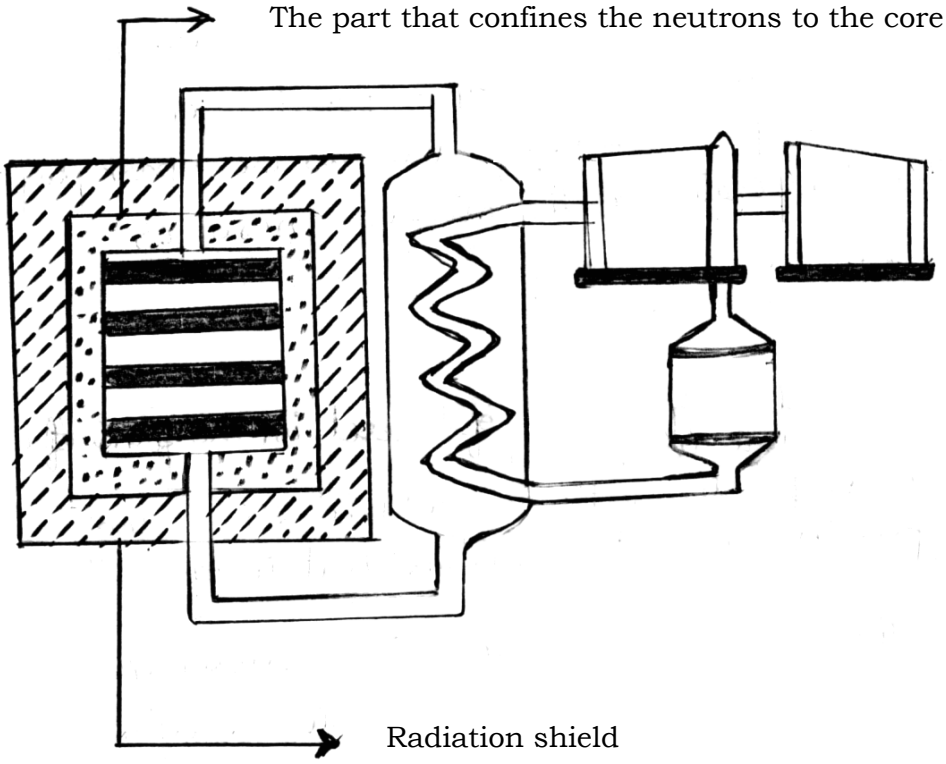
[Max. Marks : 80

Qn. Nos.	Value Points	Total
1.	"Coal is a non-renewable source of energy." Because, *Ans.* : (C) — the reserves of coal are depleting at a fast rate and it is difficult to replenish	1
4.	A man who is standing at a distance of 850 m from a sound reflecting surface claps loudly. If the velocity of the sound in air is 340 ms^{-1}, then the time taken by the echo to reach him is *Ans.* : (A) — 5 s	1
6.	Steam engine cannot be started instantaneously because, *Ans.* : (B) — steam should be produced by heating water	1
7.	The principle of working of a motor is *Ans.* : (D) — a conductor carrying electrical current experiences mechanical force if kept in a magnetic field.	1

Qn. Nos.	Value Points	Total
12.	Nowadays bio-diesel is used in transportation vehicles as an alternate to diesel. Write two advantages of this measure. *Ans.* : ★ Ecofriendly / reduces the environmental pollution ★ Renewable source of energy ★ Reduces the carbon dioxide content in the atmosphere. (any *two*) $\frac{1}{2}+\frac{1}{2}$	1
13.	Write the circuit symbol of *p-n-p* transistor. *Ans.* :  	1
15.	The schematic diagram indicating the transmission of electricity is given below :  Name the devices to be used in the places indicated as *'A'* and *'B'*. *Ans.* : *A* — Step-up transformer $\frac{1}{2}$ *B* — Step-down transformer. $\frac{1}{2}$	1

Qn. Nos.	Value Points	Total
21.	What is Doppler effect ? Mention the two applications of Doppler effect. OR List the uses of ultrasonic waves due to their high frequency. *Ans.* : The apparent change in the frequency of a wave, whenever there is a relative motion between the source of the wave and the observer. 1 Doppler effect is used to — ★ track artificial satellites ★ determine the velocity of the submarines ★ gauge the movement of stars / galaxies relative to earth ★ to study the rings of Saturn. (any *two*) $\frac{1}{2} + \frac{1}{2}$ OR Ultrasonic waves are used ★ to prepare homogeneous mixture of two immiscible liquids ★ in the manufacture of alloys and emulsion for photographic films ★ in dry cleaning to remove grease and dirt ★ as insect repellants ★ to kill bacteria ★ to cure neuralgic and rheumatic pains ★ in bloodless surgery ★ to break gall stones ★ in SONAR, ultrasound scanner. (any *four*) $4 \times \frac{1}{2}$	2 2
22.	Draw the diagram of AC dynamo and label the following parts : (i) Armature (ii) Brushes. *Ans.* :  For figure — 1 Correct parts — $\frac{1}{2} + \frac{1}{2}$	2

