RITES LIMITED chemical engg questions

1. Which of the following would have the highest oxygen transfer rate characteristics ?

A sparged stirred tank bioreactor being stirred at 200 rpm

A non-sparged stirred tank bioreactor being stirred at 200 rpm

A shake flask being mixed at 200 rpm

All of the above would have equivalent oxygen transfer rate characteristics

The answer is A sparged stirred tank bioreactor being stirred at 200 rpm

2. Molar heat capacity of water in equilibrium with ice at constant pressure is

Zero

Infinity

40.45 KJ K^-1 mol^-1

75.48 JK^-1 mol^-1

.

The answer is Zero

3. Ammonium molybdate test is used to detect the presence of

Borate

Phosphate

Chloride

Bromide

.

The answer is Phosphate

4. Increasing the temperature of an aqueous solution will cause

Decrease in Molality

Decrease in Molarity

Decrease in Mole Fraction

Decrease in Percentage by Weight

.

The answer is Decrease in Molarity

5. IUPAC name of the compound CH3CH(OH)COOH is

Lactic Acid

A-Hydroxypropanoic Acid

Carboxy Propanol

2-Hydroxypropanoic acid

.

The answer is 2-Hydroxypropanoic acid

6. Which of the following will not displace hydrogen ?

Ba

Pb

Ag

Sn

.

The answer is Ag

7. The amount of heat measure for a reaction in a bomb calorimeter is

DG

DH

DE

PDV

.

The answer is DE

8. Which of the following oxides is most amphoteric ?

Na2O

Al2O3

SO3

P2O5

.

The answer is Al2O3

9. Which among the following is most basic compound ?

Benzylamine

Aniline

Acetanilide

P-Nitroaniline

.
The answer is Benzylamine

10. Which of the following elements form interstitial compounds ?

Fe

Co

Ni

All of these

.
The answer is All of these

11. The EAN of Co in K3[Co(NH3)6] is

34

35

36

37

.
The answer is 36

12. The position of electron is identified by quantum numbers n and l. (i) n = 4, l = 1 (ii) n = 4, l = 0 (iii) n = 3, l = 2 (iv) n = 3, l = 1 The order of increasing energy from the lowest to highest is

(iv) < (ii) < (iii) < (i)

(ii) < (iv) < (i) < (iii)

(i) < (iii) < (ii) < (iv)

(iii) < (i) < (iv) < (ii)

.
The answer is (iv) < (ii) < (iii) < (i)

13. Gutta Percha is

Trans-polyisoproprene

A synthetic polymer

A very hard material

All are correct
The answer is All are correct

14. Which one of following does not give acetylene with water ?

CaC2

BaC2

SrC2

Al4C3
The answer is Al4C3

15. Normality of 0.3 M phosphoric acid (H3PO3) is

0.3

0.6

0.9

0.1
The answer is 0.6

16. _____ technique is based on the fact that there are variations in the DNA sequence of restriction sites among different individuals and different species.

Polymer Chain Reaction

Hybridoma

Restriction Fragment Length Polymorphism

None of these
The answer is Restriction Fragment Length Polymorphism

17. Which enzyme forms phosphodiester bonds between adjacent nucleotides and covalently links two individual fragments of double stranded DNA

Alkaline Phosphates

DNA Polymerase

DNA Liqase

Exonuclease
The answer is DNA Liqase

18. Name the enzyme used to prevent unwanted self-liquation of vector DNA molecules in cleaning procedures

Alkaline Phosphates

DNA Ligase

DNA Polymerase

Helicases
The answer is Alkaline Phosphates

19. Many of the vector for use in eukaryotic cells are constructed such that they can exist in both the eukaryotic cell and E.coli. Such vectors are known as

Shuttle Passengers

Shuttle Vectors

Expression Vectors

All of these
The answer is Shuttle Vectors

20. _____ are constructed by combining certain features of plasmid and the cos sites of the phage lambda

