

MT

2018 ____ 1100

Seat No.

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MT - SCIENCE & TECHNOLOGY - II (72) - SEMI PRELIM - I : PAPER - 4

Time : 2 Hours

(Pages 3)

Max. Marks : 40

Note :

- (i) All questions are compulsory.
- (ii) All questions carry equal marks.
- (iii) Draw neat and labelled diagrams wherever necessary.

Q.1. (A) Fill in the blanks :

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- (1) Mixture of bacterial strains like and is mixed with ethanol for its microbial degradation.
- (2) The property of self-multiplying of stem cells is called as
- (3) Spreading of weeds is type of disaster.

Q.1. (B) Match the columns:

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Column 'A'	Column 'B'
(1) Corynebacterium	(a) Lactic acid
(2) Aspergillus niger	(b) Itaconic acid
(3) Lactobacillus delbrueckii	(c) Gluconic acid
(4) Aspergillus itaconius	(d) Wine
	(e) L-glutamic acid

Q.1. (C) Choose the correct alternative and rewrite the statement :

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- (1) bacteria present in root nodules of leguminous plants help in nitrogen fixation.
 - (a) Rhizobium
 - (b) Azotobacter
 - (c) Geobacter
 - (d) Pseudomonas
- (2) Yeast reproduces by method of asexual reproduction.
 - (a) spores
 - (b) budding
 - (c) binary fission
 - (d) vegetative reproduction

- (3) National Pomegranate Research Institute is located at
(a) Solapur (b) Pune
(c) Nagpur (d) New Delhi
- (4) In Nil-Kranti Mission - 2016 program, government is offering subsidies of
(a) 15% - 20% (b) 50% - 100%
(c) 75% - 77% (d) 35% - 50%
- (5) Water stored in the dam possess energy.
(a) chemical (b) potential
(c) kinetic (d) electric

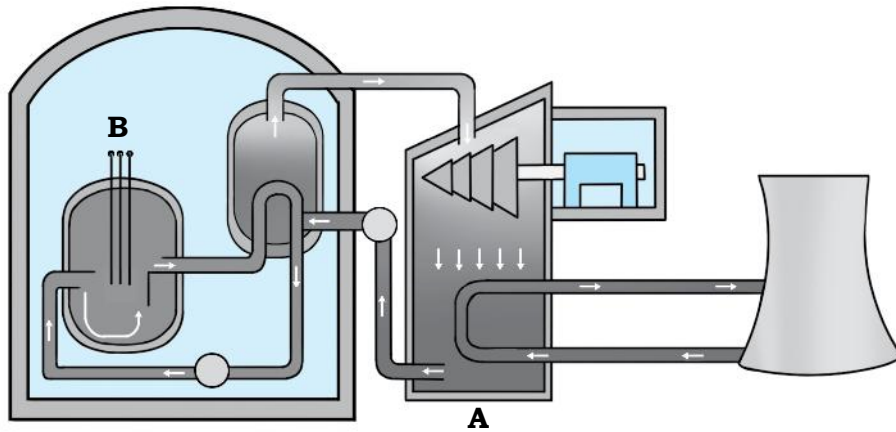
Q.2. Answer the following questions : (Any Five)**10**

- (1) How can the oil spills of rivers and oceans be cleaned?
- (2) Give reason -
Microbial enzymes are used instead of chemical catalysts in chemical industry.
- (3) Write a note on organic farming.
- (4) Which are the various processes in tissue culture?
- (5) Which are the destructive effects of flood?
- (6) Give Reason : The construction of turbine is different for different types of power plants.

Q.3. Answer the following questions : (Any Five)**15**

- (1) Explain why Mock drill is useful.
- (2) Explain the importance of good communication with others.
- (3) Write a note on Xanthan gum.
- (4) Which fuels can be obtained by microbial processes? Why is it necessary to increase the use of such fuels?
- (5) Write a note on clean technology.

(6) Answer the questions based on figure.



- (i) Label A and B in the diagram.
- (ii) Define nuclear fission.
- (iii) State any one problem related to nuclear power plant.

Q.4. Answer the following questions : (Any One)

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- (1) What is role of microbes in compost production?
- (2) What is Biotechnology? What are its commercial applications?

Best Of Luck 🍀