

SAMPLE PAPER LABORATORY ANALYST

ENGLISH

Choose the best option, from the given choices below each sentence.

1. I plan to go _____ England next year.

- A) to
- B) at
- C) on
- D) in

2. The musical instrument _____ is six feet long.

- A) is called the bass
- B) it is called the bass
- C) called the bass
- D) calls the bass

Each question below consists of a related pair of words, followed by five lettered pairs of words. Select the lettered pair that best expresses a relationship similar to that expressed in the original pair.

3. **GLARING: BRIGHT::**

- A) iridescent: colorful
- B) perceptible: visible
- C) discordant: harmonious
- D) peppery: salty
- E) deafening: loud

Choose the lettered word or phrase that is most nearly opposite in meaning to the word in capital letters.

4. **SURPRISE:**

- A) confound
- B) startle
- C) astound
- D) forewarn

5. **BRAVE:**

- A) daring
- B) bright
- C) anxious
- D) scared

Read the following passage to answer question (6-7)

"The history of science is the real history of mankind." In this striking epigram a nineteenth century writer links science with its background. Like most epigrams, its power lies in emphasizing by contrast an aspect of truth which may be easily overlooked. In this case it is easy to overlook the relations between science and mankind and to treat the former as some abstract third party, which can sometimes be praised for its beneficial influences, but frequently and conveniently blamed for the horrors of war. Science and mankind cannot be divorced from time to time at men's convenience. Yet we have seen that, inspite of countless opportunities of improvement, the opening years of the present period of civilisation have been dominated by international conflict.

Is this the inevitable result of the progress of science or does the fault lie elsewhere?

6. The science "The history of science is the real history of mankind" means:

- A) science has given man countless opportunities for improvement**
- B) science and mankind cannot always be divorced**
- C) mankind has progressed as science has developed**
- D) the good and bad uses of science reflect the character of man**

7. The epigram given in, the passage highlights:

- A) the evolution of science**
- B) the real history of man**
- C) the contrast between science and civilization**
- D) an elusive truth about human nature**

ANALYTICAL REASONING

Questions 8-11

A workshop that restores used pieces of furniture operates according to the following schedule:

A piece of furniture is examined three calendar days after it is received in the workshop. (Thus, if it is received on the first day of the month, it is examined on the fourth.) On the next Monday following the examination, the piece of furniture is delivered to the restoration room.

Restoration work may be finished one, two, or three calendar days after a piece of furniture is delivered to the restoration room. On the next Wednesday following the completion of the restoration work, a piece of furniture is varnished. Two calendar days later, the varnish is dry and a piece of furniture may be shipped. All restored pieces of furniture are shipped at the close of business on the 15th or the 30th day of the month.

This year, the first day of the month of January is a Friday.

8. If the workshop receives a steady supply of used pieces of furniture, on how many days during January will piece of furniture varnishing take place?
- A) Two
 - B) Three
 - C) Four
 - D) Five
 - E) Six
9. If a used piece of furniture is received at the workshop on Tuesday January 5th, its restoration work will be completed no later than:
- A) Monday the 11th
 - B) Wednesday the 13th
 - C) Thursday the 14th
 - D) Friday the 15th
 - E) Wednesday the 20th
10. In order to be certain that a restored piece of furniture will be shipped from the workshop on January 30th, what is the latest date by which it may be received at the workshop?
- A) Thursday the 14th
 - B) Friday the 15th
 - C) Saturday the 16th
 - D) Monday the 18th
 - E) Tuesday the 19th

11. The longest delay in shipping a restored piece of furniture will involve a piece of furniture whose cover varnish dries on:

- A) January 1st**
- B) January 8th**
- C) January 15th**
- D) January 22nd**
- E) January 29th**

Social security law is an evolving law that tries as far as possible to reflect reality, to adjust to changes in and the needs of society.

12. Which of the following statements best summarizes the above?

- A) Legislation lags behind reality.**
- B) Social security law gradually adapts itself to societal demands.**
- C) A good social security system ought to reflect every change in social values.**
- D) Changes in social conditions and needs imply the necessity for changes in social security legislation.**
- E) We need to study social needs.**

QUANTITATIVE

13. Suppose $x = y - 2 = \frac{y+5}{2}$. Then x equals:

- A) $\frac{1}{3}$
- B) 1
- C) $\frac{7}{6}$
- D) 2
- E) 7

14. In January, 55 percent of a hospital's 300 patients were women. In February, 30 percent of its 440 patients were women. What was the percent change in the number of women patients from January to February?

