



Padasalai's Telegram Groups!

(தலைப்பிற்கு கீழே உள்ள லிங்கை கிளிக் செய்து குழுவில் இணையவும்!)

- Padasalai's NEWS - Group
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- Padasalai's Channel - Group
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- Lesson Plan - Group
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- 12th Standard - Group
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- 11th Standard - Group
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- 10th Standard - Group
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- 9th Standard - Group
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- 6th to 8th Standard - Group
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- 1st to 5th Standard - Group
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- TET - Group
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10TH SCIENCE SECOND MIDTERM UNITS: 5,6,10,11

IMPORTANT TWO MARKS: PHYSICS & CHEMISTRY

- ① Why does sound travel faster on a rainy day than on a dry day?
- ② Explain, why the ceilings of concert hall are curved.
- ③ Mention two cases in which there is no Doppler effect in sound?
- ④ Differentiate : Sound and light waves.
- ⑤ At what temperature will the velocity of sound in air to be double the velocity of sound in air at 0°C?
- ⑥ Define : Doppler effect
- ⑦ (a) what is ultrasonic waves?
(b) Name three animals, which can hear ultrasonic vibrations.
- ⑧ (a) what is an echo?
(b) write one applications of echo.
- ⑨ (a) what is the minimum distance needed for an echo?
(b) The velocity of sound in sea water is _____ m/s
- ⑩ True? or False? (If false give the correct statement)
 - (a) The velocity of sound is high in gases than solids.
 - (b) The waves with a frequency greater than 20 KHZ are called Infrasonic Waves.

- (11) What is stellar energy?
- (12) Differentiate: Natural radio activity and Artificial radio activity.
- (13) Define: (i) One roentgen (ii) Curie
- (14) State Soddy and Fajan's displacement law.
- (15) Give any two uses of radio isotopes in the field of agriculture?
- (16) Write any two uses of a nuclear reactor.
- (17) 'X-rays should not be taken often'. Give the reason.
- (18) Calculate the amount of energy released when a radioactive substance undergoes fission and results in a mass defect of 2 kg.
- (19) What is nuclear fission? Give the example reaction of nuclear fission.
- (20) Differentiate: Nuclear fission and Nuclear fusion
- (21) Match the following:

(a) Co - 60	+	Age of fossil
(b) I - 131	-	Function of Heart
(c) Na - 24	+	Leukemia
(d) C - 14	-	Thyroid disease

- (22) Differentiate: Combination reactions and Decomposition reactions.
- (23) What are the factors influencing the rate of a reaction?
- (24) Differentiate: Reversible reaction and Irreversible reaction
- (25) Give a reason for the following:
- (a) Granulated zinc reacts faster with 2M HCl than 1M HCl. why?
- (b) powdered CaCO_3 reacts more readily with HCl than marble chips.
- (26) (a) The hydroxyl ion concentration of a solution is $1 \times 10^{-9} \text{ M}$. What is the pOH of the solution?
- (b) What would be the pH of an aqueous solution of H_2SO_4 which is $5 \times 10^{-5} \text{ mol litre}^{-1}$ in concentration.
- (27) Which of the metals displaces hydrogen gas from HCl? Silver or Zinc. Give the chemical equation of the reaction and justify your answer.
- (28) (a) Define combination reaction. Give one example.
- (b) Give one example for an exothermic combination reaction.
- (29) If an Iron nail is placed in an aqueous solution of copper II sulphate. what happens next? Write a chemical equation for the reaction.

30) Match the following:

(i) Functional group -OH	Benzene
(ii) Heterocyclic	Alcohol
(iii) unsaturated	Furan
(iv) Carbocyclic	Ethene

31) Differentiate: Soap and Detergent.

32) Classify the following compounds based on the pattern of carbon chain and give their structural formula

(i) propane (ii) Benzene (iii) Cyclobutane
(iv) Furan

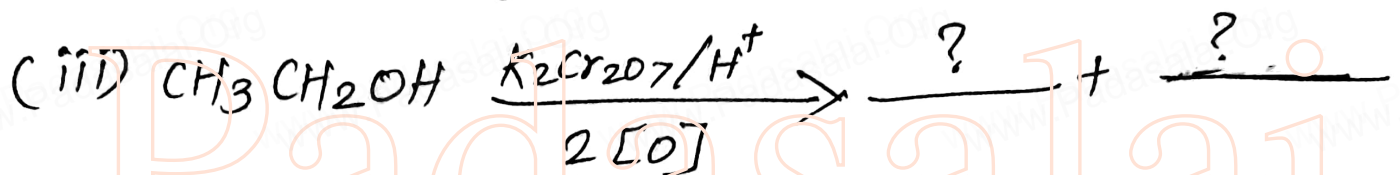
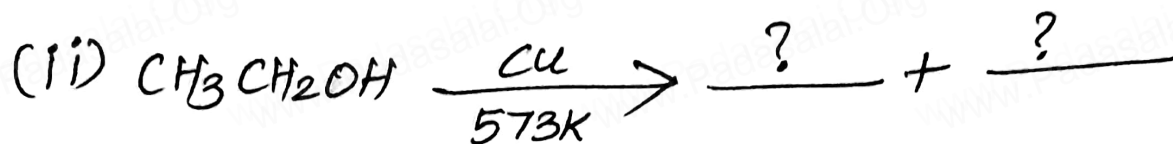
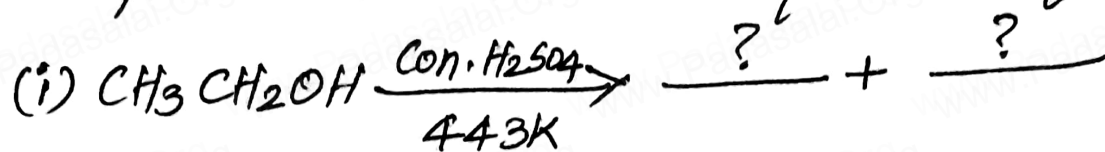
33) How is ethanoic acid prepared from ethanol? Give the chemical equation.

