

STELLA MARIS COLLEGE (AUTONOMOUS) CHENNAI 600 086
(For candidates admitted during the academic year 2011 – 12 & thereafter)

SUBJECT CODE: 11BY/PE/EB34

M. Sc. DEGREE EXAMINATION - NOVEMBER 2015
BIOTECHNOLOGY
THIRD SEMESTER

COURSE : ELECTIVE
PAPER : ENVIRONMENTAL BIOTECHNOLOGY
TIME : 3 HOURS **MAX. MARKS: 100**

SECTION – A

ANSWER ALL QUESTIONS. **(20 x 1 = 20)**

CHOOSE THE CORRECT ANSWER:

1. Ozone hole is due to
 - a. Carbon di oxide
 - b. flurochlorocarbon
 - c. Chlorofluorocarbon
2. Causative agent of acid rain
 - a. HCl
 - b. H_2SO_4
 - c. Hypochlorous acid
3. Greenhouse gases are
 - a. carbon dioxide
 - b. oxygen
 - c. nitrogen
4. EIA
 - a. Environmental impact assessment
 - b. Ecological impact assessment
 - c. Ecosystem impact assessment
5. BGA are
 - a. Bacteria
 - b. fungi
 - c. algae
6. Biogas contain more proportion of -----
 - a. Carbon dioxide
 - b. Nitrogen
 - c. Methane
7. Faecal Indicator
 - a. Escherichia coli
 - b. Entamemoeba coli
 - c. Staphylococcus aureus
8. MPN
 - a. Most probable number
 - b. Most preferable number.
 - c. Most Potential number
9. Incineration
 - a. Wet heat sterilization
 - b. Dry heat sterilization
 - c. Radiation
10. Zoogloearamigera
 - a. activated sludge flocs
 - b. anaerobic digestion
 - c. anaerobic digestion
11. Denitrifying bacteria is
 - a. *Thiobacillus*
 - b. Nitrobacter
 - c. Nitrosomonas
12. STR
 - a. Stirred tank reactor
 - b. Sludge tank reactor
 - c. Stirred top reactor
13. Minamata disease is due to
 - a. mercury poisoning
 - b. lead poisoning
 - c. chromium VI poisoning
14. Lead poisoning causes
 - a. Itaiitai
 - b. Minamata disease
 - c. painter's colic

15. Carcinogens

a. Alphatoxin b. **Aflatoxin** c.haemolysin

16. Biomonitoring of heavy metal pollution

a. Metalloid gene expression b. Metallothioxin gene expression
c. Metallothionein Expression

17. Xenobiotic compound

a. Chlorofluorocarbon b. starch c.Polychlorinated biphenyl

18. First GEM

a. *P. aerugenosa* b. *P. putida* c. P.fluorescence

19. Thiobacillusthiooxidans are

a. **Bioleaching** b. Bio blanching. c.bioplastic

20. Recalcitrant.

a. *alkane* b. Poly hydroxy butyrate c. Polysaccarides

SECTION – B

ANSWER ANY FOUR QUESTIONS:

(4 x 10 = 40)

21. What are radioactive substances? How do they act on living things?

22. Write briefly about the production of biofuels.

23. How do you restore degraded land? Justify.

24. What is composting? Explain the biological mechanism involved.

25. Write notes on biosensors.

26. What is in-situ and ex-situ bioremediation? Write notes.

SECTION – C

ANSWER ANY TWO QUESTIONS:

(2 x 20 = 40)

27. Describe about greenhouse effects.

28. How will you determine the potability of water? Explain.

29. How will you treat waste water? What are the steps followed? Explain.

30. What is biomining? Explain about its mechanism.
