

MODEL QUESTION PAPER SET-1: 2021 - 22

MM : 40

Std. 10th – SCIENCE - II (THEORY)

Time : 2 Hrs

Entire Syllabus

Instructions:

- All questions are compulsory.
- Sketch well labelled correct diagram wherever necessary.
- Solve each main question on separate page.
- Figures to the right indicate 'marks'.
- Only first attempt will be evaluated for each multiple choice question (Que. I B).
- Answer to each multiple choice question should be written with correct option.

Ex. i. a)..... . ii. C)..... .

Q.1(A) Choose the correct alternative.

5M

- The disease related with the synthesis of insulin is _____.
a) Diabetes b) Hemophilia c) Dwarfism d) Phenylketonuria
- _____ man can be considered as the first example of wise man.
a) *Dryopithecus* b) Neanderthal c) *Aegyptopithecus* d) *Ramapithecus*
- _____ convert salts of uranium released from the atomic energy plant into insoluble salts.
a) *Saccharomyces* b) *Geobacter* c) *Acidobacillus* d) *Actinomyces*
- In males, the sperms are formed in _____.
a) Cowper's gland b) Prostate gland c) Vas deferens d) Testes
- _____ is a warm blooded animal.
a) Turtle b) Sea horse c) Rohu d) Elephant

Q.1(B) Answer the following

5M

- Fill in the boxes with the help of the given clue:
Requirement for stress free life.

B			D				
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- Complete the analogy.
Peripatus : Connecting link :: Wisdom tooth: _____
- State whether the statement is True or False.
Gender of dizygotic twins is always same.
- Match the columns:

	Column I		Column II		Column III
a.	Glycolysis	1.	Cytoplasm	p.	Pyruvic acid, ATP, NADH ₂ and H ₂ O
b.	TCA	2.	Mitochondria	q.	Pyruvic acid, CO ₂ , ATP and FADH ₂
		3.	Ribosome	r.	CO ₂ , CoA, ATP, NADH ₂ and FADH ₂

- Find the odd one out

Lactobacillus acidophilus, *Clostridium*, *Lactobacillus casei*, *Bifidobacterium bifidum*

Q.2. A Give scientific reasons (Attempt any 2)

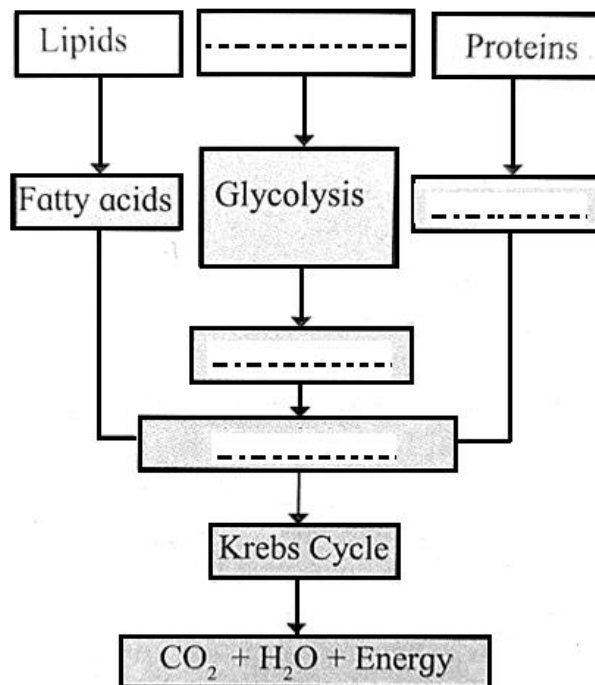
4M

- i. Enzymes obtained by microbial process are mixed with detergents.
- ii. Human beings have important place in environment.
- iii. Some of the organs in human body are most valuable.

Q.2. B Answer the following (Attempt any 3)

6M

- i State any four objectives of disaster management.
- ii. Complete the following chart.

