

**SAMPLE PAPER**  
**CHEMICAL PLANT OPERATOR**  
**(DAE)**

## ENGLISH

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

1. Land where crops grow well is called \_\_\_\_\_.

- A) arid
- B) barren
- C) fertile
- D) poor

2. Aslam is elder \_\_\_\_\_ Sara.

- A) as
- B) that
- C) of
- D) than

3. I have a claim \_\_\_\_\_ my friend's help.

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

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.

4. **PHYSICS: SCIENCE::**

- A) chemistry: laboratory
- B) astronomy: galaxy
- C) fashion: style
- D) fir: tree

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

5. **USUAL:**

- A) greedy
- B) strange
- C) brief
- D) fortunate

6. **FIXED:**

- A) countable
- B) flat
- C) changing
- D) rigid

Read the following passage to answer question (7-8)

The Big Bang theory, an explanation of the origins of our universe, is one of the greatest intellectual achievements of the twentieth century. According to this theory, about ten to twenty million years ago, the matter of which the universe is made was infinitely tightly compressed. Something—called the Big Bang—turned this matter into a gigantic fireball. As the matter was set into motion and flew away from its compressed state, bits of it became glued together to create galaxies and later, stars and planets. The motion of the matter that flew out of the fireball continues today, and the universe appears to be expanding. The theory grew out of observations of the Doppler effect. It explains that the frequency of radiation given off by a moving body decreases as the sources get further from the observer. In 1965, scientists discovered that the radiation bathing the earth is at the precise microwave frequency that would be expected if the universe began with a big bang. Some scientists think the expansion of the universe will continue to infinity, while others theorize that gravity will, at some point in the far distant future, collapse back onto itself in a "big crunch," returning it to a state of compressed matter.

7. As a moving object gets further from its source, its radiation frequency:

- A) stays the same
- B) grows larger
- C) grows smaller
- D) expands
- E) collapse

8. The author of this passage thinks the Big Bang theory:

- A) has not been proven
- B) does not explain the creation of the universe
- C) is a very important contribution to knowledge
- D) explains what happens when a moving body gets further from its source
- E) shows the frequency of radiation bathing the earth

## ANALYTICAL REASONING

### Questions 9-12

Eight toys B, C and D (soft) and H, I, J, K and L (hard) are divided into four sets available to play for different groups of kids:

Two sets contain three toys apiece and each set is given to one of two pink groups.

A single toy is given to blue group.

A single toy is given to a yellow group.

Each set given to pink group must contain at least one soft toy.

B or C, but not both, are given to blue group.

L must be in the same set with J.

Each toy is given only once to one group for playing.

9. If C is given to pink group and J is not with it, which of the following must be true?

- A) C is in the same set as K.
- B) D is in the same set as L.
- C) H is in the same set as I.
- D) K is in a different set than H.
- E) I is in a different set than H.

10. If H and D are in the same set, all of the following can be true EXCEPT:

- A) B and I are in the same set.
- B) C and J are in the same set.
- C) D and K are in the same set.
- D) I is given to the yellow group.
- E) H and I are in the same set.

11. Which of the following may comprise a set given to a pink group?

- A) B, K, L
- B) C, I, K
- C) C, D, H
- D) D, H, J
- E) H, J, L

12. The yellow group could be given which of the following toys?

- A) B
- B) C
- C) D
- D) J
- E) K

**Recent surveys show that the layman is unaware of most new health laws and doesn't understand 99% of the remaining health laws. This is mainly because of the laymen's inattention and lack of interest.**

**13. To make the point, the author of this statement:**

- A) gives a general statement followed by supporting facts**
- B) argues by pointing out the effects and then the cause**
- C) uses specific examples to disprove an argument**
- D) infers an outcome and then attempts to support that outcome**
- E) assumes the conclusion is true and uses circular reasoning to state the premise**

## QUANTITATIVE

14. Which of these is NOT equal to  $\frac{4}{9}$ ?

A)  $\frac{2}{3}$

B)  $\frac{20}{45}$

C)  $\frac{8}{18}$

D)  $\frac{16}{36}$

15. A boy saves 18 Rupees in 8 weeks. He continues to save at the same rate. How many weeks will it take him to save 81 rupees?

