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(REVISED COURSE)

Time : 2 Hours

(Pages 4)

Max. Marks : 40

Note :- (i) It is necessary to solve all the questions.

(ii) Draw neat and labelled diagrams wherever necessary.

(iii) Start every new main question on separate page.

(iv) Figures on the right indicate marks.

(v) For Each Multiple Choice Question (1.B), ONLY first answer will be considered.

(vi) Write answer of each MCQ with option number.

Eg. i) a..... ii) c.....

Q.1 (A) Choose the proper alternative and fill in the blanks:

5

(1) A feature of reproduction that is common to Amoeba, Yeast and Bacterium is that:

- (a) they are all multicellular
- (b) all produces daughter cells genetically dissimilar to parent cells
- (c) they reproduce only sexually
- (d) they reproduce asexually

(2) The code for each amino acid consists of three nucleotides that is called as '_____'.
(a) triplet codon (b) triplet codes (c) triplet nucleotides (d) triplet amines

(3) The decomposers in an ecosystem:

- (a) convert the inorganic material into simpler forms
- (b) convert organic material into inorganic forms
- (c) convert the inorganic material into organic compounds
- (d) do not break down organic compounds

(4) Millipedes, belong to phylum

- (a) Echinodermata (b) Arthropoda (c) Mollusca (d) Cnidarians

(5) _____ is bringing about artificial genetic changes and hybridization in organisms for human welfare.

- (a) Bioinformatics (b) Cell biology
- (c) Structural biology (d) Biotechnology

(B) Attempt the following:

5

(1) Find the odd one out:

1

Glucose, Pyruvic acid, Lactic acid, Alcohol

(2) State 'True' or 'False', if 'False' correct it: **1**

Process of dirt / muck removal occurs at low temperature too due to mixing of enzymes with talcum powder.

(3) Write the correlated terms: **1**

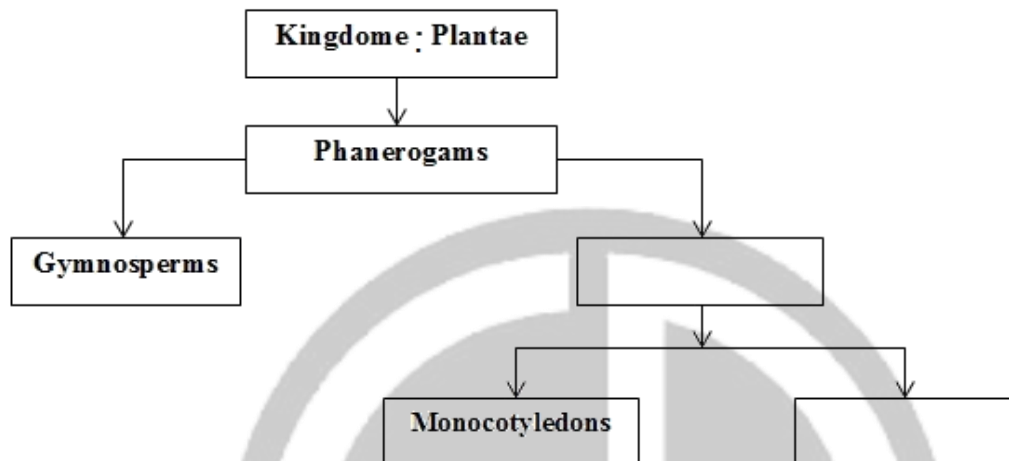
Paddy field : Producer :: Frog :: _____

(4) Name the following: **1**

Book published by Darwin explaining evolution through natural selection.

(5) Answer the following in one line: **1**

Complete the following flow chart:



Q.2(A) Give reasons:(Any Two) **4**

(1) Individual developed by sexual reproduction always carry recombined genes of both the parents.

(2) All vertebrates are chordates but all chordates are not vertebrates.*

(3) Only humans can conserve and improve the quality of nature.

(B) Answer the following:(Any Three) **6**

(1) Menstrual cycle.*

(2) Characters of a phylum are given below. Read those carefully and answer the questions.