34) Match the following:

Compound	Functional group
Alcohol	- CO
Aldehyde	- COOH
Ketone	- CHO
Carboxylic acid	- OH

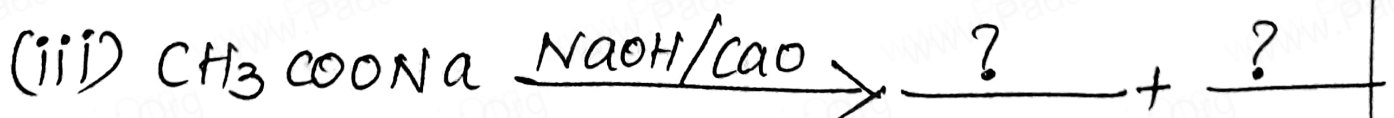
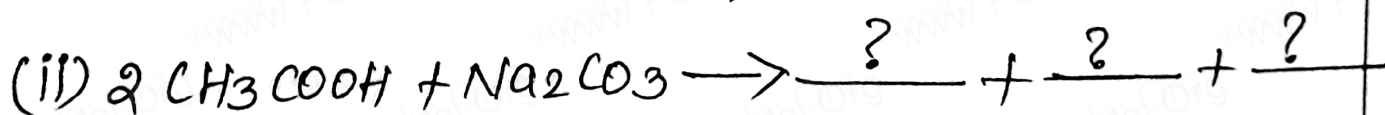
- (35) write the physical properties of Ethanol.
- (36) Explain the Esterification and write with a chemical equation of the reaction.
- (37) write the uses of Ethanoic acid.

(38) Complete the chemical equation of ethanol



(39) Write the disadvantages of detergents.

(40) Complete the chemical equation for ethanoic acid



SECOND MID TERM TEST LESSONS: 19,20,21

10TH SCIENCE IMPORTANT TWO MARKS - BIOLOGY PART

- ① Why is Archaeopteryx considered to be a connecting link?
- ② What is variation? What are the types of variation?
- ③ Write the importance of fossils.
- ④ (a) What is Ethnobotany?
(b) Who first coined the term "Ethnobotany"?
- ⑤ Write the importance of Ethnobotany.
- ⑥ Match the following:

(i) Natural selection theory	W.F. Libby
(ii) Use and disuse theory	J.W. Harsberger
(iii) Ethnobotany	Charles Darwin
(iv) Radioactive carbon (C^{14}) dating method	Jean Baptiste Lamarck

- ⑦ (a) What is fossilization?
(b) _____ is the "Father of Paleobotany."
- ⑧ Write the cosmic origin, the theories on origin of life.

- 9) What is (i) Homologous organs (ii) Vestigial organs?
- 10) (i) What is Astrobiology?
(ii) What is Goldilock zone for life?
- 11) Define: Genetic Engineering.
- 12) What are stem cells? and write its types.
- 13) State the applications of DNA Finger printing.
- 14) Name maize hybrids rich in amino acids lysine.
- 15) Differentiate:
(i) Somatic gene therapy and germ line gene therapy.
(ii) Out breeding and inbreeding.
- 16) Write short notes on biofortification.
- 17) (i) What is heterosis?
(ii) What are the effects of hybrid vigour in animals?
- 18) True or False? If false, write the correct statement.
(i) Golden rice is a hybrid.
(ii) Molecular scissors refers to DNA ligases.
(iii) Restriction enzymes are the enzymes which help in ligating the broken DNA fragments.
- 19) Define: (a) Clone (b) Plasmid

20 Match the following:

(i) Sonalika	-	Beta carotene
(ii) IR 8	-	Ground nut
(iii) TMV-2	-	Semi-dwarf rice
(iv) Golden rice	-	Semi-dwarf wheat

21 What are the contributing factors for Obesity?

22 What is metastasis?

23 What are the various routes by which transmission of H.I.V takes place?

24 Differentiate between Type-1 and Type-2 diabetes mellitus.

25 Why is a dietary restriction recommended for an obese individual?

26 Expand the following abbreviations:

(i) IDDM (ii) BMI (iii) AIDS (iv) NIDDM

27 What is leukemia?

28 Matching:

(i) Sarcoma	-	Excessive thirst
(ii) Carcinoma	-	Excessive hunger
(iii) Polydipsia	-	Stomach cancer
(iv) Polyphagia	-	Connective tissue cancer

(29) Mention the diseases caused by tobacco smoke.

(30) State whether True or False. If false write the correct statement

(i) In leukemia both WBCs and RBCs increase in number

(ii) Type 2 diabetes mellitus results due to insulin deficiency.

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