A) 13

B) 36

C) 40

D) 71

16. If the average (arithmetic means) of a and -5 is 10, then a=?

A) 25

B) 15

C) 5

D) -5

## IQ

17. If  $4=0$   
 $5=5$   
 $6=12$   
 $7=21$   
 $8=32$   
Then  $9=?$

- A) 27
- B) 36
- C) 45
- D) 54
- E) 63

18. If a man is called boy, boy is called baby, baby is called child, child is called cook and cook is called villain, then who will work in a kitchen?

- A) man
- B) cook
- C) villain
- D) baby
- E) boy

19. If  $20 - 4 = 10$ ,  $30 - 6 = 10$ , then  $40 - 8 = ?$

- A) 32
- B) 10
- C) 30
- D) 22

## SUBJECT

20. Sulphuric acid is mainly used in the:

- A) Fertilizer industry
- B) Steel industry
- C) Paper making
- D) Paint industry

21. Length of polarimeter is:

- A) 1 dm
- B) 1.5 dm
- C) 2 dm
- D) 3 dm

22. The picture given below indicates which of the following equipment



- A) Centrifugal blower
- B) Screw conveyer
- C) Scraper conveyer
- D) Overhead conveyer

23. Catalyst used in isomerisation is:

- A) Alumina
- B) Nickel
- C) Phosphoric acid
- D) Aluminium chloride

24. Neptunium series starts from:

- A)  $NP^{273} \rightarrow Bi^{200}$
- B)  $NP^{273} \rightarrow Pb^{206}$
- C)  $NP^{273} \rightarrow Pb^{207}$
- D)  $NP^{273} \rightarrow Pb^{208}$

25. Waste disposal may be obtained in the form of \_\_\_\_\_.

- A) Only liquids
- B) Only solids
- C) Only gases
- D) All of the above

26. Method of analysis in which concentration of a solution is measured by the intensity of emission spectrum, is:

- A) Photometer
- B) Flame photometry
- C) Spectroscopy
- D) Nephthometry

27. Which valve is known as isolating valve?

- A) Globe valve
- B) Gate valve
- C) Ball valve
- D) Plug valve

28. A heat engine is 100 % efficient only when its exhaust temperature is:

- A) Less than input temperature
- B) More than input temperature
- C) 100° C
- D) 0° C

29. Which of the following is formula for finding heat capacity?

- A)  $m/c$
- B)  $mc$
- C)  $mc^2$
- D)  $m^2 c$

30. Natural gas without  $H_2S$  is known as:

- A) bitter gas
- B) sweet gas
- C) sour gas
- D) hot gas

31.  $HNO_3$  is prepared by catalytic oxidation of:

- A) Brine solution
- B)  $NH_3$
- C)  $CaCO_3$
- D) NaOH

**32. All of the following can cause power plant accidents, Except:**

- A) Use of circuit breaker
- B) Heating of oil in electrical transformers
- C) Improper insulation of electrical wires
- D) Overloading of cranes
- E) Not following instructions properly

**33. To avoid damage to ears in a noisy area, use:**

- A) Filter lenses
- B) Goggles
- C) Gloves
- D) Ear muffs

**34. Example of crystalloid is:**

- A) Salt
- B) Sand
- C) Jelly, Gum
- D) Ink

**35. Clay treating is used to remove:**

- A) Salt from the crude
- B) Colour and dissolved gases from cracked gasoline
- C) Wax from lube oil
- D) None of the above

**36. Salt is the basic raw material used for the manufacture of:**

- A) Caustic soda
- B) Sugar
- C) Sucrose
- D) Soap

## ANSWER KEY

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