A. Spines of calcium carbonate are present on the body.

B. These animals are exclusively marine.

C. They perform the locomotion with the help of tube feet.

D. Their skeleton is made up of calcareous plates or spicules.

i. Animals of which phylum show the above characters?

ii. Give an example from that phylum.

iii. These animals can be classified with the help of which criteria of new system of animals classification?

(3) (i) What is cell?

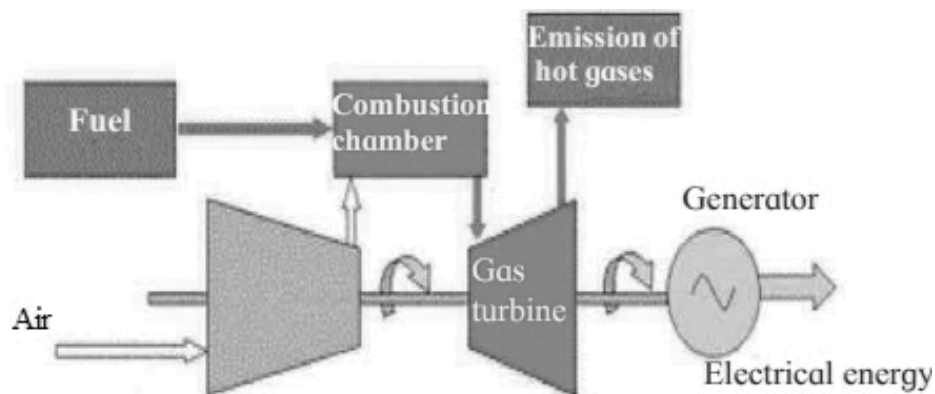
(ii) Which technique in relation to tissues have you studied in earlier classes?*

(4) Which are the effects of dry famine?*

(5) What is the relationship between the cell division and formation of new organism of same species by earlier existing organism?*

(1) Define heredity. Explain the mechanism of hereditary changes.*

(2) Observe the diagram and answer the questions:



(a) Which energy is generated from the power plant?

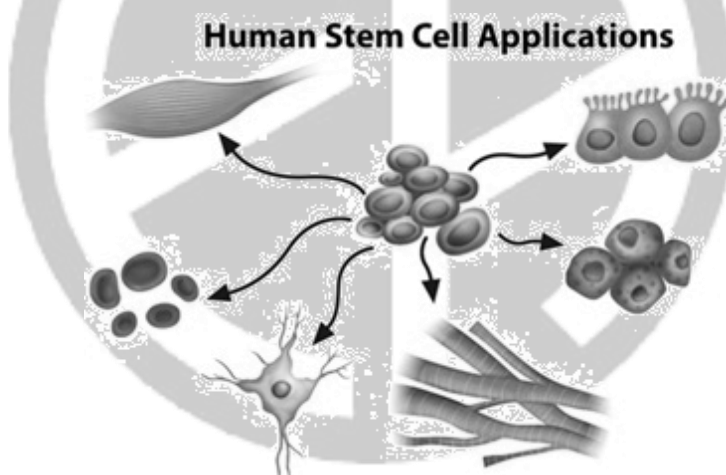
(b) State its source.

(c) Which is more eco friendly - Power generation from coal or Power generation from natural gas ? Why ?

(3) Why does the human beings have important place in environment?*

(4) How the excessive use of social media and technology is proving harmful?

(5) The diagram is representing the application of the human stem cell. Identify the organs which can be regenerated from stem cell.



(6) i. Which mental illness is shown in the picture given below?

ii. Which social message would you like to give through it?



(7) Why is it essential to get the training of first aid?*

(8) Complete the flow chart of nuclear power plant below:



Q.4 Answer the following:(Any One)

5

- (1) With the help of suitable diagrams, explain the five stages of prophase-I of meiosis.*
- (2) (A) Lack of management of which factor is shown in the picture?
B) How can that factor be managed with the help of microbes?
C) How the oil spills in oceans are cleared?



....All The Best....



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