- A) decrease of 20%
- B) increase of 20%
- C) decrease of 25%
- D) increase of 25%
- E) increase of 46.67%

15. A room is 16 feet in length, 15 feet in width, and 12 feet in height. What is the maximum distance possible in feet along a straight line between any two points in the room?

- A) 15
- B) 20
- C) 25
- D) $10\sqrt{2}$
- E) $10\sqrt{3}$

IQ

**16. 5 3 1 8 7 5 1 5 6 3 5 2 0 9 5 3 5 1 0 2 5 8 7 1 5 3 3
5 0 1 3 5 5 3 2 5**

Count each 5 above that has a 3 next after it. Tell how many 5's you count.

- A) 3**
- B) 4**
- C) 5**
- D) 6**

17. Complete the given series 6, 13, 28, ...:

- A) 56**
- B) 57**
- C) 58**
- D) 59**

18. If X is the brother of the son of Y's son, how is X related to Y?

- A) son**
- B) brother**
- C) cousin**
- D) grandson**
- E) uncle**

SUBJECT

19. Comparative rates of diffusion of He and SO_2 will be ____.
- A) 8
 - B) 2
 - C) 4
 - D) 16
 - E) 64
20. The unit of viscosity is _____.
- A) Joule
 - B) N/m^2
 - C) dynes/cm
 - D) poises
 - E) ergs
21. The maximum possible number of electrons a shell 'n' can accommodate is given by
- A) n
 - B) n^2
 - C) $2n^2$
 - D) n^3
 - E) $3n^2$
22. The number of moles of solute dissolved per liter of solution is called:
- A) Normality
 - B) Molality
 - C) Molarity
 - D) Percentage composition
 - E) Mole fraction
23. According to _____ "the properties of elements are the periodic function of their atomic number".
- A) Newland's law of octaves
 - B) Dobernien's triads
 - C) Lothar Meyer's classification
 - D) Modern periodic law

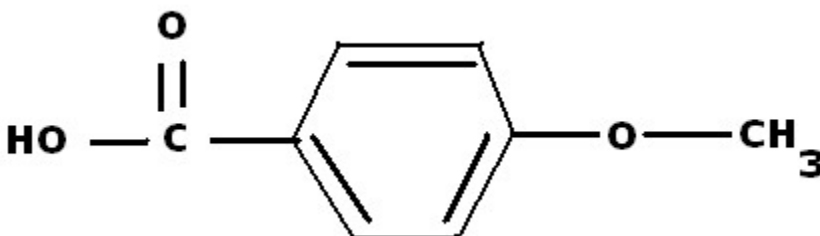
24. Transition elements and their compounds are commonly used as catalysts due to _____.

- A) involvement of inner-d-orbitals
- B) due to the presence of unpaired electron
- C) d-d transition of electrons
- D) variable oxidation state
- E) suitable surface area

25. The acidic nature of ethanol is shown when it reacts with Na forming:

- A) Sodium hydroxide
- B) Sodium oxide
- C) Sodium ethoxide
- D) Formic acid
- E) Acetaldehyde

26. What functional groups are present in the compound below?



- A) Ester and ether
- B) Ester and amine
- C) Ester and carboxylic acid
- D) Ether and carboxylic acid
- E) Ether and ketone

27. The best antidote in the case of H₂S poisoning is:

- A) Very strong chlorine
- B) Very dilute chlorine
- C) Very strong sulphur
- D) Very dilute sulphur
- E) Very dilute hydrogen

28. Absolute alcohol can be prepared by:

- A) absorbing water of rectified spirit
- B) direct fermentation of molasses
- C) direct fermentation of starch
- D) distillation of wood

29. Which of the following halogens does not exhibit positive oxidation state in its compounds?

- A) I
- B) Br
- C) Cl
- D) F

30. Oxidation of a secondary alcohol gives:

- A) Organic acid
- B) Ether
- C) Aldehyde
- D) Formic acid
- E) Ketone

31. Grignard's reagent can be prepared by the reaction of alkyl halide with magnesium in the presence of:

- A) Ether
- B) Anhydrous ether
- C) Water
- D) Sulphuric acid
- E) Sodium hydroxide

ANSWER KEY

Q #	ANSWER CHOICE
1	A
2	C
3	E
4	D
5	D
6	B
7	A
8	C
9	C
10	A
11	A
12	B
13	E
14	D
15	C
16	B
17	D
18	D
19	C
20	D
21	C
22	C
23	D
24	E
25	C
26	D
27	B
28	A
29	D
30	E
31	B