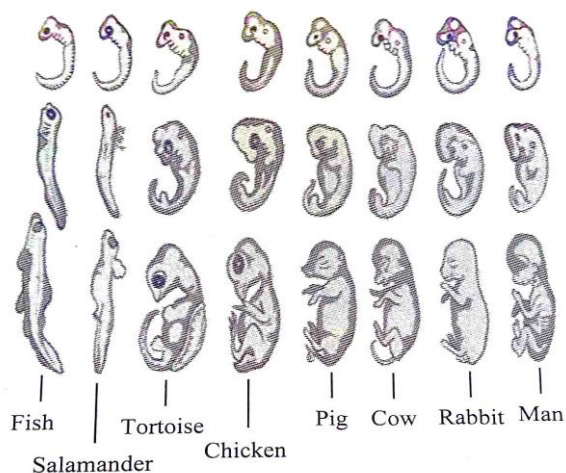


- iii. Write a short note on Biotechnology – Professional uses.
- iv. Write any four harmful effects of consumption of alcoholic drinks on human body.
- v. Distinguish between asexual reproduction and sexual reproduction.

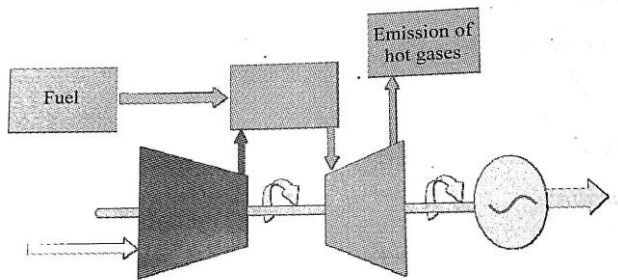
Q.3. Solve the following questions (Any Five)

15M

- i. Observe the given figure and answer the questions.



- a) Identify the evidence of evolution shown in the given diagram.
- b) How is this evidence used as a proof of evolution ?
- c) Mention any two other evidence of evolution.
- ii. Identify the various aspects of disaster management based on the given statements.
- Plan for minimizing the damage to the society and country.
 - Intensity of various aspects of disaster and disaster management are reviewed.
 - A plan is chalked out so as to get the quick response from general public and administration.
 - It is an important link between emergency measures and national progress.
 - Response to the disaster given immediately after the incidence.
 - Important link between measures after disaster and national development.
- iii. What will you do in the following situations? Why?
- The child of your neighbor is addicted to tobacco chewing.
 - Your brother studying in XII has developed stress.
 - Your sister has become incommunicative and she prefers to remain alone.
- iv. Observe the following diagram and answer the questions.



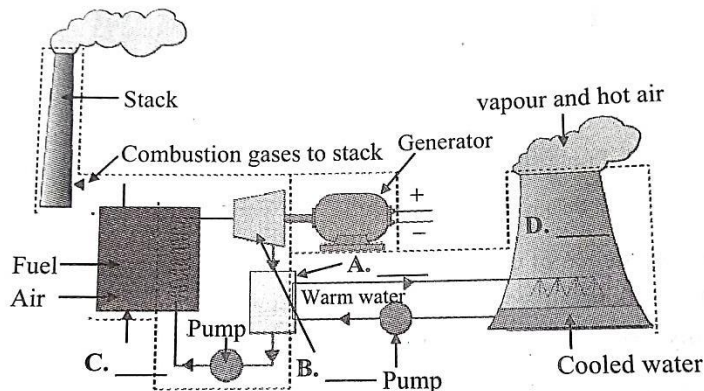
- The schematic of which power plant is shown in diagram?
 - Is the energy generation through this plant considered green energy? Give reason why?
 - Draw the flow chart for the transformation of energy in the power plant.
- v. Explain how energy is formed from oxidation of carbohydrates, fats and proteins.
- vi. To which phylum does Cockroach belong? Justify your answer with scientific reasons.

vii a) Define bioremediation

b) Complete the given chart.

Sr.	Plants /Microbes	Function
1.	<i>Pteris Vittata</i>	-----
2.	<i>Pseudomonas</i>	-----
3.	-----	Absorption of uranium and arsenic
4.	-----	Absorption of radiations of nuclear waste

viii. Label the following diagram and explain the energy conversion in the plant.



Q.4. Answer the following (Attempt any 1)

5M

i In a cropland ecosystem, grasshoppers feed on crop plants and cause huge losses to farmers. Rodents like rats feed on these grasshoppers. Snakes are major predators of rodents and help control their population.

Based on the given paragraph answer the questions given below.

- How can the food chain of this cropland ecosystem be represented?
- What would happen if all the snakes are removed from the field?
- What would happen if all the crops in the farm are harvested?
- Hawks are natural predators of snakes. What would happen if hawks are present around the field?
- In a similar manner, draw the food chain of a pond ecosystem.

ii Classify the given organisms with detailed explanation.



(a)



(b)

Together, we will make a difference.....