Qn. Nos.	Value Points	Total
28.	Observe the following figure. Which property of diode is indicated here ? Explain that property.  *Ans.* : ★ Rectifying action / Rectifier. 1 ★ When the diode is forward biased it allows the current but when it is reverse biased the diode does not allow the current. OR The diode allows the current to pass through only in one direction. Hence it is used to convert *AC* into *DC*. 1	2
34.	The wavelength of a wave is 3 m. If the velocity of the wave is 330 ms^{-1}, then find the frequency of that wave. Calculate the time period if the frequency of that wave is reduced to half of its value. *Ans.* : $V = n\lambda$ $n = \frac{V}{\lambda}$ $\frac{1}{2}$ $= \frac{330}{3}$ n = 110 Hz $\frac{1}{2}$ $n = \frac{1}{2} \times 110$ n = 55 Hz $\frac{1}{2}$ $T = \frac{1}{55}$ $\frac{1}{2}$ or or T = 0·018 s $\frac{1}{2}$	2

Qn. Nos.	Value Points	Total
35.	Draw the diagram of a nuclear power reactor and label the following parts. (i) The part that confines neutrons to the core (ii) Radiation shield. *Ans.* :  For the figure — 2 Correct parts — $2 \times \frac{1}{2}$	3
37.	Explain intake stroke and compression stroke in the working of a petrol engine. OR Explain the working of a diesel engine. *Ans.* : *Intake stroke :* ★ The vapourised mixture of petrol and air is let through inlet valve. $\frac{1}{2}$ ★ The outlet valve is closed. $\frac{1}{2}$ ★ Piston moves away from the spark plug. $\frac{1}{2}$	

Qn. Nos.	Value Points	Total
	Compression stroke : ★ Both inlet valve and outlet valves are closed. $\frac{1}{2}$ ★ The mixture of air and petrol is compressed by the piston moving towards the spark plug. $\frac{1}{2}$ ★ The temperature of the mixture increases. $\frac{1}{2}$ OR ★ During the intake stroke, filtered air is sent into the cylinder and compressed. $\frac{1}{2}$ ★ The compression ratio is 14 : 1 to 25 : 1 and compression generates enough heat to ignite the fuel. $\frac{1}{2}$ ★ At the end of compression stroke diesel in the form of micelles is injected into the cylinder. $\frac{1}{2}$ ★ Diesel bursts into flame instantaneously, the products of combustion are high pressure gases. $\frac{1}{2}$ ★ Due to the expansion of gases the piston is pushed. $\frac{1}{2}$ ★ Spent gases are ejected out of the cylinder during exhaust stroke. $\frac{1}{2}$	3
40.	(a) Explain the red giant stage of a star. Which is the factor that decides the next stage of a star after its red giant stage ? (b) Define escape velocity with respect to earth. What do R and g indicate in the mathematical formula of escape velocity ? OR (a) Explain the supernova stage of a star. Mention the main feature of a black hole. (b) State the law of conservation of momentum. "Propellants are necessary for the working of rockets." Why ? *Ans.* : a) In the red giant stage of a star, ★ As the radiation pressure increases beyond the gravitational pull, the star begins to swell. $\frac{1}{2}$ ★ The surface area of the star becomes more. There is a radiation loss. $\frac{1}{2}$	3

Qn. Nos.	Value Points	Total
	★ The temperature of the star decreases and it emits light with low frequency radiation and becomes red. $\frac{1}{2}$	
	The mass of a star. $\frac{1}{2}$	
	b) The minimum velocity with which a body must be projected so that it escapes from the gravitational field of the earth is called escape velocity. 1	
	$R \rightarrow$ radius of the earth. $\frac{1}{2}$	
	$g \rightarrow$ acceleration due to gravity. $\frac{1}{2}$	4
	OR	
	a) ★ The stars having the mass five times than the mass of the sun undergo this stage called supernova. $\frac{1}{2}$	
	★ Several nuclear reactions are ignited. Fusion of helium forms carbon core and fusion of carbon nuclei liberates energy and heavier elements like oxygen, magnesium and silicon are synthesized. $\frac{1}{2}$	
	★ When the iron core is formed, after the repetition of fusion cycles, the star explodes and the event is called supernova. $\frac{1}{2}$	
	★ Intense gravitational force / very high density. $\frac{1}{2}$	
	b) The total momentum of the system is conserved when the net force acting on the system is zero. 1	
	★ Propellants are required to launch the rockets. $\frac{1}{2}$	
	★ Rockets need to work even in vacuum. $\frac{1}{2}$	
	★ Propellants contain oxidizer with fuel which help the fuel to burn even in the absence of oxygen (or in vacuum). Hence propellants are necessary for the working of rockets. $\frac{1}{2}$	
	(Any *two*)	4