Hybrides

Cybrids

Cosmids

None of these
The answer is Cosmids

21. _____ are used as vector to clone DNA fragments of more than 1 Mb in size

Yeast Artificial Chromosomes

Bacterial Artificial Chromosomes

Plant Chromosomes

All of these
The answer is Yeast Artificial Chromosomes

22. _____ vector can accommodate upto 300-350 kb of foreign DNA

YAC

BAC

Plant

Animal
The answer is BAC

23. A collection of clones representing the complete genome of an organism is called

Genomic Library

DNA Library

Inventory

None of these
The answer is Genomic Library

24. Which method is used to introduce recombinant DNA into host cell ?

Electroporation

Microinjection

Biolistics

All of the above
The answer is All of the above

25. Who invented Polymerase Chain Reaction ?

Ely Lilly

Kary Mullis

Sanger

All of these

The answer is Kary Mullis

26. Who developed Dideoxynucleotide Chain termination method ?

Frederick Sanger and Andrew Coulson

Andrew Coulson and Maxam

Gilbert

All of them
The answer is Frederick Sanger and Andrew Coulson

27. Who coined the term genomics ?

Winkler

Thomas Roderick

Craig Venter

All of them

The answer is Thomas Roderick

28. _____ primarily involves high-throughput DNA sequencing followed by assembly, organization and management of DNA sequence

Structural Genomics

Functional Genomics

Contigs

None of these

The answer is Structural Genomics

29. _____ deals with the reconstruction of the genome to determine the biological function of genes and gene interaction

Structural Genomics

Functional Genomics

Random Libraries

Contigs

The answer is Basic Local Alignment Search Tool

30. _____ of genomic DNA are constructed in small and edium seat plasmid vector along with genomic shotgun large unseat BAC library

Random Arrays

Mirco Arrays

Random Libraries

All of these

The answer is Random Libraries

31. BLAST means

Basic Local Alignment Search Tool

Basic Local Array Search Tool

Basic Linkage Alignment Search Technique

None of them

The answer is Basic Local Alignment Search Tool

32. _____ is a closed culture system, which contains limited amount of nutrients

Fed-Batch Culture

Continuous Culture

Batch Culture

All of these

33 . If a batch culture is continuously or sequentially fed with fresh medium without remaining the growing culture, it is called

Batch Culture

Fed-Batch Culture

Continuous Culture

Another Culture

The answer is Fed-Batch Culture

34 Educational Background-How many years does a chemical engineer need to study in university before becoming a chemical engineer?
A. bachelors degree.
B. 5 years
C. a chemical engineer need about fourteen years of study's before becoming a engineer.
D. 4 years
E. all of the above.

Q.35) Salary- in 2007 Alberta had a wage and salary survey. from the results of the survey a chemical engineer can make up to how much dollars a year?
A. $101,000
B. $156,000
C. depends on his/her education.
D. $191,000
E. $190,000

Q.36) Job Description- what does a chemical engineer manage?
A. chemicals, biochemicals, pharmaceutical materials and processing plants.
B. tools for measuring pressure.
C. Determines the most effective process for chemical products.
D. all of the above
E. only a abd b

Q.37) working conditions- does the chemical engineer get called after hours?
A. lol what no!
B. yes obviously
C. no a chemical engineer's work to hard for that to happen
D. non of the above.
E. b and d

Q.38 working conditions- does a chemical engineer ever come in contact with hazardous products?
A. yes always come on there chemical engineers!!!
B. no never..."what you talking about #!@#!?"
C. those who work in production may come in contact with hazardous products.
D. non of the above.
E. all of the above.

Q.39) daily basis- does a chemical engineer ever work with the computer?
A. no never.

B. while drawing reports.
C. yes always
D. B) and C) only
E. non of the above.

Q.40) Duties- why do chemical engineer test products before putting them out for sale?
A. so the products doesn't hurt animals.
B. the manufacturing process may affect the environment and the safer of workers and consumers.
C. they don't test them.....
D. all of the above.
E. non of the above

Q.41) what 2 university's did i mention that had the chemical engineers course in my presentation?
A. University of Toronto and University of Alberta.
B. University of Alberta and the University of Edmonton
C. University of Alberta and the University of Calgary.
D. University of Edmonton and University of Waterloo
E. a and d

Q.42) What is the minimum degree to become a Chemical engineer?
A. masters.
B. bachelors.
C. 4 years degree.
D. license for a degree.
E. all of the above

Q.43) University of Alberta is located in what major city?
A. Toronto
B. Halifax
C. Calgary
D. Edmonton
E. non of the above